

**FINAL  
ENVIRONMENTAL IMPACT REPORT**

SDCRAA # EIR-06-01  
State Clearinghouse No. 2005091105

**AIRPORT MASTER PLAN**  
**SAN DIEGO INTERNATIONAL AIRPORT**

**CHAPTERS TWO through SEVEN**



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# List of Abbreviations/Acronyms

<b>AAA</b>	Automatic Aid Agreement
<b>AAD</b>	Average Annual Day
<b>AAOZ</b>	Airport Approach Overlay Zone
<b>ADPM</b>	Average Day Peak Month
<b>ADT</b>	Average Daily Traffic
<b>ADG</b>	Aircraft Design Group
<b>AEOZ</b>	Airport Environs Overlay Zone
<b>AGL</b>	Above Ground Level
<b>ALP</b>	Airport Layout Plan
<b>ALUC</b>	Airport Land Use Commission
<b>ALUCP</b>	Airport Land Use Compatibility Plan
<b>AMP</b>	Airport Master Plan
<b>AMSL</b>	Above Mean Sea Level
<b>APCD</b>	Air Pollution Control District
<b>APU</b>	Auxiliary Power Unit
<b>APWA</b>	American Public Work Association
<b>ARFF</b>	Aircraft Rescue and Fire Fighting
<b>ASIG</b>	Aircraft Service International Group
<b>ASSP</b>	Airport Site Selection Program
<b>AST</b>	Aboveground Storage Tank
<b>ASTM</b>	American Society for Testing Materials
<b>ATAG</b>	Airport Land Use Compatibility Plan Technical Advisory Group
<b>ATAP</b>	Air Transportation Action Program
<b>ATCT</b>	Air Traffic Control Tower
<b>AVI</b>	Automated Vehicle Identification
<b>BAT</b>	Best Available Economically Achievable
<b>BEAP</b>	Base Exterior Architecture Plan
<b>bgs</b>	below ground level
<b>BMPs</b>	Best Management Practices
<b>BO</b>	Biological Opinion
<b>BPC</b>	Board of Port Commissioners
<b>BUR</b>	Burbank
<b>CAA</b>	Clean Air Act
<b>CAAQS</b>	California Ambient Air Quality Standards
<b>Caltrans</b>	California Department of Transportation
<b>CARB</b>	California Air Resources Board

# List of Abbreviations/Acronyms

<b>CBC</b>	California Building Code
<b>CBP</b>	Customs and Border Control
<b>CCC</b>	California Coastal Commission
<b>CCCP</b>	Center City Community Plan
<b>CCDC</b>	Centre City Development Corporation
<b>CCR</b>	California Code of Regulations
<b>CDFG</b>	California Department of Fish and Game
<b>CDMG</b>	California Division of Mines and Geology
<b>CHSP</b>	Community Health and Safety Plan
<b>CERCLA</b>	Comprehensive Environmental Response Compensation & Liability Act
<b>CEQ</b>	Council on Environmental Quality
<b>CEQA</b>	California Environmental Quality Act
<b>CFR</b>	Code of Federal Regulations
<b>CGS</b>	California Geological Survey
<b>CHSRA</b>	California High-Speed Rail Authority
<b>CIP</b>	Capital Improvement Program
<b>CIS</b>	Customs and Immigration Services
<b>CIWMD</b>	California Integrated Waste Management Board
<b>CLUP</b>	Community Land Use Plan
<b>CMP</b>	Construction Management Program
<b>CNEL</b>	Community Noise Exposure Level
<b>CO</b>	Carbon Monoxide
<b>CONRAC</b>	Consolidated Rental Car Facility
<b>CPA</b>	Community Planning Area
<b>CPIOZ</b>	Community Plan Implementation Overlay Zone
<b>CPS</b>	Cycles per Second
<b>CPUC</b>	California Public Utilities Commission
<b>CUPA</b>	Certified Unified Program Agency
<b>CWA</b>	Clean Water Act
<b>CZARA</b>	Costal Zone Management Act
<b>CZMA</b>	Coastal Zone Management Act
<b>dB</b>	Decibel
<b>DEH</b>	Department of Environmental Health
<b>DEIR</b>	Draft Environmental Impact Report
<b>DETR</b>	U.K. Department of Environment, Transport, and Region
<b>DNL</b>	Day-Night Average Sound Level

# List of Abbreviations/Acronyms

<b>DTSC</b>	Department of Toxic Substances Control
<b>DWR</b>	Department of Water Resources
<b>EA</b>	Environmental Assessment
<b>EDMS</b>	Emissions and Dispersion Modeling System
<b>EDT</b>	Explosives Device Team
<b>EIR</b>	Environmental Impact Report
<b>EMS</b>	Emergency Medical Service
<b>EMT</b>	Emergency Medical Technicians
<b>EOC</b>	Emergency Operations Center
<b>EPA</b>	Environmental Protection Agency (United States)
<b>EPCRA</b>	Emergency Planning & Community Right to Know Act
<b>ESD</b>	Environmental Services Department
<b>FAA</b>	Federal Aviation Administration
<b>FAR</b>	FAA Regulations
<b>FBO</b>	Fixed Base Operator
<b>FEMA</b>	Federal Emergency Management Agency
<b>FERC</b>	Federal Energy Regulatory Commission
<b>FHPS</b>	Fire Hazards and Prevention Services
<b>FHWA</b>	Federal Highway Administration
<b>FICAN</b>	Federal Interagency Committee on Aviation Noise
<b>FICON</b>	Federal Interagency Committee on Noise
<b>FIS</b>	Federal Inspection Services
<b>FR</b>	Federal Register
<b>GA</b>	General Aviation
<b>GSE</b>	Ground Support Equipment
<b>HAER</b>	Historic American Engineering Records
<b>HABS</b>	Historic American Building Survey
<b>HAP</b>	Hazardous Air Pollutants
<b>HC</b>	Hydrocarbons
<b>HCM</b>	Highway Capacity Manual
<b>HHRA</b>	Human Health Risk Assessment
<b>HHWE</b>	Household Hazardous Waste Element
<b>HMTA</b>	Hazardous Materials Transportation Act
<b>HOV</b>	High Occupancy Vehicles
<b>HU</b>	Hydraulic Unit
<b>HUD</b>	Department of Housing and Urban Developments

# List of Abbreviations/Acronyms

<b>ICBO</b>	International Conference of Building Officials
<b>INM</b>	Integrated Noise Model
<b>ITE</b>	Institute of Transportation Engineers
<b>JAAC</b>	Joint Airport Advisory Committee
<b>JURMP</b>	Jurisdictional Urban Runoff Management Program
<b>kV</b>	Kilovolt
<b>LAX</b>	Los Angeles International Airport
<b>LCP</b>	Local Coastal Program
<b>LEA</b>	Local Enforcement Agency
<b>LEQ</b>	Equivalent Sound Level
<b>LGB</b>	Long Beach Airport
<b>LOS</b>	Level of Service
<b>LRDP</b>	Long Range Development Plan
<b>LTO</b>	Landing and Takeoff
<b>LUP</b>	Land Use Plan
<b>LWCF</b>	Land and Water Conservation Fund
<b>MAP</b>	Million Annual Passengers
<b>MCRD</b>	Marine Corps Recruitment Depot
<b>MD</b>	Mid-day
<b>MGD</b>	Million Gallons per Day
<b>MIRP</b>	Major Incident Response Plan
<b>MM</b>	Mitigation Measures
<b>MOE</b>	Measure of Effectiveness
<b>MPH</b>	Miles per Hour
<b>MS4s</b>	Municipal Separate Storm Sewer System
<b>MSA</b>	Major Statistical Area
<b>MSCP</b>	Multiple Species Conservation Program
<b>MSL</b>	Mean Sea Level
<b>MTDB</b>	San Diego Metropolitan Transit Development Board
<b>MTS</b>	Metropolitan Transport System
<b>NA80</b>	Nighttime Activity above SEL 80 dB
<b>NA90</b>	Nighttime Activity above SEL 90 dB
<b>NAC</b>	Noise Abatement Criteria
<b>NAAQS</b>	National Ambient Air Quality Standards
<b>NAHC</b>	Native American Heritage Commission
<b>NCTD</b>	North San Diego County Transit District

# List of Abbreviations/Acronyms

<b>NCWRP</b>	North City Wastewater Reclamation Plant
<b>NDFE</b>	Non-Disposal Facility Element
<b>NEPA</b>	National Environmental Policy Act
<b>NFPA</b>	National Fire Protection Association
<b>NLR</b>	Noise Level Reduction
<b>NO</b>	Nitric Oxide
<b>NO<sub>2</sub></b>	Nitrogen Dioxide
<b>NO<sub>3</sub></b>	Nitrate Radical
<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>NOP</b>	Notice of Preparation
<b>NOTAM</b>	Notice to Airmen
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>NPL</b>	National Priority List
<b>NTC</b>	Naval Training Center
<b>O<sub>3</sub></b>	Ozone
<b>OAG</b>	Official Airline Guide
<b>OAK</b>	Oakland
<b>O&amp;D</b>	Originating and Terminating
<b>OEHHA</b>	Office of Environmental Health Hazard Assessment
<b>ONT</b>	Ontario International Airport
<b>OSHA</b>	Occupational Safety and Health Administration
<b>PCB</b>	Polychlorinated Biphenyls
<b>PDX</b>	Portland Oregon
<b>Pb</b>	Lead
<b>PM-2.5</b>	Particulate Matter less than 2.5 micrometers in diameter
<b>PM-10</b>	Particulate Matter less than 10 micrometers in diameter
<b>PMM</b>	Program Mitigation Measure
<b>PMP</b>	Port Master Plan
<b>PV</b>	Private Vehicles
<b>ppm</b>	Parts per Million
<b>PWP</b>	Public Works Plan
<b>RCP</b>	Regional Comprehensive Plan
<b>RCRA</b>	Resource Conservation & Recovery Act
<b>ROG</b>	Reactive Organic Gases
<b>RON</b>	Remain Over Night
<b>RPZ</b>	Runway Protection Zone

# List of Abbreviations/Acronyms

<b>RTP</b>	Regional Transportation Plan
<b>RUWMP</b>	Regional Urban Water Management Plan
<b>RV</b>	Recreational Vehicle
<b>RWQCB</b>	Regional Water Quality Control Board
<b>SANDAG</b>	San Diego Association of Governments
<b>SANTEC</b>	San Diego Traffic Engineers Council
<b>SBs</b>	Senate Bills
<b>SBWRP</b>	South Bay Water Reclamation Plant
<b>SD</b>	San Diego International Airport
<b>SDAPCD</b>	San Diego County Air Pollution Control District
<b>SDCP</b>	San Diego Downtown Community Plan
<b>SDCRAA</b>	San Diego County Regional Airport Authority
<b>SDCWA</b>	San Diego County Water Authority
<b>SDDCP</b>	San Diego Downtown Community Plan
<b>SDFD</b>	San Diego Fire Department
<b>SDG&amp;E</b>	San Diego Gas and Electric
<b>SDHPD</b>	San Diego Harbor Police Department
<b>SDIA</b>	San Diego International Airport
<b>SDMWWD</b>	San Diego Metropolitan Wastewater Department
<b>SDUPD</b>	San Diego Unified Port District
<b>SEL</b>	Sound Equivalent Level
<b>SIMMOD</b>	Simulation Model
<b>SIP</b>	State Implementation Plan
<b>SJC</b>	San Jose
<b>SMF</b>	Sacramento
<b>SNA</b>	John Wayne Airport
<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>SO<sub>x</sub></b>	Sulfur Oxides
<b>SPAWAR</b>	Space and Naval Warfare Systems Command
<b>SPL</b>	Sound Pressure Level
<b>SR</b>	State Route
<b>SRRE</b>	Source Reduction and Recycling Element
<b>SUSWMP</b>	Standard Urban Stormwater Mitigation Plan
<b>SWMP</b>	Storm Water Management Plan
<b>SWP</b>	State Water Project
<b>SWPPP</b>	Storm Water Pollution Prevention Plan

# **List of Abbreviations/Acronyms**

<b>SWRCB</b>	State Water Resources Control Board
<b>TA65</b>	Time above 65 dB
<b>TAZ</b>	Traffic Analysis Zones
<b>TIS</b>	Traffic Impact Analysis
<b>TDY</b>	Teledyne Ryan
<b>TDM</b>	Transportation Demand Management
<b>TMDL</b>	Total Maximum Daily Load
<b>tpy</b>	Tons per year
<b>TSA</b>	Transportation Security Administration
<b>TSR</b>	Transportation Security Regulations
<b>UBC</b>	Uniform Building Code
<b>UFC</b>	Uniform Fire Code
<b>USC</b>	United States Code
<b>USDA</b>	United States Department of Agriculture
<b>USFWS</b>	United States Fish and Wildlife Service
<b>USGS</b>	United States Geological Survey
<b>UST</b>	Underground Storage Tank
<b>UWMP</b>	San Diego Urban Water Management Plan
<b>V/C</b>	Volume to Capacity Ratio
<b>VFR</b>	Visual Flight Rules
<b>VHD</b>	Vehicle-Hours of Delay
<b>VOC</b>	Volatile Organic Compound
<b>WQA</b>	Water Quality Act



# CHAPTER TWO: INTRODUCTION, BACKGROUND, AND PROJECT DESCRIPTION

This chapter describes the purpose and organization of this document and provides a brief background on the San Diego County Regional Airport Authority and forecast used in the analysis of the Proposed Project. The Proposed Project objectives and the components of the Proposed Project are briefly described and separate on-going and recent planning processes for San Diego International Airport are summarized. Lastly, incorporated references are provided.

After review of the comments on the 2007 Draft EIR the San Diego County Regional Airport Authority determined that the public comments did not identify any significant new environmental impacts from the Proposed Project or from new mitigation measures proposed in response to comments and that the public comments did not provide any new information therefore the Final Environmental Impact Report will not be re-circulated. As part of the evaluation of the comments received on the Draft Environmental Impact Report, revisions were made to the Draft Environmental Impact Report to clarify and provide additional information in the Final Environmental Impact Report. Text to be deleted is shown in strike out, and text that has been inserted is shown in underline.

## 2.1 Document Purpose and Organization

This section describes the purpose of this document and its organization.

### 2.1.1 Document Purpose

The California Environmental Quality Act is defined in Public Resources Code 21000 et. seq. and requires for any project the preparation of an objective, full-disclosure document to: [1] inform agency decision makers and the general public of the direct and indirect environmental effects of a proposed project; [2] identify and evaluate alternatives to the proposed that might lessen or avoid some or all of the identified significant impacts of the project; and [3] identify, where feasible, mitigation measures to reduce or eliminate any identified significant adverse impacts. The San Diego County Regional Airport Authority adopted the California Environmental Quality Act guidelines, *Title 14 California Code of Regulations, Division 6 Chapter 3 Guidelines for Implementing the California Environmental Quality Act*, and the Environmental Checklist questions from *Appendix G* for impact criteria on February 2, 2004. The San Diego County Regional Airport Authority has used these guidelines as their own since adoption. The City of San Diego periodically revises sections of the significance thresholds in response to California Environmental Quality Act case law, and changes in federal, state, and local regulations. Where other agencies have differing or additional criteria those criteria are specifically defined within the introduction of each resource category in Chapter Five. As such, the San Diego County Regional Airport Authority has prepared this Environmental Impact Report to address the potential environmental impacts associated with projects described herein at San Diego International Airport.

This Environmental Impact Report includes both PROGRAM and PROJECT level analyses. This Environmental Impact Report provides PROGRAM level environmental analyses of the Proposed Project by the San Diego County Regional Airport Authority to prepare and adopt an Airport Master Plan which includes an Airport Land Use Plan that designates airport uses within the Airport's jurisdiction. This Environmental Impact Report also provides PROJECT level analyses of the environmental impacts related to implementing the Airport Master Plan for specific improvements that are proposed for construction and operation to meet aviation demand through 2015.

*Title 14 California Code of Regulations, Division 6 Chapter 3 Guidelines for Implementing the California Environmental Quality Act*, section 151688 indicates that a PROGRAM level Environmental Impact Report "may be prepared on 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 issuance of 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 authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.”

The San Diego County Regional Airport Authority has determined that a PROGRAM Environmental Impact Report is best suited to consider potential environmental impacts associated with the approval of the Airport Master Plan for the following reasons:

- The Airport Authority is a new state-created agency with the authority and jurisdiction to establish planning policies for Airport facilities. The Airport Authority will adopt an Airport Land Use Plan to describe the boundaries of the Authority’s jurisdiction and existing and future Airport uses. The Airport Land Use Plan is a policy document that will guide future Airport uses when they are needed to meet future demand. Therefore, a PROGRAM Environmental Impact Report is appropriate related to items 1, 3 and 4: the Airport Land Use Plan is located in a common geographical area (item 1); serves as a “plan or other general criteria to govern the conduct of a continuing program” (item 3); and includes related activities carried out under the same regulatory authority and having generally similar environmental effects which can be mitigated in similar ways (item 4).
- Consistent with the provisions of the California Environmental Quality Act relative to addressing future master plan development at a program level of analysis, this Airport Master Plan program Environmental Impact Report anticipates future development and redevelopment of facilities and property for airport uses at the Airport, beyond that specifically identified for near-term by the Airport Implementation Plan.
- The Proposed Project includes a Proposed Airport Land Use Plan which is a policy document only. That is, the Proposed Airport Land Use Plan describes proposed land use designations which provide for generalized airport uses on land that is neither currently developable nor needed in the near-term by the San Diego County Regional Airport Authority.
- Although the Proposed Airport Land Use Plan contemplates future uses for all Airport property without a specific timetable, it is clear that the San Diego County Regional Airport Authority will ultimately develop all Airport property as needed to accommodate natural growth at the San Diego International Airport.
- While the specifics of future development outlined by the Proposed Airport Land Use Plan will be defined in the future at the project-level of planning and will undergo additional environmental review pursuant to the California Environmental Quality Act, the basic nature of, and impacts from, those future land uses should be accounted for in a programmatic environmental analysis of the Airport Master Plan.

The San Diego County Regional Airport Authority has also determined that environmental analysis of the specific improvements that are proposed for construction and operation in the Airport Master Plan process for meeting aviation demand through 2015 are best reviewed using PROJECT level environmental analysis requirements. Therefore this program Environmental Impact Report also includes analysis that is more typical of a PROJECT Environmental Impact Report.

This ~~Draft~~ Final document is not an Environmental Impact Statement under the National Environmental Policy Act or other federal environmental review requirements. Future environmental documentation will be developed for Federal review of the specific improvements within the Proposed Project necessary to meet aviation demand through 2015. This documentation will be developed using Federal Aviation Administration environmental guidance. Scoping for the Federal review of the Proposed Project will take place later in 2007.

## **2.1.2 Organization of the Report**

The document is divided into three volumes, the report and two volumes of technical appendices. The first chapter of the report is the executive summary chapter that provides an overview of the project and a summary of potential impacts and mitigation measures. Chapter Two provides an introduction and briefly

describes the proposed project. Chapter Three provides project objectives, and Chapter Four describes the Proposed Project (Preferred Alternative) and its alternatives, including the No Project Alternative. Chapter Five provides the environmental setting, impacts, and mitigation measures associated with each resource for each alternative. Chapter Six describes other effects of the Proposed Project and Chapter Seven includes closing sections of the Environmental Impact Report.

Volume Two contains appendices. Revised Appendices A through D include the Notice Of Preparation, responses to the Notice of Preparation, scoping meeting information, comments received on the previous draft environmental impact report (May 2006), and technical information and studies for noise, airfield simulation, and traffic impacts. Volume Three includes revised Appendices E through K which provides additional technical studies prepared for this Environmental Impact Report, such as air quality and human health risk analysis.

## 2.2 Background

San Diego International Airport is located in the northwest portion of the downtown area within the City of San Diego. The existing Airport site is severely constrained by its location. The Airport is bounded by North Harbor Drive and San Diego Bay to the south, the Navy water channel and Liberty Station to the west, the Marine Corps Recruit Depot to the north, and Pacific Highway and Interstate 5 to the east. Land in the vicinity of the Airport is densely developed and has high developable value due to the Airport's proximity of less than two miles from Downtown San Diego. The regional location map for San Diego International Airport is depicted in [Figure 2.1](#).

San Diego International Airport is the smallest major airport site in the U.S., consisting of 661 acres. The Airport has a single, 9,401-foot-long 200-foot-wide east-west runway, making it the busiest single-runway commercial airport in the nation. The runway is supported by one full length parallel taxiway on the south (Taxiway B) and one partial taxiway on the north (Taxiway C) as there is insufficient space between the runway and the U. S. Marine Corps Recruit Depot property. Additionally, there are ancillary taxiways that provide for runway and terminal access and aprons that provide for aircraft parking. There are, currently, two main terminals and a commuter terminal serving domestic and international passengers. Other predominate landside Airport facilities include general aviation facilities, air cargo facilities, related aviation support facilities, and Airport rescue and fire fighting facilities. San Diego International Airport's air service continues to grow based upon the growing region's demand for air travel. No changes to the runway configuration or an additional runway are included in the Proposed Project.

From 1960 to 2000, the San Diego County population grew from approximately one million residents to approximately three million residents. Each of the three existing passenger terminals was constructed during this forty-year period while annual passenger totals at San Diego International Airport tripled from 1980 to 2005. In 2006, San Diego International Airport served 17.5 million annual passengers and handled 208,000 tons of cargo.

### 2.2.1 San Diego County Regional Airport Authority

San Diego International Airport was dedicated as the San Diego region's municipal airport on August 28, 1928. On December 18, 1962, the San Diego Unified Port District (Port District) was created when the State Legislature approved Senate Bill 41, which was certified by the County Board of Supervisors. District purview included ownership and operation of the Airport. The Port District prepared San Diego International Airport's first Draft Master Plan document in 2001. This Draft Master Plan document was not adopted and the associated environmental analysis was not completed prior to the transfer of Airport ownership and operation to the San Diego County Regional Airport Authority. The San Diego County Regional Airport Authority was formed with two purposes: (1) to operate and plan San Diego International Airport and (2) to conduct an Airport Site Selection Program to identify a long-term regional airport solution.

Assembly Bill 93 established the San Diego County Regional Airport Authority Act in 2002, which created the San Diego County Regional Airport Authority as a local entity of regional government to oversee the Airport operations. The bill also required San Diego County Regional Airport Authority to adopt a comprehensive Airport Land Use Plan for all of San Diego County and conduct an Airport Site Selection Program to identify a long-term regional airport solution. Governor Davis signed Senate Bill 1896 into law

in August 2002, which amended Assembly Bill 93 regarding the selection and appointment of San Diego County Regional Airport Authority Board members. Finally, on January 1, 2003, the ownership and operation of San Diego International Airport was transferred to the San Diego County Regional Airport Authority from the Port District as required by the Airport Authority Act.

The transfer from the Port District shifted planning responsibilities, operation, and control of the Airport to the San Diego County Regional Airport Authority. The San Diego County Regional Airport Authority is governed by a nine-member Board. All Board members are appointed. Three of the Board members are paid and constitute the Executive Committee. Seven Board members are appointed by mayors of various communities within San Diego County. One Board member is appointed by the San Diego County Sheriff and another by the Governor of the State of California. The San Diego County Regional Airport Authority Board is responsible for all policy and planning decisions for the San Diego International Airport and serves as the lead agency in accordance with the California Environmental Quality Act. Other San Diego County Regional Airport Authority programs and responsibilities related to regional airport planning are described in Section 2.4, *Other Airport Authority Programs*.

## **2.2.2 Aviation Forecast Update and Planning Horizon Used for Environmental Analysis**

A forecast provides the basis of the aircraft movements and passenger numbers that in turn assist in defining the types and timing of uses provided the Master Plan and specific facilities that may be required in the short, medium, and long term. To inform the Master Plan process San Diego County Regional Airport Authority prepared and published a new aviation activity forecast in June 2004. The forecast analyzed future aviation activity and demand in the San Diego Region through 2030.

The forecast is based on regional growth and economic trends as well as events that impacted aviation activity, such as the terrorist attacks of September 11, 2001. The forecast was prepared by SH&E and included both a low and high growth scenario and was approved by the Federal Aviation Administration in June of 2005. The unconstrained high growth scenario comports with the Federal Aviation Administration's 2007 Terminal Area Forecast for San Diego International Airport. Growth in passengers has exceeded the forecast growth in 2004, 2005, and 2006, the first three full years after the forecast was completed. Growth in operations has more closely matched the high growth scenario than the low growth scenario over the same period. Because the trend at San Diego International Airport is tracking more closely to the high growth scenario, the high growth scenario will be used for analysis in this Environmental Impact Report.

The Draft Environmental Impact Report issued by the San Diego County Regional Airport Authority in May 2006 limited environmental consideration to the year 2015. As a result of comments received on the May 2006 document this Draft Final Environmental Impact Report considers potential environmental impacts through the year 2030. Regional transportation plans use 2030 as a planning horizon. Therefore, analyzing impacts of the Proposed Project through 2030 allows a direct comparison with regional transportation plans. Although the environmental analysis for potential impact considers operational growth for the Airport through 2030 no additional improvements are proposed for San Diego International Airport beyond those needed to accommodate growth through 2015. The San Diego International Airport Master Plan considers improvements conceptually through 2030; however, implementation of specific improvements is developed only through 2015. Future phases of planning for San Diego International Airport will focus on specific improvements beyond 2015. As these improvements are developed and become described for environmental consideration, additional environmental review will be undertaken by the San Diego County Regional Airport Authority.

### **Unconstrained versus Single-Runway-Constrained Forecasts**

A summary of the San Diego International Airport Aviation Activity forecast is shown in **Table 2-1**. The San Diego County Regional Airport Authority prepared both constrained and unconstrained forecasts of aviation activity through 2030 that could be used for facilities planning and in evaluating airport improvements. The unconstrained forecast represents projections of how San Diego metropolitan area passenger demand, airline flights and other activity segments are likely to grow in the future, without consideration of the constraints on the growth that may be imposed by facility limitations at San Diego International Airport. The constrained forecast reflects the limitations of the existing San Diego

International Airport facilities, specifically its single runway, and represents a projection of how aviation activity would grow if no additional runway capacity is provided.

The most constraining component of an airport defines the practical capacity<sup>1</sup> of the entire airport. An airport is a complex system made up of components through which passengers and aircraft flow in a sequential order. Aircraft arriving at the airport pass through the airspace, land on the runway, travel on the taxiways, and proceed to the terminal gates to unload and reload passengers. Once loaded and ready for departure, the aircraft pass back through these same components in reverse order.

Table 2-1  
Forecast Annual Aircraft Operations

Year	Passenger	Cargo	General Aviation	Military	Total
2005 (a)	189,299	7,400	12,618	195	209,512
2006 (b)	188,830	6,592	13,657	412	209,491
2010 (c)	205,756	5,116	16,530	1,130	228,572
2015 (c)	234,776	6,936	18,439	1,130	261,281
2020 (c)	252,766	8,755	18,439	1,130	281,100
2025 (c)	260,196	10,135	18,439	1,130	289,900
2030 (c)	267,616	11,515	18,439	1,130	298,700

Notes:

(a) Operations for 2005 were extrapolated at the onset of this study (April 2005) and those numbers were used for analysis of 2005. Operations modeled for San Diego International Airport were as follows: Passenger 190,002; Cargo 7,206; General Aviation 13,586; and Military 571.

(b) Actual operational levels.

(c) Constrained High Scenario Forecast.

Source: SH& E Aviation Activity Forecast, June 2004 and Draft Airport Master Plan, HNTB, October 2007.

Passengers move through the system in a similar set of sequential steps. Departing passengers travel on local roadways and on-airport roads, arrive at the terminal from the curbside, parking, or other shuttle facilities, are then processed in the terminal and proceed to the designated aircraft gate for boarding. Arriving passengers generally proceed through these steps in reverse order upon arrival at an airport. Exceptions for arriving passengers include domestic connecting passengers who board other flights and international arrivals who move through federal inspection facilities and baggage claim before they connect to other flights or use ground transportation.

Each component of the airport system (i.e., the airfield, terminal passenger facilities, and the curbside) has an operational or passenger capacity that is a function of the physical characteristics of the component. When an airport system component is operating at "capacity," – meaning that it is processing a maximum level of hourly operations given its characteristics and procedures, increasing the capacity of other components does not increase the capacity of the system. For example, if a runway is operating at its throughput operational capacity and, by definition, is accepting the maximum number of hourly arriving and/or departing flights without regard for delay, increasing the number of gates would not improve the airport's ability to accept more arriving flights. The runway system would have to be expanded to increase the throughput operational rate.

<sup>1</sup> *Practical Capacity* is a term used here to refer to the number of hourly or annual aircraft operations (takeoffs and landings) that can be accommodated with no more than a given amount of delay, usually expressed in terms of maximum acceptable average delay (since delay is a dynamic variable, airport and airspace simulation modeling was used to develop delay averages, which recognize that at some aircraft will be delayed more than the specified levels and some less). Initial simulation modeling was performed in development of the constrained forecast and more extensive airspace and airfield modeling was performed for the Master Plan to fully analyze aircraft movement throughout the airspace, airfield and gate areas.

The Airport Master Plan used the single-runway constrained forecast to develop airport requirements for airfield, terminal, and ground transportation facilities. While each of these facilities has unique characteristics, they operate collectively as a system for moving people and goods. The capacity of this Airport system is limited by its constraining component, the single runway. Capacity improvements made to the terminals and ground transportation components in this situation would increase the level of service experienced by the user without increasing the overall capacity of the San Diego International Airport.

The constrained high scenario forecast, which is used in this Environmental Impact Report for conservative analysis purposes, indicates aircraft operations would increase by 2.3 percent annually over the next 10 years. [Table 2-2](#) provides a summary of corresponding Airport passenger activity forecast. Passengers are expected to increase by 2.8 percent per year over the next 10 years. Both expected aircraft and passenger growth over the next 10 years would exacerbate existing congestion problems. [Appendix I](#) provides follow-on derivative forecast development for the annual average day used for the environmental analysis contained in this program Environmental Impact Report, which is summarized in Section 2.2.3, *Derivative Forecast for Environmental Analysis*.

Table 2-2  
Forecast Annual Passengers

Year	Passengers
2005 (actual, a)	17,372,521
2006 (actual)	17,481,942
<u>2007 (actual)</u>	<u>18,326,761</u>
2010 (b)	19,500,000
2015 (b)	22,800,000
2020 (b)	25,100,000
2025 (b)	26,600,000
2030 (b)	28,200,000

Notes:

(a) Annual passengers for 2005 were extrapolated at the onset of this study (April 2005) and those numbers were used for analysis of 2005. Passenger numbers extrapolated for 2005 were 17,689,972.

(b) Constrained High Scenario Forecast.

Source: SH&E Aviation Activity Forecast, June 2004 and Draft Airport Master Plan, HNTB, October 2007.

## 2.2.3 Derivative Forecast for Environmental Analysis

This section reviews the forecasts used in the Airport Master Plan and describes their application in this environmental analysis. The forecasts build upon the work prepared for the Airport Master Plan completed in 2005 and are intended to assist in evaluation of the impacts of the three terminal development alternatives: the Proposed Project (Preferred Alternative), the East Terminal Alternative, and the No Project Alternative. These alternatives are described in detail in Chapter 4, *Proposed Project and Alternatives*. The years of interest in this analysis are the base year/existing conditions (2005) and future years 2010, 2015, 2020, 2025, and 2030. The principle purpose of the forecasts developed for this Environmental Impact Report is to provide input for the traffic, noise, and air quality analysis.

The annual activity forecasts are discussed first. A description of the preparation of the gated flight schedules, including the assumptions and methodology, follows. These are provided for both the project alternatives and the No Project Alternative. Lastly, a description of the gate requirements and other derivative forecast results is provided.

### 2.2.3.1 Summary of Annual Forecasts

The annual forecasts were based on *San Diego International Airport Aviation Activity Forecasts* prepared by SH&E. The Aviation Activity Forecast was published in June 2004 and used 2002 as a base year. It included a low and a high forecast and also provided runway-constrained scenarios for each case. The runway-constrained forecasts assumed no new runways would be built at San Diego International Airport, while the unconstrained forecast assumed that new runways would be built as passenger demand

warranted. The report included forecasts for domestic and international passengers, air cargo tonnage, aircraft operations by major category, and fleet mix. Peak hour passenger projections were not included. Passengers are defined as travelers riding in an aircraft that are not part of the aircraft crew. The passenger forecast was prepared using a statistical forecasting model, based on regional income and air carrier fares, very similar to the previous draft Master Plan forecasting model, but with more recent data.

Members of San Diego County Regional Airport Authority staff, the Federal Aviation Administration (FAA), and the Airport Master Plan consulting team reviewed the assumptions and approach for reasonableness. The FAA officially approved the forecast in June 28, 2005. Then the forecast results were compared with the most recent available information on Airport activity. The forecast approach was deemed to be reasonable, and comparison of the high and low forecast levels with activity to date is presented in [Table 2-3](#).<sup>2</sup>

[Table 2-3](#) provides actual activity prior to 2005 and an estimate of 2005 activity extrapolated from the first three months of data in 2005. The extrapolated data was used for the base year/existing conditions analysis.<sup>3</sup> Under the high scenario, the constrained forecast parallels the unconstrained forecast until 2015. Under the low scenario, the constrained forecast parallels the unconstrained forecast until 2022.

As shown in [Table 2-3](#), actual passenger enplanements exceeded the 2005 high forecast by 5.7 percent and the low forecast by 10.0 percent. The increase above forecast levels is entirely attributable to domestic activity. International enplanements declined significantly in 2004 with the loss of London and Canadian service. In contrast to passenger enplanements, aircraft operations are more closely tracking the high forecast, differing by only 1.8 percent in 2005. Passenger enplanements are the total number of people boarding an aircraft except for on-duty crew. Passenger deplanements are the total number of people disembarking an aircraft except for on-duty crew. Total passengers are the sum of passenger enplanements and deplanements.

Although the passenger activity exceeded the high forecast by 5.7 percent in 2005, high jet fuel prices dampened the growth in activity in 2006 and actual passenger activity exceeded the forecast by only 2.7 percent. The differences between actual and forecast activity are still within the range of variability normally expected from year to year. In fact, the FAA's Terminal Area Forecasts for San Diego, published in March 2007, project 2015 passenger enplanements to be about the same as the Airport Master Plan high forecast, however by 2025 the Terminal Area Forecast projects that enplanements would be approximately 12 percent higher than the Master Plan Forecast. This divergence in enplanements forecast is due to the unconstrained forecasting assumption of the Terminal Area Forecast. The FAA's Terminal Area Forecasts project 2015 aircraft operations differ from the Airport Master Plan forecast by slightly less than 10 percent, despite the fact that the FAA's control tower reports that it handles through the San Diego International Airport airspace (called overflights) that do not use San Diego International Airport for takeoffs and landings, therefore these numbers include some overflights and overstate the difference. By the year 2025 the divergence in operational levels between the Airport Master Plan high forecast and the Terminal Area Forecast is more pronounced and is more than 20 percent lower than the Terminal Area Forecast. This difference is again likely due in part to the unconstrained nature of the Terminal Area Forecast. It is noted that for the Federal Aviation Administration to consider forecasts to be consistent with their Terminal Area Forecast the forecast must differ by less than 10 percent in the 5-year forecast and 15 percent in the 10-year period, or the forecast activity levels will not affect the timing or scale of an airport project.<sup>4</sup> With these criteria in mind, the Federal Aviation Administration approved forecast is still viable. To date, however, it is clear that actual activity has more closely matched the high forecast than the low forecast.

In addition to passengers, the high forecast also predicts growth in air cargo operations and volumes of cargo (measured in cargo tons). All cargo operations are forecast to grow in 2010 to 5,116 operations

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<sup>2</sup> Details of the review can be found in the Airport Master Plan report, HNTB, October 2007.

<sup>3</sup> The analysis described in this section was performed in late spring and early summer of 2005.

<sup>4</sup> Revision to Guidance on Review and Approval of Aviation Forecasts, Federal Aviation Administration, December 23, 2004.

carrying 190,118 tons of cargo and in 2030 to 11,515 operations carrying 526,930 tons of cargo. Additional cargo facilities would be required to be developed at San Diego International Airport to load, sort and distribute this cargo from the aircraft to ground vehicles.

The demand for general aviation facilities at San Diego International Airport is anticipated to grow modestly as general aviation operations are forecast to increase 1% annually from 13,586 general aviation operations in 2005 to approximately 16,530 general aviation operations in 2010 and 18,439 in general aviation operations 2015. General aviation operations are expected to level out beyond 2015 at San Diego International Airport in the constrained condition.

The Airport Land Use Plan designates airport support uses that may serve air cargo and general aviation demand in the future by providing air cargo and general aviation facilities on the airport.

**Table 2-4** shows the high unconstrained and runway-constrained forecasts in more detail. Values for 2015 and 2025 were interpolated where necessary. Consistent with the Airport Master Plan, the high constrained forecast was used for the environmental analysis.

### **2.2.3.2 Approach to Preparation of Gated Flight Schedules**

Gated flight schedules were prepared from the annual forecasts as a means of generating derivative forecasts, including gate requirements, for use in the Airport Master Plan. A gated flight schedule is a schedule of aircraft operations that takes into the consideration availability of gates specific to each airline carrier's needs. Since the intent of the Airport Master Plan was to provide adequate facilities to accommodate traffic during peak periods, those gated flight schedules were designed to represent peak month activity. The environmental analysis is intended to be representative of the entire year, therefore, the gated flight schedules for the environmental analysis are for an average annual day rather than an average weekday in the peak month.

Sixteen gated flight schedules were prepared for the environmental analysis. They included:

- Base year/existing conditions (2005)
- Proposed Project (Preferred Alternative) for 2010
- Proposed Project (Preferred Alternative) for 2015
- Proposed Project (Preferred Alternative) for 2020
- Proposed Project (Preferred Alternative) for 2025
- Proposed Project (Preferred Alternative) for 2030
- East Terminal Alternative for 2010
- East Terminal Alternative for 2015
- East Terminal Alternative for 2020
- East Terminal Alternative for 2025
- East Terminal Alternative for 2030
- No Project Alternative for 2010
- No Project Alternative for 2015
- No Project Alternative for 2020
- No Project Alternative for 2025
- No Project Alternative for 2030



Table 2-3

## Comparison of Actual and Forecast Aviation Activity

Activity Category	2002 Baseline	2004	2005 (a)	2006(a)	2010	2020	2030
<b>Actual Activity (b)</b>							
Passenger Enplanements							
Domestic	7,321,641	8,124,791	8,561,714	8,633,671			
International	150,003	75,896	130,980	125,998			
<b>Total</b>	<b>7,471,644</b>	<b>8,200,687</b>	<b>8,692,694</b>	<b>8,759,669</b>			
Operations							
Passenger	174,370	178,538	190,002	188,830			
Cargo	4,634	4,960	7,206	6,592			
General Aviation	15,044	13,734	13,586	13,657			
Military	1,253	1,241	571	412			
<b>Total</b>	<b>195,301</b>	<b>198,473</b>	<b>211,365</b>	<b>209,491</b>			
<b>High Forecast – Unconstrained (c)</b>							
Passenger Enplanements							
Domestic	7,321,641	7,738,224	8,060,303	8,331,806	9,417,820	12,295,248	15,382,283
International	150,003	141,000	160,000	196,400	342,000	670,000	954,000
<b>Total</b>	<b>7,471,644</b>	<b>7,879,224</b>	<b>8,220,303</b>	<b>8,528,206</b>	<b>9,759,820</b>	<b>12,965,248</b>	<b>16,336,283</b>
Difference (e)	0.00%	4.10%	5.75%	2.71%			
Operations							
Passenger	174,370	182,226	186,155	190,083	205,796	263,756	326,970
Cargo (d)	4,634	4,755	4,815	4,875	5,116	8,755	11,515
General Aviation (d)	15,044	15,416	15,601	15,787	16,530	20,348	25,049
Military	1,253	1,130	1,130	1,130	1,130	1,130	1,130
<b>Total</b>	<b>195,301</b>	<b>203,526</b>	<b>207,701</b>	<b>211,875</b>	<b>228,572</b>	<b>293,989</b>	<b>364,664</b>
Difference (e)	0.0%	-2.5%	1.8%	-1.1%			
<b>Low Forecast - Unconstrained (c)</b>							
Passenger Enplanements							
Domestic	7,321,641	7,647,308	7,755,243	7,904,701	8,502,533	10,544,669	12,922,281
International	150,003	139,000	144,000	178,800	318,000	502,000	636,000
<b>Total</b>	<b>7,471,644</b>	<b>7,786,308</b>	<b>7,899,243</b>	<b>8,083,501</b>	<b>8,820,533</b>	<b>11,046,669</b>	<b>13,558,281</b>
Difference (e)	0.0%	5.3%	10.0%	8.36%			

Table 2-3

## Comparison of Actual and Forecast Aviation Activity

Activity Category	2002 Baseline	2004	2005 (a)	2006(a)	2010	2020	2030
<b>Low Forecast - Unconstrained (c) (continued)</b>							
Operations							
Passenger	174,370	177,270	178,720	180,170	185,971	225,444	272,890
Cargo (d)	4,634	4,655	4,666	4,676	4,718	6,716	9,016
General Aviation (d)	15,044	15,071	15,084	15,097	15,150	17,239	19,616
Military	1,253	1,130	1,130	1,130	1,130	1,130	1,130
<b>Total</b>	<b>195,301</b>	<b>198,126</b>	<b>199,599</b>	<b>201,073</b>	<b>206,969</b>	<b>250,529</b>	<b>302,652</b>
Difference (e)	0.0%	0.2%	5.9%	4.2%			

## Notes:

- (a) Numbers in Tables 2-5 and 2-9 were based on estimates extrapolated from data through March 2005, which differ slightly from the complete calendar year data in this table.
- (b) San Diego International Airport, Air Traffic Reports.
- (c) SH&E, San Diego International Airport, Aviation Activity Forecasts.
- (d) Values for 2003, 2004, 2005, and 2006 are interpolated.
- (e) Percentage by which actual numbers exceed or trail forecast numbers.

Table 2-4

## Annual Forecasts of Activity – Aviation Activity High Forecast

Activity Category	Actual	Forecast					
	2002 Baseline	2005	2010	2015	2020	2025	2030
<b>Unconstrained Forecast</b>							
Passenger Enplanements							
Domestic	7,321,641	8,060,303	9,417,820	10,846,004	12,295,248	13,750,391	15,382,283
International	150,003	160,000	342,000	557,000	670,000	800,000	954,000
<b>Total</b>	<b>7,471,644</b>	<b>8,220,303</b>	<b>9,759,820</b>	<b>11,403,004</b>	<b>12,965,248</b>	<b>14,550,391</b>	<b>16,336,283</b>
Operations							
Passenger	174,370	186,155	205,796	234,776	263,756	295,363	326,970
Cargo (a)	4,634	4,815	5,116	6,936	8,755	10,135	11,515
General Aviation (a)	15,044	15,601	16,530	18,439	20,348	22,699	25,049
Military	1,253	1,130	1,130	1,130	1,130	1,130	1,130
<b>Total</b>	<b>195,301</b>	<b>207,701</b>	<b>228,572</b>	<b>261,281</b>	<b>293,989</b>	<b>329,327</b>	<b>364,664</b>
<b>Constrained Forecast</b>							
Passenger Enplanements							
Domestic (b)	7,321,641	8,060,303	9,417,820	10,846,004	11,874,500	12,520,250	13,166,000
International (c)	150,003	160,000	342,000	557,000	670,000	800,000	954,000
<b>Total (d)</b>	<b>7,471,644</b>	<b>8,220,303</b>	<b>9,759,820</b>	<b>11,403,004</b>	<b>12,544,500</b>	<b>13,320,250</b>	<b>14,120,000</b>
Operations							
Passenger (d)	174,370	186,155	205,796	234,776	252,776	260,196	267,616
Cargo (c)	4,634	4,815	5,116	6,936	8,755	10,135	11,515
General Aviation (e)	15,044	15,601	16,530	18,439	18,439	18,439	18,439
Military (c)	1,253	1,130	1,130	1,130	1,130	1,130	1,130
<b>Total</b>	<b>195,301</b>	<b>207,701</b>	<b>228,572</b>	<b>261,281</b>	<b>281,100</b>	<b>289,900</b>	<b>298,700</b>

## Notes:

(a) 2005, 2015, and 2025 interpolated.

(b) Total enplanements less international enplanements.

(c) Assumed to be the same as in unconstrained case.

(d) Activity through 2015 assumed to be the same as unconstrained case, 2020 and 2030 from SH&amp;E Forecast, 2025 interpolated.

(e) No growth after 2015, in accordance with SH&amp;E forecast.

Sources: As noted, SH&amp;E, San Diego International Airport Aviation Activity Forecasts, June 2004, and HNTB analysis.

These schedules were prepared using the runway-constrained high forecast. In a gated flight schedule, forecasts are made on a flight-by-flight basis for an average annual day. The purpose of the gated flight schedule is to provide the necessary detail from which to prepare hourly activity forecasts that reflect the impacts of the Airport throughout the day.

The approach used to prepare the flight schedules is the same as that used in the Airport Master Plan and involved several steps. First, the annual aircraft operations projections from the forecasts (see [Table 2-4](#)) were converted into operations for the average annual day. The operations were then distributed among markets by airline and aircraft type. The final step was to assign arrival and departure times to each of the flights identified in the market analysis.

## **Average Annual Day Aircraft Operation Forecasts**

[Table 2-5](#) shows the average annual day forecasts for the high constrained scenario from 2010 through 2030. As shown in [Table 2-5](#), 574 average annual day operations were estimated for 2005, 626 average annual day operations are projected for 2010, 716 average annual day operations are projected for 2015, and 819 operations are projected in 2030. The average annual day is a day that represents all of the total annual operations and those operations are then divided by 365. The average annual day allows representation of all aircraft types that fly into San Diego International Airport.

## **Air Service Assumptions**

The average annual day operations estimates were allocated by market, airline, and aircraft type before conversion to gated flight schedules. Existing flights by market were obtained from an electronic version of the Official Airline Guide schedules. The flight time distributions for non-scheduled operations were obtained from Airport radar data. Origins and destinations for non-scheduled markets were estimated based on available information on carrier markets and aircraft ranges.

Attachment A of [Appendix I](#) presents the 2010 through 2030 estimates of scheduled passenger aircraft departures by market, airline, and aircraft type. There were several steps involved:

- 1) *Establish overall totals for aircraft departures and seat departures.* The total for departures came directly from [Table 2-5](#). The total for scheduled seat departures was obtained by dividing the passenger projections by the load factor projections.
- 2) *Apportion seat departures by market.* Scheduled seat departures in each market were projected to grow at the forecast passenger growth rate for that market segment (<500 miles, 500-2000 miles, 2000+ miles), then adjusted for the forecast of load factor, as well as the ratio of constrained to unconstrained passengers.
- 3) *Identify new domestic non-stop markets.* New non-stop markets were estimated based on current origin and destination thresholds for non-stop service at San Diego International Airport. Candidate markets for non-stop service were determined by identifying the current thresholds of origin and destination traffic that justified non-stop service to San Diego International Airport markets. These thresholds vary, depending on the type of market. For example, nearby markets tend to have lower origin and destination thresholds than more distant markets because service can be offered with smaller aircraft and because there is less competition from connecting hubs between the two markets. The origin and destination threshold for non-stop service was assumed to be the average of the largest origin and destination market without non-stop service and the smallest origin and destination market with non-stop service in each market segment. Origin and destination traffic in each market was assumed to grow at the same rate as the passenger forecast for that segment. If future year originations in a market exceeded the origin and destination threshold for that market's segment, it was assumed that that market would obtain non-stop service.
- 4) *Adjust seat departures in existing non-stop markets.* Seat departures to new non-stop markets were balanced by a corresponding reduction in seat departures to existing airline hubs in the same market segment, based on the assumption that new non-stop passengers would be drawn from ranks of existing connecting passengers.

Table 2-5

## Estimated Average Weekday Peak Month Operations – Aviation Activity High Constrained Forecast

Activity Category	2005		2010		2015		2020		2025		2030	
	Annual (a)	Average Annual Day (c)	Annual (b)	Average Annual Day (c)	Annual (b)	Average Annual Day (c)	Annual (b)	Average Annual Day (c)	Annual (b)	Average Annual Day (c)	Annual (b)	Average Annual Day (c)
<b>Operations</b>												
Domestic Passenger (b)	189,299	519	205,796	564	234,776	643	252,776	693	260,196	713	267,616	733
Cargo (c)	7,400	20	5,116	14	6,936	19	8,755	24	10,135	28	11,515	32
General Aviation (d)	12,618	35	16,530	45	18,439	51	18,439	51	18,439	51	18,439	51
Military (e)	195	1	1,130	3	1,130	3	1,130	3	1,130	3	1,130	3
<b>Total</b>	<b>209,512</b>	<b>574</b>	<b>228,572</b>	<b>626</b>	<b>261,281</b>	<b>716</b>	<b>286,100</b>	<b>771</b>	<b>289,900</b>	<b>795</b>	<b>298,700</b>	<b>819</b>
<b>Departures (d)</b>												
Domestic Passenger	94,650	259	102,898	282	117,388	322	126,388	346	130,098	357	133,808	367
Cargo	3,700	10	2,558	7	3,468	10	4,378	12	5,068	14	5,758	16
General Aviation	6,309	17	8,265	23	9,220	25	9,220	26	9,220	26	9,220	26
Military	98	0	565	1	565	1	565	1	565	1	565	1
<b>Total</b>	<b>104,756</b>	<b>287</b>	<b>114,286</b>	<b>313</b>	<b>130,641</b>	<b>358</b>	<b>140,551</b>	<b>385</b>	<b>144,951</b>	<b>398</b>	<b>149,351</b>	<b>410</b>

Notes:

(a) Table 2-1.

(b) Table 2-4.

(c) Annual divided by 365 days.

(d) Operations divided by 2.

Sources: As noted, Federal Aviation Administration Air Traffic Activity Database System, San Diego International Airport, Air Traffic Report, and HNTB analysis.

- 5) *Identify international markets.* International markets were taken directly from the forecast analysis prepared by SH&E.
- 6) *Allocate individual market seat departures to airlines.* Airlines were assumed to serve each market based on existing service trends, existing airline service strategies, and the assumptions contained in SH&E report. Critical assumptions were:
  - Increased market share by low fare carriers such as Southwest and JetBlue.
  - No major change in hubbing strategy among legacy carriers.
  - No major airline liquidations or consolidation.
- 7) *Allocate individual airline seat departures by market to aircraft.* This step was taken in conjunction with Step 6. Aircraft were assumed to serve each market based on the fleet and fleet acquisition plans for each airline, and the unconstrained fleet mix.

Average annual day air cargo, general aviation, and military operations were obtained from [Table 2-5](#). The future fleet mix for these categories was taken from the SH&E forecast report. The current distribution of cargo routes was assumed to continue into the future.

### **Gated Flight Schedules**

The base year gated flight schedule was prepared using Official Airline Guide schedules for May 2005<sup>5</sup>, adjusted slightly to match the average annual day operation totals calculated in [Table 2-5](#). Gate assignments by flight were based on the flight information provided on San Diego International Airport's official website.

Gated flight schedules were developed for 2010 through 2030 at 5 year intervals using the existing flight schedule and the average annual day service projections in [Table I.1](#) as controls. These schedules include operations performed by all segments of aviation – passenger, cargo, general aviation, and military flights. The schedules provide the following detail for each flight: 1) type of operation – arrival or departure, 2) time of operation, 3) airline (except general aviation flights), 4) equipment, 5) origin for arrivals, and destination for departures, 6) gate, 7) passenger deplanements and terminations for aircraft arrivals, and 8) passenger enplanements and originations for aircraft departures.

The gated flight schedules were prepared using the following steps:

- 1) *Identify arrival and departure times for existing flights.* The May 2005 Official Airline Guide schedule was used to identify these times. Where necessary, the equipment for existing flights was changed to reflect the fleet mix projection in [Table I.1](#).
- 2) *Identify arrival and departure times for new flights.* Times for new flights were based on the flight times for the same market to Los Angeles International Airport where available. Otherwise, flight times for new flights were based on judgment, taking into account the following factors:
  - When scheduling multiple frequencies with the same city pair market for any individual airline, an attempt was made to distribute the flights in a balanced manner over the course of the day.
  - Flights were scheduled to avoid take-offs and landings during nighttime (2300-0600) at destination markets (i.e., no arrivals from the East Coast before 9-10 AM and no departures for the East Coast after 3-4 PM, unless a “red-eye” flight).
  - When scheduling flights in a new market, departures and arrivals were timed similarly as those found in comparable markets (i.e., a new transcontinental market had flights timed similarly to an existing transcontinental market).

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<sup>5</sup> In order to maintain consistency with previous gating schedules no modifications were made due to newer editions of the Official Airline Guide.

- 3) *Determine Aircraft Turnarounds.* Aircraft turnarounds (determination of which arriving flight becomes (is paired with) which departing flight) were based on current practice and are as follows:
  - Regional aircraft turnarounds were scheduled for no less than 25 minutes.
  - Wide-body aircraft turnarounds were scheduled for no less than one hour.
  - Narrow-body turnarounds for most airlines were scheduled for no less than 45 minutes.
  - Turnarounds for Southwest Airlines were scheduled for no less than 20 minutes.
- 4) *Determine load factors by market.* Average load factors for the average annual day were assumed to be the same as the annual load factors in the SH&E forecast. Average load factors were assumed to be the same for all markets in each segment.
- 5) *Determine load factors by flight.* The distribution of load factors by time of day was based on judgment, with an effort made to increase load factors during the morning and afternoon peaks at the place of origin.
- 6) *Determine passenger originations and terminations by flight.* Ratio of originations to enplanements by carrier based on existing airline origin and destination ratios at San Diego International Airport, and adjusted to match SH&E projection of 96 percent.
- 7) *Assign Gates.* Airline gate assignments for the Proposed Project (Preferred Alternative) were the same as in the Airport Master Plan (see [Appendix D](#) in Master Plan). [Table 2-6](#) shows the summary gate requirements for the Proposed Project (Preferred Alternative) which assumes preferential use. Preferential use of gate implies that airlines do not share gates, as opposed to common use of gates in which airlines share the same gate. The gate requirements for the East Terminal Alternative are the same as for the Proposed Project (Preferred Alternative), the difference being that expansion is assumed to occur to the east of the existing terminal complex rather than to the west. The following guidelines were used to assign gates under the East Terminal Alternative:
  - provide each domestic airline with its own gates where possible;
  - locate alliance partners at adjacent gates;
  - keep major airlines at existing gates where possible;
  - reserve the Commuter Terminal for flights to Los Angeles International Airport;
  - use a fifteen minute buffer between a departing flight and the next arriving flight at a gate;
  - assume common use for international arrival gates; and
  - balance utilization across gates.

## **No Project Alternative**

The environmental evaluation process requires the examination of a “No Project” alternative against which to compare the impacts of the proposed alternative. The No Project Alternative is intended to represent the most likely way in which San Diego International Airport would accommodate the projected demand absent the construction of any projects that have not yet received the required environmental approvals. In this instance, it would mean that the Airport would not be able to add any contact gates or expand any of the associated terminal and roadway facilities.

The estimate of common use gate requirements, as shown in [Table 2-6](#), indicates that the projected 2015 passenger aircraft traffic could be theoretically accommodated with the existing number of gates, provided that commuter aircraft operations continue to use the commuter terminal. Common use of gates implies that airlines share gates as schedules demand. The 2010 through 2030 flight schedules were gated using the existing terminal layout. No changes in flight schedules were required through 2015; however, airlines would be required to share gates much more than they do currently and passenger hold rooms would not be expanded. Using this methodology it was determined that forecast flight operations could not completely be accommodated beyond 2020 (i.e., flight schedules were reduced beyond 2020 due to gate constraints).

Table 2-6  
**Summary of Gate Requirements (a)**

Aircraft	2015(b)	
	Common Use	Preferential Use (c)
Widebody	4	5
Large Narrowbody (757)	5	5
Other Narrowbody	28	34
Regional	4	7
International	4	3
<b>Total</b>	<b>45</b>	<b>54</b>

Notes:

- (a) Airport Master Plan, Table 5-3. Estimates do not include any spare gates.
- (b) Gate requirements past 2015 are not being evaluated in this EIR.
- (c) Preferential use gate requirements for 2015 were prepared in more detail than the other cases and designed to use existing terminal facilities to the extent possible. The buffer times for international gates were relaxed slightly to avoid major reconstruction in the international arrivals area. Hence, the international gate requirements for the preferential use scenario are lower than for the common use scenario.

Sources: As noted and HNTB analysis.

The gating exercise demonstrates the projected 2015 through 2030 flight schedules with the existing gates, under common gate use assumptions. The gating exercise does not account for additional delays resulting from the high congestion, lack of flexibility, operational complexity resulting from extensive gate sharing, and extremely poor passenger service levels resulting from the crowded terminal area and congested roadways.

Other comparable airports were examined to address the potential impact of these issues. Airports were considered comparable if they were large origin and destination airports located on the West Coast with limited international activity. These airports included Ontario, John Wayne, Portland, Oregon, Sacramento, Oakland, San Jose, and Burbank.

Airlines vary in their rates of gate utilization and airports vary in their mix of airlines. Consequently, to render the comparison more meaningful, airlines were broken out into four major categories, Short and Medium Haul, Long Haul, Southwest, and International. Commuter airlines that do not use contact gates were excluded from the analysis. **Table 2-7** shows the existing breakout for San Diego International Airport.

**Table 2-8** shows gate utilization by airline category for the comparison airports and for San Diego International Airport, both currently and under the 2015 through 2030 No Project Alternative. Note that airports that are terminally constrained (John Wayne and Burbank) or are embarking on major terminal expansion projects (Oakland) have much higher gate utilization rates than the other airports in the sample. Under the 2020 No Project Alternative, San Diego International Airport's terminal utilization rates would be well above the average for the comparison airports, but still marginally below the maximum utilization rate in each airline category, except international. The projected international utilization rate (4.21) is slightly above Oakland's international utilization rate (3.55). Compared to domestic rates, however, the international utilization rate is still modest. Beyond 2020 the No Project Alternative can not accommodate all the flights forecast and operations are therefore constrained.

The utilization rates in **Table 2-8** suggest that beyond 2020 under the No Project Alternative, San Diego International Airport would meet a breaking point. Based on the experience of other congested airports such as Oakland, Burbank, and John Wayne, airlines would still be accommodating the projected activity, however. Therefore, the No Project Alternative gated flight schedule represents a plausible No Project Alternative through 2020 but fails to accommodate all the forecast operations beyond that timeline. The facility shortfall would be reflected by increased ramp congestion, arrival gate delays, higher airline operational costs, more bottlenecks and delays within the terminal, especially in security cues, congested hold rooms, and higher curbside congestion.



Table 2-7

## 2005 Baseline San Diego International Airport Gate Use

Airline	Number of Gates	Number of Average Annual Day Departures (a)	Average Utilization Rate
<b>Short and Medium Haul Airlines</b>			
Alaska	2.00	12	6.00
America West	2.00	18	9.00
Frontier	0.71	5	7.00
<b>Subtotal</b>	<b>4.71</b>	<b>35.0</b>	<b>7.42</b>
<b>Long Haul Airlines</b>			
American	8.00	21	2.63
Aloha	0.50	3	6.00
JetBlue	0.43	3	7.00
Continental	2.00	9	4.50
Independence Air	0.14	1	7.00
Delta/Skywest/Comair	3.24	14	4.32
Hawaiian	0.33	1	3.00
Northwest	2.50	6	2.40
Sun Country	0.14	1	7.00
United/Skywest	5.00	21	4.20
US Airways	1.00	6	6.00
<b>Subtotal</b>	<b>23.29</b>	<b>86.0</b>	<b>3.69</b>
<b>Southwest Airlines</b>			
Southwest	10	84	8.40
<b>International Gates</b>			
Common Use	2	5	2.50
<b>Unused Gate</b>			
Unused	1	0	0.00
<b>Commuter Positions</b>			
American Eagle	5	28	5.60
United/Skywest	5	21	4.20
<b>Subtotal</b>	<b>10</b>	<b>49</b>	<b>4.90</b>
<b>TOTAL MAINLINE</b>	<b>41</b>	<b>210</b>	<b>5.12</b>

Note:

(a) Average annual day in 2005.

Source: HNTB analysis.

Table 2-8

**Gate Utilization at Comparable Airports**

<b>Airport</b>	<b>Short and Medium Haul Airlines</b>	<b>Long Haul Airlines</b>	<b>Southwest</b>	<b>International</b>
Ontario	4.06	4.56	6.79	2.51
John Wayne	9.81	6.72	10.48	n/a
Portland, Oregon	5.23	3.95	8.44	2.37
Sacramento	4.80	4.21	9.13	2.79
Oakland	6.24	6.42	11.40	3.55
San Jose	6.07	4.55	9.94	2.97
Burbank	7.09	4.14	8.32	n/a
Average	6.19	4.94	9.21	2.84
Average Unconstrained (a)	5.04	4.32	8.58	2.66
Maximum	9.81	6.72	11.40	3.55
San Diego (2005)	7.42	3.69	8.40	2.50
San Diego (2015 No Action)	7.15	6.02	10.70	3.00
San Diego (2020 No Action)	7.33	6.62	11.30	3.00
San Diego (2025 No Action)	7.33	6.71	11.40	3.33
San Diego (2030 No Action)	7.33	6.71	11.40	4.00

Note: (a) Average of Ontario, Portland Oregon, Sacramento and San Jose.

Sources: [Table 2-7](#), Official Airline Guide and HNTB analysis.

The gated flight schedule for the base year is presented Attachment B of [Appendix I](#). The Proposed Project (Preferred Alternative) gated flight schedules for 2010 through 2030 are presented in Attachments C through G of [Appendix I](#). The East Terminal Alternative gated flight schedules for 2010 through 2030 are presented in Attachments H through L of [Appendix I](#). The No Project Alternative gated flight schedules for 2010 through 2030 are presented in Attachment M through Q of [Appendix I](#).

### 2.2.3.3 Results

The flight-by-flight average annual day forecasts in the gated flight schedules were aggregated to generate forecasts of hourly aircraft operations and hourly passenger and origin and destination flows.

[Tables 2-9 through 2-20](#) show the projected hourly distributions of passengers and scheduled passenger aircraft operations for the base year, and the 2010 through 2030 high constrained forecast. As shown in [Tables 2-9 through 2-11](#), the hourly distributions for the base year, 2010, and 2015 are the same for all three alternatives that were analyzed. [Tables 2-12 through 2-20](#) include the Proposed Project, East Terminal (Alternative Project), and the No Project alternatives for the years 2020, 2025, and 2030 due to the fact that the hourly distributions for the alternatives in each of these years is not identical. Peak hour arrivals and departures are projected to decline slightly from 2005 to 2015, and are more pronounced from 2020 to 2030. The tendency for airlines to spread operations to off-peak periods as delays increase is somewhat offset by the increase in the percentage of long-haul flights, which because of time zone differences are more limited in the hours in which they can operate.

Note that the 2030 No Project Alternative gated flight schedule has more passengers but slightly fewer aircraft operations than the 2025 No Project schedule. This situation results from the reduction of commuter operations to LAX between 2025 and 2030 that occurs in all the alternatives considered in this Environmental Impact Report. Unlike the Proposed Project and East Terminal Alternatives, these reductions cannot be offset by increases by other carriers in the No Project Alternative because there would be no additional contact gate capacity to accommodate this growth.

Table 2-9

## Estimated Hourly Distribution of Passengers and Operations – 2005 Base Year: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL Origin and Destination	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	TOTAL Aircraft Operations
0000-0059	-	-	-	-	-	-	-	-	-
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,547	7	2,554	2,547	8	2,555	27	1	28
0700-0759	2,369	524	2,893	2,424	551	2,975	20	8	28
0800-0859	1,793	1,176	2,969	1,928	1,262	3,190	16	14	30
0900-0959	1,838	1,550	3,388	1,942	1,687	3,629	21	17	38
1000-1059	1,187	2,098	3,285	1,307	2,242	3,549	15	20	35
1100-1159	1,676	1,520	3,196	1,791	1,619	3,410	19	17	36
1200-1259	1,670	1,508	3,178	1,780	1,629	3,409	19	16	35
1300-1359	1,319	1,189	2,508	1,412	1,268	2,680	16	15	31
1400-1459	1,217	1,299	2,516	1,309	1,372	2,681	15	18	33
1500-1559	1,185	837	2,022	1,248	904	2,152	15	12	27
1600-1659	863	963	1,826	950	1,025	1,975	13	15	28
1700-1759	1,156	1,391	2,547	1,229	1,515	2,744	14	17	31
1800-1859	1,348	774	2,122	1,431	824	2,255	14	10	24
1900-1959	501	2,171	2,672	535	2,336	2,871	8	22	30
2000-2059	896	2,155	3,051	940	2,239	3,179	12	18	30
2100-2159	749	1,227	1,976	802	1,227	2,029	9	13	22
2200-2259	385	1,975	2,360	403	1,975	2,378	4	19	23
2300-2359	212	555	767	253	555	808	2	7	9
<b>Total</b>	<b>22,911</b>	<b>22,919</b>	<b>45,830</b>	<b>24,231</b>	<b>24,238</b>	<b>48,469</b>	<b>259</b>	<b>259</b>	<b>518</b>
<b>Peak Hour</b>	<b>2,547</b>	<b>2,171</b>	<b>3,388</b>	<b>2,547</b>	<b>2,336</b>	<b>3,629</b>	<b>27</b>	<b>22</b>	<b>38</b>
Peak Hour Percent	11.1%	9.5%	7.4%	10.5%	9.6%	7.5%	10.4%	8.5%	7.3%

Source: [Table 1.2](#) and HNTB analysis. Numbers may not exactly add to annual total due to rounding.

Table 2-10

## Forecast Hourly Distribution of Passengers and Operations – 2010 All Alternatives Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL Origin and Destination	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	TOTAL Aircraft Operations
0000-0059	-	-	-	-	-	-	-	-	-
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,627	-	2,627	2,627	-	2,627	28	-	28
0700-0759	2,101	519	2,620	2,118	543	2,661	19	7	26
0800-0859	1,492	1,678	3,170	1,556	1,787	3,343	14	20	34
0900-0959	2,474	1,923	4,397	2,601	2,056	4,657	26	19	45
1000-1059	1,418	2,054	3,472	1,525	2,164	3,689	16	20	36
1100-1159	1,902	1,837	3,739	1,993	1,926	3,919	22	20	42
1200-1259	1,843	1,823	3,666	1,945	1,932	3,877	22	20	42
1300-1359	1,604	1,697	3,301	1,680	1,785	3,465	19	20	39
1400-1459	1,415	1,597	3,012	1,509	1,698	3,207	17	18	35
1500-1559	1,731	852	2,583	1,845	922	2,767	17	12	29
1600-1659	1,101	1,200	2,301	1,173	1,245	2,418	12	16	28
1700-1759	1,578	1,161	2,739	1,673	1,248	2,921	17	14	31
1800-1859	1,240	914	2,154	1,322	965	2,287	14	11	25
1900-1959	683	1,901	2,584	727	2,026	2,753	10	21	31
2000-2059	818	2,363	3,181	854	2,422	3,276	10	21	31
2100-2159	734	1,596	2,330	777	1,596	2,373	10	16	26
2200-2259	590	1,885	2,475	592	1,885	2,477	6	19	25
2300-2359	186	539	725	220	539	759	2	7	9
<b>Total</b>	<b>25,537</b>	<b>25,539</b>	<b>51,076</b>	<b>26,737</b>	<b>26,739</b>	<b>53,476</b>	<b>281</b>	<b>281</b>	<b>562</b>
<b>Peak Hour</b>	<b>2,627</b>	<b>2,363</b>	<b>4,397</b>	<b>2,627</b>	<b>2,422</b>	<b>4,657</b>	<b>28</b>	<b>21</b>	<b>45</b>
Peak Hour Percent	10.3%	9.3%	8.6%	9.8%	9.1%	8.7%	10.0%	7.5%	8.0%

Source: Table I.3 and HNTB analysis. Numbers may not exactly add to annual total due to rounding.

Table 2-11

## Forecast Hourly Distribution of Passengers and Operations – 2015 All Alternatives Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL Origin and Destination	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	TOTAL Aircraft Operations
0000-0059	-	88	88	-	92	92	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,099	144	2,244	2,099	154	2,253	23	2	25
0700-0759	1,760	721	2,481	1,768	775	2,543	17	10	27
0800-0859	2,317	1,856	4,172	2,399	1,977	4,376	22	21	43
0900-0959	2,563	1,778	4,342	2,710	1,879	4,589	27	19	46
1000-1059	1,746	2,547	4,293	1,836	2,705	4,541	19	24	43
1100-1159	1,950	2,759	4,710	2,078	2,888	4,966	22	27	49
1200-1259	2,173	2,464	4,638	2,280	2,619	4,898	26	25	51
1300-1359	2,448	1,856	4,304	2,581	1,931	4,512	26	23	49
1400-1459	1,979	1,228	3,208	2,081	1,291	3,372	22	15	37
1500-1559	1,455	1,460	2,915	1,519	1,522	3,041	15	15	30
1600-1659	1,616	953	2,568	1,674	1,011	2,685	15	13	28
1700-1759	1,646	1,517	3,162	1,742	1,619	3,360	17	19	36
1800-1859	1,193	1,026	2,219	1,288	1,066	2,354	13	12	25
1900-1959	1,305	2,131	3,436	1,369	2,255	3,624	14	22	36
2000-2059	1,123	2,226	3,349	1,170	2,332	3,502	14	21	35
2100-2159	1,342	2,397	3,739	1,417	2,397	3,814	17	23	40
2200-2259	909	2,119	3,028	939	2,119	3,057	10	23	33
2300-2359	263	611	874	291	611	902	3	7	10
<b>Total</b>	<b>29,889</b>	<b>29,880</b>	<b>59,769</b>	<b>31,241</b>	<b>31,241</b>	<b>62,482</b>	<b>322</b>	<b>322</b>	<b>644</b>
<b>Peak Hour</b>	<b>2,563</b>	<b>2,759</b>	<b>4,710</b>	<b>2,710</b>	<b>2,888</b>	<b>4,966</b>	<b>27</b>	<b>27</b>	<b>51</b>
Peak Hour Percent	8.6%	9.2%	7.9%	8.7%	9.2%	7.9%	8.4%	8.4%	7.9%

Source: Table I.4 and HNTB analysis. Numbers may not exactly add to annual total due to rounding.

Table 2-12  
Forecast Hourly Distribution of Passengers and Operations - 2020 No Project Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL Origin and Destination	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	TOTAL Aircraft Operations
0000-0059	-	88	88	-	88	88	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,657	148	2,804	2,657	157	2,814	27	2	29
0700-0759	2,530	748	3,278	2,533	812	3,345	24	10	34
0800-0859	2,368	1,895	4,264	2,506	2,029	4,535	22	21	43
0900-0959	2,484	2,003	4,487	2,625	2,097	4,722	27	21	48
1000-1059	1,814	2,796	4,609	1,914	2,982	4,897	20	26	46
1100-1159	2,047	2,788	4,836	2,196	2,929	5,125	23	27	50
1200-1259	2,164	2,704	4,868	2,274	2,883	5,157	25	27	52
1300-1359	2,898	2,104	5,003	3,058	2,184	5,242	29	24	53
1400-1459	2,097	1,363	3,461	2,204	1,431	3,635	23	15	38
1500-1559	1,397	1,688	3,085	1,451	1,756	3,207	15	16	31
1600-1659	1,580	1,248	2,828	1,640	1,322	2,962	16	16	32
1700-1759	2,335	1,811	4,146	2,453	1,945	4,398	22	22	44
1800-1859	1,385	1,147	2,532	1,505	1,195	2,700	14	14	28
1900-1959	1,444	2,276	3,720	1,514	2,410	3,924	15	22	37
2000-2059	1,253	2,739	3,992	1,299	2,849	4,148	15	26	41
2100-2159	1,356	2,507	3,863	1,440	2,507	3,948	16	24	40
2200-2259	1,022	2,402	3,424	1,058	2,404	3,462	10	25	35
2300-2359	278	653	932	308	653	962	3	7	10
<b>Total</b>	<b>33,110</b>	<b>33,110</b>	<b>66,220</b>	<b>34,634</b>	<b>34,634</b>	<b>69,269</b>	<b>346</b>	<b>346</b>	<b>692</b>
<b>Peak Hour</b>	<b>2,898</b>	<b>2,796</b>	<b>5,003</b>	<b>3,058</b>	<b>2,982</b>	<b>5,242</b>	<b>29</b>	<b>27</b>	<b>53</b>
Peak Hour Percent	8.8%	8.4%	7.6%	8.8%	8.6%	7.6%	8.4%	7.8%	7.7%

Source: HNTB analysis. Numbers may not exactly add to annual total due to rounding

Table 2-13  
Forecast Hourly Distribution of Passengers and Operations - 2020 East Terminal Alternative Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL Origin and Destination	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	Aircraft Operations
0000-0059	-	88	88	-	88	88	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,657	148	2,804	2,657	157	2,814	27	2	29
0700-0759	2,416	748	3,164	2,419	812	3,231	23	10	33
0800-0859	2,370	1,895	4,266	2,506	2,029	4,535	22	21	43
0900-0959	2,484	2,003	4,487	2,625	2,097	4,722	27	21	48
1000-1059	1,814	2,796	4,609	1,914	2,982	4,897	20	26	46
1100-1159	2,047	2,900	4,947	2,196	3,043	5,239	23	28	51
1200-1259	2,277	2,704	4,981	2,388	2,883	5,271	26	27	53
1300-1359	2,898	2,104	5,003	3,058	2,184	5,242	29	24	53
1400-1459	2,097	1,363	3,461	2,204	1,431	3,635	23	15	38
1500-1559	1,397	1,688	3,085	1,451	1,756	3,207	15	16	31
1600-1659	1,580	1,248	2,828	1,640	1,322	2,962	16	16	32
1700-1759	2,335	1,811	4,146	2,453	1,945	4,398	22	22	44
1800-1859	1,385	1,147	2,532	1,505	1,195	2,700	14	14	28
1900-1959	1,444	2,276	3,720	1,514	2,410	3,924	15	22	37
2000-2059	1,253	2,628	3,881	1,299	2,735	4,034	15	25	40
2100-2159	1,356	2,507	3,863	1,440	2,507	3,948	16	24	40
2200-2259	1,022	2,402	3,424	1,058	2,404	3,462	10	25	35
2300-2359	278	653	932	308	653	962	3	7	10
<b>Total</b>	<b>33,110</b>	<b>33,110</b>	<b>66,220</b>	<b>34,634</b>	<b>34,634</b>	<b>69,269</b>	<b>346</b>	<b>346</b>	<b>692</b>
<b>Peak Hour</b>	<b>2,898</b>	<b>2,900</b>	<b>5,003</b>	<b>3,058</b>	<b>3,043</b>	<b>5,271</b>	<b>29</b>	<b>28</b>	<b>53</b>
Peak Hour Percent	8.8%	8.8%	7.6%	8.8%	8.8%	7.6%	8.4%	8.1%	7.7%

Source: HNTB analysis. Numbers may not exactly add to annual total due to rounding.

Table 2-14

## Forecast Hourly Distribution of Passengers and Operations - 2020 Proposed Project (Preferred Alternative) Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL O&D	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	Aircraft Operations
0000-0059	-	88	88	-	88	88	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,657	148	2,804	2,657	157	2,814	27	2	29
0700-0759	2,416	748	3,164	2,419	812	3,231	23	10	33
0800-0859	2,370	1,895	4,266	2,506	2,029	4,535	22	21	43
0900-0959	2,484	2,003	4,487	2,625	2,097	4,722	27	21	48
1000-1059	1,814	2,796	4,609	1,914	2,982	4,897	20	26	46
1100-1159	2,047	2,900	4,947	2,196	3,043	5,239	23	28	51
1200-1259	2,277	2,704	4,981	2,388	2,883	5,271	26	27	53
1300-1359	2,898	2,104	5,003	3,058	2,184	5,242	29	24	53
1400-1459	2,097	1,363	3,461	2,204	1,431	3,635	23	15	38
1500-1559	1,397	1,688	3,085	1,451	1,756	3,207	15	16	31
1600-1659	1,580	1,248	2,828	1,640	1,322	2,962	16	16	32
1700-1759	2,335	1,811	4,146	2,453	1,945	4,398	22	22	44
1800-1859	1,385	1,147	2,532	1,505	1,195	2,700	14	14	28
1900-1959	1,444	2,276	3,720	1,514	2,410	3,924	15	22	37
2000-2059	1,253	2,628	3,881	1,299	2,735	4,034	15	25	40
2100-2159	1,356	2,507	3,863	1,440	2,507	3,948	16	24	40
2200-2259	1,022	2,402	3,424	1,058	2,404	3,462	10	25	35
2300-2359	278	653	932	308	653	962	3	7	10
<b>Total</b>	<b>33,110</b>	<b>33,110</b>	<b>66,220</b>	<b>34,634</b>	<b>34,634</b>	<b>69,269</b>	<b>346</b>	<b>346</b>	<b>692</b>
<b>Peak Hour</b>	<b>2,898</b>	<b>2,900</b>	<b>5,003</b>	<b>3,058</b>	<b>3,043</b>	<b>5,271</b>	<b>29</b>	<b>28</b>	<b>53</b>
Peak Hour Percent	8.8%	8.8%	7.6%	8.8%	8.8%	7.6%	8.4%	8.1%	7.7%

Source: Appendix C and HNTB analysis.



Table 2-15  
Forecast Hourly Distribution of Passengers and Operations - 2025 No Action Forecast: Average Annual Day (Total)

Hour	Passenger Originations	Passenger Terminations	TOTAL O&D	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	Aircraft Operations
0000-0059	-	84	84	-	88	88	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,788	146	2,935	2,788	157	2,945	28	2	30
0700-0759	2,970	676	3,647	2,974	728	3,702	25	9	34
0800-0859	2,473	2,022	4,495	2,580	2,148	4,728	22	21	43
0900-0959	2,632	2,411	5,043	2,774	2,522	5,297	26	24	50
1000-1059	1,946	2,960	4,905	2,057	3,167	5,224	22	27	49
1100-1159	2,146	2,609	4,755	2,312	2,733	5,045	23	23	46
1200-1259	2,009	2,621	4,630	2,112	2,796	4,908	22	27	49
1300-1359	2,978	2,367	5,346	3,142	2,450	5,592	30	24	54
1400-1459	2,109	1,501	3,610	2,211	1,580	3,791	21	16	37
1500-1559	1,612	1,942	3,554	1,690	2,030	3,720	17	19	36
1600-1659	1,869	1,669	3,538	1,951	1,753	3,705	19	18	37
1700-1759	2,588	1,610	4,198	2,712	1,745	4,457	22	19	41
1800-1859	1,265	1,222	2,486	1,387	1,275	2,663	13	15	28
1900-1959	1,435	2,055	3,491	1,509	2,182	3,691	15	20	35
2000-2059	1,041	2,882	3,923	1,080	2,996	4,075	12	26	38
2100-2159	1,564	2,717	4,281	1,656	2,717	4,373	17	24	41
2200-2259	978	2,625	3,603	1,031	2,647	3,678	10	26	36
2300-2359	283	566	849	317	566	883	3	6	9
<b>Total</b>	<b>34,686</b>	<b>34,686</b>	<b>69,372</b>	<b>36,282</b>	<b>36,282</b>	<b>72,564</b>	<b>347</b>	<b>347</b>	<b>694</b>
<b>Peak Hour</b>	<b>2,978</b>	<b>2,960</b>	<b>5,346</b>	<b>3,142</b>	<b>3,167</b>	<b>5,592</b>	<b>30</b>	<b>27</b>	<b>54</b>
Peak Hour Percent	8.6%	8.5%	7.7%	8.7%	8.7%	7.7%	8.6%	7.8%	7.8%

Source: HNTB analysis. Numbers may not exactly add to annual total due to rounding.

Table 2-16

## Forecast Hourly Distribution of Passengers and Operations - 2025 Proposed Project (Preferred Alternative) Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL Origin and Destination	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	TOTAL Aircraft Operations
0000-0059	-	84	84	-	88	88	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,881	147	3,028	2,881	157	3,038	29	2	31
0700-0759	2,729	677	3,406	2,729	729	3,457	23	9	32
0800-0859	2,174	1,983	4,157	2,279	2,109	4,387	21	21	42
0900-0959	2,632	2,516	5,148	2,774	2,630	5,404	26	25	51
1000-1059	2,234	2,960	5,195	2,349	3,168	5,517	24	27	51
1100-1159	2,245	2,923	5,168	2,415	3,056	5,471	24	26	50
1200-1259	2,224	2,613	4,836	2,331	2,786	5,117	24	27	51
1300-1359	2,968	2,421	5,389	3,129	2,503	5,633	30	25	55
1400-1459	2,163	1,463	3,626	2,266	1,542	3,808	22	16	38
1500-1559	1,575	1,943	3,518	1,653	2,031	3,684	17	19	36
1600-1659	1,906	1,637	3,542	1,990	1,715	3,705	20	19	39
1700-1759	2,701	1,871	4,571	2,819	2,016	4,835	24	22	46
1800-1859	1,392	1,223	2,615	1,522	1,276	2,798	14	15	29
1900-1959	1,435	2,176	3,612	1,509	2,306	3,815	15	21	36
2000-2059	1,300	2,748	4,048	1,346	2,859	4,205	15	25	40
2100-2159	1,457	2,669	4,126	1,547	2,669	4,215	16	24	40
2200-2259	978	2,578	3,556	1,031	2,600	3,631	10	26	36
2300-2359	283	647	930	317	647	964	3	7	10
<b>Total</b>	<b>35,277</b>	<b>35,277</b>	<b>70,554</b>	<b>36,887</b>	<b>36,887</b>	<b>73,773</b>	<b>357</b>	<b>357</b>	<b>714</b>
<b>Peak Hour</b>	<b>2,968</b>	<b>2,960</b>	<b>5,389</b>	<b>3,129</b>	<b>3,168</b>	<b>5,633</b>	<b>30</b>	<b>27</b>	<b>55</b>
Peak Hour Percent	8.4%	8.4%	7.6%	8.5%	8.6%	7.6%	8.4%	7.6%	7.7%

Source: HNTB analysis. Numbers may not exactly add to annual total due to rounding.

Table 2-17  
Forecast Hourly Distribution of Passengers and Operations - 2025 East Terminal Alternative Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL O&D	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	Aircraft Operations
0000-0059	-	84	84	-	88	88	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,881	147	3,028	2,881	157	3,038	29	2	31
0700-0759	2,729	677	3,406	2,729	729	3,457	23	9	32
0800-0859	2,174	1,983	4,157	2,279	2,109	4,387	21	21	42
0900-0959	2,632	2,516	5,148	2,774	2,630	5,404	26	25	51
1000-1059	2,234	2,960	5,195	2,349	3,168	5,517	24	27	51
1100-1159	2,245	2,923	5,168	2,415	3,056	5,471	24	26	50
1200-1259	2,224	2,613	4,836	2,331	2,786	5,117	24	27	51
1300-1359	2,968	2,421	5,389	3,129	2,503	5,633	30	25	55
1400-1459	2,163	1,463	3,626	2,266	1,542	3,808	22	16	38
1500-1559	1,575	1,943	3,518	1,653	2,031	3,684	17	19	36
1600-1659	1,906	1,637	3,542	1,990	1,715	3,705	20	19	39
1700-1759	2,701	1,871	4,571	2,819	2,016	4,835	24	22	46
1800-1859	1,392	1,223	2,615	1,522	1,276	2,798	14	15	29
1900-1959	1,435	2,176	3,612	1,509	2,306	3,815	15	21	36
2000-2059	1,300	2,748	4,048	1,346	2,858	4,205	15	25	40
2100-2159	1,457	2,669	4,126	1,547	2,669	4,215	16	24	40
2200-2259	978	2,578	3,556	1,031	2,600	3,631	10	26	36
2300-2359	283	647	930	317	647	964	3	7	10
<b>Total</b>	<b>35,277</b>	<b>35,277</b>	<b>70,554</b>	<b>36,887</b>	<b>36,887</b>	<b>73,773</b>	<b>357</b>	<b>357</b>	<b>714</b>
<b>Peak Hour</b>	<b>2,968</b>	<b>2,960</b>	<b>5,389</b>	<b>3,129</b>	<b>3,168</b>	<b>5,633</b>	<b>30</b>	<b>27</b>	<b>55</b>
Peak Hour Percent	8.4%	8.4%	7.6%	8.5%	8.6%	7.6%	8.4%	7.6%	7.7%

Source: HNTB analysis. Numbers may not exactly add to annual total due to rounding.

Table 2-18  
Forecast Hourly Distribution of Passengers and Operations - 2030 No Project Alternative Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL Origin and Destination	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	TOTAL Aircraft Operations
0000-0059	-	85	85	-	89	89	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	30	30	-	36	36	-	1	1
0600-0659	2,798	191	2,990	2,798	212	3,010	27	3	30
0700-0759	2,951	787	3,738	2,955	847	3,802	24	10	34
0800-0859	2,432	2,621	5,053	2,553	2,778	5,331	22	25	47
0900-0959	2,672	2,488	5,160	2,825	2,611	5,436	26	24	50
1000-1059	2,197	3,019	5,217	2,312	3,237	5,549	23	27	50
1100-1159	2,386	2,705	5,091	2,564	2,832	5,396	24	24	48
1200-1259	2,080	2,392	4,472	2,182	2,540	4,722	23	23	46
1300-1359	2,998	2,529	5,527	3,160	2,615	5,775	28	24	52
1400-1459	1,878	1,333	3,211	1,959	1,416	3,375	19	15	34
1500-1559	1,567	1,955	3,522	1,641	2,048	3,689	15	17	32
1600-1659	1,884	1,451	3,335	1,967	1,537	3,504	18	16	34
1700-1759	2,312	1,745	4,057	2,429	1,881	4,310	19	20	39
1800-1859	1,553	1,191	2,744	1,687	1,235	2,922	15	13	28
1900-1959	1,392	2,170	3,561	1,461	2,308	3,769	14	20	34
2000-2059	1,210	2,801	4,011	1,258	2,903	4,161	14	25	39
2100-2159	1,743	2,621	4,363	1,844	2,621	4,465	17	24	41
2200-2259	1,058	2,523	3,580	1,115	2,523	3,638	11	24	35
2300-2359	287	761	1,048	320	761	1,081	3	6	9
<b>Total</b>	<b>35,397</b>	<b>35,397</b>	<b>70,794</b>	<b>37,030</b>	<b>37,030</b>	<b>74,060</b>	<b>342</b>	<b>342</b>	<b>684</b>
<b>Peak Hour</b>	<b>2,998</b>	<b>3,019</b>	<b>5,527</b>	<b>3,160</b>	<b>3,237</b>	<b>5,775</b>	<b>28</b>	<b>27</b>	<b>52</b>
Peak Hour Percent	8.5%	8.5%	7.8%	8.5%	8.7%	7.8%	8.2%	7.9%	7.6%

Source: HNTB analysis. Numbers may not exactly add to annual total due to rounding.

Table 2-19

## Forecast Hourly Distribution of Passengers and Operations - 2030 Proposed Project (Preferred Alternative) Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL Origin and Destination	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	TOTAL Aircraft Operations
0000-0059	-	85	85	-	89	89	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,915	188	3,103	2,915	202	3,116	29	3	32
0700-0759	2,852	776	3,628	2,852	834	3,686	24	10	34
0800-0859	2,386	2,596	4,982	2,527	2,755	5,283	23	26	49
0900-0959	2,840	2,492	5,332	2,993	2,607	5,601	28	24	52
1000-1059	2,297	2,935	5,232	2,406	3,151	5,557	24	27	51
1100-1159	2,350	2,953	5,303	2,527	3,092	5,619	24	27	51
1200-1259	2,391	2,794	5,185	2,497	2,966	5,464	26	27	53
1300-1359	3,179	2,698	5,877	3,346	2,793	6,139	30	26	56
1400-1459	2,106	1,550	3,655	2,203	1,649	3,852	22	17	39
1500-1559	1,813	2,044	3,857	1,911	2,137	4,048	18	19	37
1600-1659	1,939	1,743	3,682	2,019	1,846	3,865	19	19	38
1700-1759	2,680	1,817	4,496	2,823	1,949	4,772	23	21	44
1800-1859	1,521	1,418	2,939	1,648	1,474	3,122	15	16	31
1900-1959	1,504	2,089	3,593	1,577	2,229	3,805	15	20	35
2000-2059	1,336	2,902	4,238	1,385	3,015	4,400	16	26	42
2100-2159	1,652	2,686	4,338	1,750	2,686	4,436	17	25	42
2200-2259	1,060	2,727	3,787	1,116	2,727	3,843	11	26	37
2300-2359	279	607	886	311	607	918	3	7	10
<b>Total</b>	<b>37,100</b>	<b>37,100</b>	<b>74,200</b>	<b>38,807</b>	<b>38,807</b>	<b>77,614</b>	<b>367</b>	<b>367</b>	<b>734</b>
<b>Peak Hour</b>	<b>3,179</b>	<b>2,953</b>	<b>5,877</b>	<b>3,346</b>	<b>3,151</b>	<b>6,139</b>	<b>30</b>	<b>27</b>	<b>56</b>
Peak Hour Percent	8.6%	8.0%	7.9%	8.6%	8.1%	7.9%	8.2%	7.4%	7.6%

Source: HNTB analysis. Numbers may not exactly add to annual total due to rounding.

Table 2-20  
Forecast Hourly Distribution of Passengers and Operations - 2030 East Terminal Alternative Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL O&D	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	Aircraft Operations
0000-0059	-	85	85	-	89	89	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,915	188	3,103	2,915	202	3,116	29	3	32
0700-0759	2,852	776	3,628	2,852	834	3,686	24	10	34
0800-0859	2,386	2,596	4,982	2,527	2,755	5,283	23	26	49
0900-0959	2,821	2,492	5,313	2,973	2,607	5,581	28	24	52
1000-1059	2,297	2,935	5,232	2,406	3,151	5,557	24	27	51
1100-1159	2,350	2,953	5,303	2,527	3,092	5,619	24	27	51
1200-1259	2,391	2,794	5,185	2,497	2,966	5,464	26	27	53
1300-1359	3,179	2,698	5,877	3,346	2,793	6,139	30	26	56
1400-1459	2,106	1,550	3,655	2,203	1,649	3,852	22	17	39
1500-1559	1,813	2,044	3,857	1,911	2,137	4,048	18	19	37
1600-1659	1,939	1,743	3,682	2,019	1,846	3,865	19	19	38
1700-1759	2,680	1,817	4,496	2,823	1,949	4,772	23	21	44
1800-1859	1,521	1,418	2,939	1,648	1,474	3,122	15	16	31
1900-1959	1,504	2,089	3,593	1,577	2,229	3,805	15	20	35
2000-2059	1,336	2,902	4,238	1,385	3,015	4,400	16	26	42
2100-2159	1,671	2,686	4,357	1,770	2,686	4,456	17	25	42
2200-2259	1,060	2,727	3,787	1,116	2,727	3,843	11	26	37
2300-2359	279	607	886	311	607	918	3	7	10
<b>Total</b>	<b>37,100</b>	<b>37,100</b>	<b>74,200</b>	<b>38,807</b>	<b>38,807</b>	<b>77,614</b>	<b>367</b>	<b>367</b>	<b>734</b>
<b>Peak Hour</b>	<b>3,179</b>	<b>2,953</b>	<b>5,877</b>	<b>3,346</b>	<b>3,151</b>	<b>6,139</b>	<b>30</b>	<b>27</b>	<b>56</b>
Peak Hour Percent	8.6%	8.0%	7.9%	8.6%	8.1%	7.9%	8.2%	7.4%	7.6%

Source: HNTB analysis. Numbers may not exactly add to annual total due to rounding.

## **2.2.4 Airport Master Plan Process**

Using the newly updated forecast as described in Section 2.2.2, *Aviation Forecast Update*, San Diego County Regional Airport Authority commenced an update to the Airport's Draft Master Plan technical report. The draft report, prepared in 2001, was not adopted. Improvements for San Diego International Airport required to accommodate regional growth as defined in the previous draft report were not implemented. The Airport Master Plan, considered in this Environmental Impact Report, is being developed to address requirements for accommodating natural growth through 2030.

Four distinct events, ranging in magnitude, but all affecting San Diego International Airport, have necessitated that the Airport's master plan be updated prior to adoption. The four critical events that have led to San Diego County Regional Airport Authority's decision to update the draft San Diego International Airport Master Plan include:

- 1) The events of September 11, 2001.
- 2) The transfer of Airport ownership and operation from the San Diego Unified Port District to San Diego County Regional Airport Authority in 2003.
- 3) The new aviation activity forecast of future aviation demand at San Diego International Airport completed in June 2004 and approved by the Federal Aviation Administration on June 28, 2005.
- 4) The 2004, 2005, and 2006 passengers and operations have exceeded the high growth forecast described in June 2004.

The impact of the terrorist attacks of September 11, 2001, was felt on a global scale, as well as on a local scale. The entire aviation industry, including airports such as San Diego International Airport, was affected. Demand for air travel internationally, and particularly within the United States, was significantly reduced, helping to drive multiple U.S. airlines into bankruptcy. The event also resulted in a complete restructuring of security procedures and facilities at U.S. airports. Similarly, management of the Airport was restructured when Airport ownership and operation was transferred to San Diego County Regional Airport Authority.

Completion of the environmental review process (this Environmental Impact Report) will allow the San Diego County Regional Airport Authority to formally adopt the Airport Master Plan.

### **Airport Master Plan Goal**

The goal of the Airport Master Plan is to provide a financially and environmentally responsible guideline for future Airport development that will accommodate forecast aviation demand and remain adaptable to either a short-term or long-term future for the existing Airport site based on the results of the Airport Site Selection Program.

Because the Airport Master Plan began while the Airport Site Selection Program was still underway, the Airport Master Plan provides an effective strategy for two varying scenarios: 1) remaining at Lindbergh Field; and 2) providing a responsible development guide for the existing site to meet the demand for aviation during an interim period should it be determined that the Airport would be relocated.

The result of the Airport Site Selection Program, as determined by the voters of San Diego, is that the region's primary airport is Lindbergh Field for the foreseeable future. The Proposed Project presented in the Airport Master Plan and this Environmental Impact Analysis is the appropriate action for near-term development and airport land use planning.

### **Airport Master Plan Overall Objectives**

In order to meet the goal of the Airport Master Plan, the following overall objectives were set to guide future development at San Diego International Airport:

- 1) Improve levels of service for Airport customers/users
- 2) Improve Airport safety and security for Airport customers/users
- 3) Utilize property and facilities efficiently
  - a. Maintain balance of passenger volumes and operations among the Airport facilities
  - b. Improve tenant facilities

- 4) Enhance Airport access as part of the region's transportation system
- 5) Enhance regional economy by serving demand for air service
- 6) Prepare measured, incremental improvements that are cost effective and respond to the region's forecast for air service for passengers and cargo
- 7) Involve stakeholder and community input
- 8) Consider compatibility with surrounding land uses and Airport Authority policies

## 2.3 Objectives of the Proposed Project and Proposed Project Description

The Proposed Project is the Airport Master Plan which includes implementation of improvements to meet forecast aviation demand through 2015. As described in 2.2.2, *Aviation Forecast Update and Planning Horizon Used for Environmental Analysis*, the previous Draft Environmental Impact Report (May 2006) limited the environmental review to the year 2015. Due to comments received on the previous document this ~~Draft~~ Final Environmental Impact Report considers potential environmental impacts through the year 2030. Again, it should be noted that no implementation improvements are proposed beyond those required to meet 2015 aviation demand. Improvements to meet aviation demand beyond 2015 will be considered in future planning efforts and related environmental documents. In consideration of the Airport Master Plan objectives, the Proposed Project objectives are as follows:

- 1) Provide adequate facilities to accommodate air service demand (natural growth through 2015) while improving levels of services, airport safety and security, and enhancing airport access.
- 2) Develop facilities that utilize the current Airport property and facilities efficiently and are compatible with surrounding land uses.
- 3) Provide for future public transit options in airport land use planning.

The Proposed Project to be evaluated in this Environmental Impact Report consists of two key components needed to meet the Project Objectives. The first is the Proposed Airport Land Use Plan and the second is implementation of specific projects contained in the Airport Master Plan necessary to accommodate natural growth through 2015, called the Proposed Airport Implementation Plan. The Proposed Airport Land Use Plan would assist with meeting the Proposed Project objectives focused on future efficient development (i.e., utilizing the Airport property and facilities efficiently by reserving adequate land for future development). The Proposed Airport Implementation Plan will meet the Proposed Project objectives focused on developing efficient facilities compatible with surrounding land uses. Each component is described in the following sections.

### 2.3.1 Proposed Airport Land Use Plan—Designate Land Uses

The Proposed Airport Land Use Plan depicts the boundaries of San Diego International Airport and designates existing and proposed land uses. The Proposed Airport Land Use Plan is a policy document only. For the Airport Land Use Plan, San Diego County Regional Airport Authority will request programmatic approval, and will follow with further environmental evaluation once specific projects are proposed for implementation. This approach will ensure that a responsible planning and mitigation program will be implemented at San Diego International Airport that considers the full range of development possibilities, cumulative impacts, and mitigation opportunities. San Diego County Regional Airport Authority proposes to adopt an Airport Land Use Plan that:

- Depicts the boundaries of San Diego International Airport; and
- Designates the land uses on the Airport.

The Proposed Airport Land Use Plan is a figure that depicts the properties and boundaries under the planning jurisdiction of San Diego County Regional Airport Authority, [Figure 2.2](#).

The Proposed Airport Land Use Plan designates existing and proposed land uses in areas that are under San Diego County Regional Airport Authority's control. It is important to note that the majority of the lands that comprise San Diego International Airport are State tidelands, which are held in trust for the



benefit of the citizens of the State of California. The Airport property (with the exception of a thin strip of land along Pacific Highway that is not designated as “tidelands”), while under the control and jurisdiction of the San Diego County Regional Airport Authority, remain in the public trust and any proposed land uses must be consistent with California Tidelands Trust requirements. The Airport Land Use Plan designates four general categories of land use on the Airport: airfield, terminal, ground transportation, and airport support all of which are consistent with California Tidelands Trust requirements. These areas are contemplated by the San Diego County Regional Airport Authority to be used for future airport purposes and facilities but subsequent environmental review will be required at a project-level before these future facilities are developed. In order to attain a programmatic level of approval for future development, the following general types of facilities and locations are depicted to analyze program and cumulative impacts and to develop mitigation measures that would:

- Designate land area for future ground transportation and airport support uses in the North Area and former Teledyne Ryan property;
- Construct new and replacement air cargo facilities in the North Area;
- Construct new and replacement general aviation facilities in the North Area;
- Construct new and relocated ground transportation facilities in the North Area including a potential transit center with an onsite connector linking the North and South Areas;
- Relocate cargo aircraft parking positions in the North Area; and
- Remove aircraft movement obstructions along the east end of Taxiway C and south of Taxiway B adjacent to and within the former Teledyne Ryan property.

The former Teledyne Ryan property (47.5 acres) was recently incorporated into the San Diego County Regional Airport Authority’s planning jurisdiction with the execution of a 63-year lease from the Port of San Diego in October 2005. The future land uses contemplated for the former Teledyne Ryan property include ground transportation and airport support. Specifically, these uses may include parking facilities, roadway and transit improvements, Airport offices and maintenance, air cargo, or general aviation consistent with allowable State tidelands uses.

### **2.3.2 Proposed Airport Implementation Plan (with Parking Structure)—Develop and Operate Project Components**

The Proposed Airport Implementation Plan would include project-level approvals for those elements that are to be designed and constructed through 2012 and operated through 2015 and beyond. San Diego County Regional Airport Authority has identified specific physical improvements at San Diego International Airport to allow the Airport to effectively continue its mission of serving San Diego’s commercial air transportation needs as forecasted through 2015. The project elements are described as follows and are depicted on [Figure 2.3](#).

- **Expand existing Terminal Two West with 10 new jet gates.** Construct an addition to the existing Terminal Two West that would include approximately 430,100 square feet of new space, 10 additional aircraft gates and approximately 2,250 lineal feet of new and reconfigured private vehicle curb front on two levels and approximately 1,800 feet of lineal curb front dedicated to commercial vehicles in a transit plaza. The new and reconfigured terminal space would be expanded on three floors for passenger processing facilities including airline ticketing, security screening, departure holdrooms, restrooms, concessions, public circulation, and outbound baggage areas. Most likely three additional baggage claim devices would be provided within the existing baggage claim area. The Terminal Two West facility was originally constructed to accommodate two additional carousels within the existing space. This would improve service for arriving passengers and their baggage from both Terminal Two West and Terminal Two East. The additional aircraft gates would reduce existing crowding in Terminal One and accommodate passenger volumes forecasted through 2015, and would reduce severe crowding in all terminals expected from the growth in airport-wide traffic and flights. The proposed terminal expansion would also include an extension of the existing Terminal Two West vehicle curb front used for pickup and drop-off of arriving and departing passengers. This project feature also includes a reconfiguration of the existing Terminal Two curb front to improve automobile flow and passenger convenience. The new curb front system for Terminal Two would vertically segregate arriving

and departing vehicle traffic between the existing ground level and a new second level proposed as part of a new parking structure (described below). See [Figure 2.3](#) Project Element Orange #1.

- **Construct new aircraft parking and replacement Remain-Over-Night aircraft parking apron.** This new aircraft parking apron would be constructed to accommodate up to 10 jet aircraft adjacent to the new Terminal Two West taxiway. Overnight aircraft would be moved to gates in the morning to resume flight routing. See [Figure 2.3](#) Project Element Orange #2.
- **Construct new apron and aircraft taxiway.** This new aircraft apron pavement would be built adjacent to and west of the proposed aircraft gates at Terminal Two West. It would be used as an aircraft taxiway for aircraft to taxi between the runway and the new proposed gates. This project element would facilitate efficient aircraft movement on the west end of the terminal area. See [Figure 2.3](#) Project Element Orange #3.
- **Construct new second level road/curb and vehicle circulation serving Terminal Two.** A new second level curbside would be constructed with a new parking structure and connected via pedestrian walkways to Terminal Two to accommodate forecasted growth of passengers expected by 2015. The second level curbside would serve as a private vehicle departure curb with airline check-in facilities and elevated pedestrian walkways connecting to the upper level Terminal Two lobby. Access to the second level curbside would be provided from the Terminal Two entrance roadway and the Terminal Two exit roadways would be reconfigured to accommodate the second level curbside/roadway exit. Access to McCain Road would also be provided from the Terminal Two roadways and would serve the taxi and shuttle staging area and SAN Park NTC. See [Figure 2.3](#) Project Element Orange #4.
- **Construct new parking structure and vehicle circulation serving Terminal Two.** A new multi-level parking structure accommodating a departure curb on the second level would be built adjacent to Terminal Two to accommodate forecasted growth of passengers expected by 2015. This structure would be five levels with parking, departure curb, and a commercial vehicle curb accommodating shuttles, buses, taxis and shared-ride vans. Elevated pedestrian walkways would be reconstructed to connect the second level Departure Curb with the upper level Terminal Two lobby. The new parking structure would be centralized within an expanded roadway loop. Vehicles approaching the terminal area would be directed to parking or passenger pick-up and drop-off well in advance of driver decision points in the roadway. New access roadways would eliminate the need for vehicles to utilize the terminal curbside roadway to enter structured or surface parking areas. Removing these circulating vehicles from the terminal roadway would reduce congestion during peak periods. See [Figure 2.3](#) Project Element Orange #5.
- **Relocate and reconfigure SAN Park Pacific Highway.** The existing SAN Park Pacific Highway parking facility, approximately 1,670 public parking spaces, would be relocated and reconfigured with 500 additional spaces to the north of the existing parking facility to accommodate construction of new airfield and general aviation facilities. The site would be bound by Pacific Highway to the east and a new access road to the south and west. Access/egress to the parking facility would be provided from the new access road. The parking spaces currently utilized by the Port of San Diego, approximately 210 parking spaces, would remain in the existing location along Pacific Highway. See [Figure 2.3](#) Project Element Green #1.
- **Construct a new access road from Sassafras Street/Pacific Highway intersection.** A new access road would be constructed to provide access to SAN Park Pacific Highway and new general aviation facilities. The access road would utilize the existing Sassafras Street/Pacific Highway intersection and existing traffic signal. Underground utilities required for airport facilities including water, electric, sanitary sewer, and storm drains, would be constructed in conjunction with the access road and connect with existing utilities located along the Pacific Highway corridor. See [Figure 2.3](#) Project Element Green # 2.
- **Construct new general aviation facilities including access, terminal/hangars and apron to improve airport safety for airport customers/users.** New general aviation facilities would be constructed on 12.4 acres to accommodate forecasted general aviation operations through 2015. General aviation uses must be relocated to allow for the construction of airfield/taxiway improvements and apron hold pads. New general aviation terminal/hangars and apron would be located immediately north of the taxiway improvements and provide access to the airfield for

general aviation aircraft. Landside access for vehicles and parking would be provided from the new access road through the Sassafras Street/Pacific Highway intersection. See [Figure 2.3](#) Project Element Green #3.

- **Demolish the existing general aviation facilities to improve airport safety and circulation on airfield.** The existing general aviation facilities would be demolished to accommodate airfield/taxiway improvements. The removal of subsurface structures and site remediation, including removal of existing underground storage tanks, would be conducted. See [Figure 2.3](#) Project Element Green #4.
- **Reconstruct Taxiway C, construct new apron hold pads and new taxiway east of Taxiway D.** The existing Taxiway C pavement would be rehabilitated and the taxiway centerline established 400 feet north of the runway centerline to separate and accommodate the movement of Group V commercial aircraft. A new 195-foot wide aircraft apron and hold pads would be constructed north of Taxiway C and east of Taxiway D to allow aircraft to hold for extended periods while awaiting departure, but also allowing aircraft movement to continue unimpeded on adjacent taxiways. A new parallel taxiway north of the new apron and east of Taxiway D would also be constructed. This taxiway would facilitate efficient and safe aircraft movement by allowing aircraft to bypass those on the apron and also provide airfield access to the new general aviation facilities. See [Figure 2.3](#) Project Element Green #5.

## 2.4 Other Airport Authority Programs

The following sections provide a brief summary of other on-going programs being contemplated by the San Diego County Regional Airport Authority. These programs have been considered separately by the Airport Authority. The Airport Master Plan is intended to identify and set forth a measured, incremental improvement program for existing San Diego International Airport that addresses the immediate needs of the Airport, in concert with the Airport Land Use Compatibility Plan for San Diego International Airport.

### 2.4.1 Airport Transit Plan

The Airport Authority led a multi-agency committee that developed a draft Airport Transit Plan for San Diego International Airport has been developed to identify opportunities to improve transit access to SDIA. The Authority supports improvements to Airport transit service and is developing policies and programs to encourage and increase transit use by airport users comprised of passengers and employees. The main goal of the Airport Transit Plan and the Authority is to increase the airport passenger transit ridership from the existing 1.2 percent to the national average of 5 percent over the next 3 to 5 years. The Airport Transit Plan analyzes and evaluates existing and proposed airport transit service, addresses transit market share expectations, presents preliminary design and costs estimates, as well as addressing policy direction and adoption, and an implementation plan for recommended transit improvements. The transit improvements recommended in the Airport Transit Plan are presented in [Table 2-21](#). The transit improvements are divided into three tiers: Tier 1 projects may be implemented immediately; Tier 2 projects may be implemented after further study and cost estimating; and Tier 3 projects require a link to transit ridership and airport development before implementation.

Table 2-21

Transit Improvements Recommended – Draft Airport Transit Plan

Improvement Alternative	Study Tier			Timeframe for Implementation			Potential Benefit			Responsible Agency (1)					
	1	2	3	Near-term (1-3 years)	Mid-term (3 to 5 years)	Long-term (over 5-years)	Increase Ridership	Traffic Reduction (fewer buses)	Passenger Service Improvement	SDCRAA (2)	SANDAG	MTS	NCTD	City	Cal-trans (3)
<b>Existing Service Improvement</b>															
Low Floor Buses (2-steps)	X			X					X			X			
Passenger/Customer Service Training	X			X					X	X		X			
Install Transit Ticket Machines at Airport	X			X					X	X		X			
Free Ride for Arriving Airport Passengers	X			X			X		X	X		X			
Turn on NextBus Signs Installed in 2004 at Airport	X			X					X	X		X			
Airport Employee Transit Incentive Program		X		X			X			X					
BRT Technologies (bus lane, signal priority, queue jumper lanes)		X			X				X	X				X	X
<b>Marketing</b>															
Target Residents (existing transit users)	X			X			X			X	X				
Target Visitors (high density visitor areas - Downtown, Miss)	X			X			X			X	X				
Target Residents (new transit users)	X			X			X			X	X				
<b>Existing Route Change</b>															
Extend Convention Center Flyer Route Hours	X			X			X					X			
Capture Additional Hotels/Residences			X	X			X					X			
Reduce Flyer Headways (less than 12-minutes)		X		X			X		X			X			
Add Coaster Service (nights and weekends)		X		X			X						X		
<b>New Route</b>															
Hotel Circle Route			X	X			X	X							
Harbor Island Route			X	X			X	X							
Combine Hotel Shuttles			X	X				X							
Express Bus to Cruise Ship Terminals			X	X					X						
Express Bus to Old Town Transit Center (4)		X		X			X			X	X	X			
Remote Parking/Terminals (Flyaway) along I-15 and I-805 corridors		X			X		X			X	X				
Express Bus/Flyaway to Escondido Transit Center		X			X		X			X	X		X		
Consolidated Bus to Consolidated Rental Car Facility			X			X		X							
APM to Transit Center			X			X	X	X	X						
APM to CONRAC Facility			X			X	X	X	X						
Trolley Connection to Airport Terminals			X			X	X	X	X						

BRT = bus rapid transit  
 APM = automated people mover  
 CONRAC = consolidated rental car facility  
 SDCRAA = San Diego County Regional Airport Authority  
 SANDAG = San Diego Association of Governments  
 MTS = Metropolitan Transit System  
 NCTD = North County Transit District  
 City = City of San Diego  
 Caltrans = California Department of Transportation

**Study Tiers**  
 Tier 1 projects = Implement  
 Tier 2 projects = Implement after further study and cost estimating  
 Tier 3 projects = Requires link to transit ridership and airport development before implementation

(1) Responsible agency indicated for improvement alternatives recommended for further review.  
 (2) SDCRAA: Although not the operator of the bus and rail systems, the Authority will provide on-airport facilities and will contribute to extent allowed by federal restrictions on airport revenue.  
 (3) Caltrans would be involved in BRT technologies if freeway ramps are included.  
 (4) Use of Old Town Transit Center would require involvement of Old Town San Diego State Historic Park.

Source: Draft Transit Demand and Access Study, SDCRAA, September 2006.

The Draft Airport Transit Plan was prepared with extensive coordination and participation of the Transit/Roadway Committee. This Committee was initiated in 2005 and includes various transit and transportation agencies that have provided extensive input in the preparation of the Draft Airport Transit Plan.

The Transit/Roadway Committee consists of the following agencies:

- San Diego County Regional Airport Authority
- SANDAG/Metropolitan Transit System (MTS)
- North County Transit District
- Caltrans
- City of San Diego/Centre City Development Corporation
- Port of San Diego
- Federal Aviation Administration
- California Coastal Commission

The purpose of the Committee is to provide transportation agency coordination and data exchange, assist in the preparation of a Transit Demand /Access Study, provide Airport Board participation and policy direction, and present the Airport Transit Plan for adoption to the various transportation agencies boards. This Committee helped to develop the near-term, mid-term, and long-term transit improvement recommendations presented in [Table 2 -21](#).

In addition, the Proposed Airport Land Use Plan designates Ground Transportation land uses in the North Area that may include an intermodal transit center and a proposed transit corridor connecting to the South Area. Further analysis of an intermodal transit center will be coordinated with the regional transportation agencies.

## **2.4.2 Airport Site Selection Program**

The Airport Site Selection Program was conducted by the San Diego County Regional Airport Authority as part of the state law requirement to conduct a comprehensive study of all potential airport sites and solutions to meet the region's air transportation needs through the year 2030. As part of the Airport Site Selection Program, the San Diego County Regional Airport Authority was required to have a county-wide advisory ballot measure with an airport recommendation.

As described before, San Diego International Airport is the busiest single-runway commercial airport in the nation and the aviation activity forecast for the San Diego region identifies substantial growth in the future from 2015 through 2030 and the future. San Diego International Airport is, however, severely constrained in its current location, limiting the ability to expand and improve the existing airport to accommodate the projected growth. From 2003 to November 7, 2006, the San Diego County Regional Airport Authority conducted a comprehensive study of relocating the region's primary commercial airport or enhancing San Diego International Airport's capacity with a connecting inter-tie across San Diego Bay to transport passengers and cargo to the airfield and runways on Naval Air Station North Island.

Potential sites for relocating San Diego International Airport have been under continuous study since 2001, beginning with the Air Transportation Action Program, a joint prospect of the San Diego Association of Governments and the Port District. Oversight of the Air Transportation Action Program was provided by the Joint Airport Advisory Committee, which was comprised of the San Diego Association of Governments' Transportation Subcommittee and the Board of Airport Commissioner's Airport Ad Hoc Committee. Upon formation of the San Diego County Regional Airport Authority in January 2003, the responsibility for the identification and evaluation of potential sites shifted from the Joint Airport Advisory Committee to the Authority's Board, within the context of what was initiated as the Air Transportation Action Program and is now known as the Airport Site Selection Program.

Through the course of evaluating 30 possible sites and applying "screening criteria" to winnow the range of potential options, nine sites were identified as candidates for further analysis. The San Diego County Regional Airport Authority selected five of these sites to undergo a comprehensive detailed alternative analysis for the purpose of developing a recommendation for a new airport location. In accordance with

the same state law that created the San Diego County Regional Airport Authority, the recommendation was presented to the people of San Diego County as a ballot measure for a county-wide vote in November 2006.

The advisory ballot measure was identified as San Diego County Measure A, in the November 7, 2006 election, and was worded as follows:

*“To provide for San Diego’s long-term transportation needs, shall the Airport Authority and government officials work to obtain approximately 3,000 of 23,000 acres at MCAS Miramar by 2020 for a commercial airport, provided necessary traffic and freeway improvements are made, military readiness is maintained without expense to the military for modifying or relocating operations, no local taxes are used on the airport, overall noise impacts are reduced, and necessary Lindbergh Field improvements are completed?”*

The final decision was made by the voters of San Diego County and the measure did not pass in a final result of 61.83% No and 38.17% Yes (County of San Diego, Election Results 2006).

It is important to note that although the Airport Site Selection Program process was conducted concurrent with the San Diego International Airport Master Plan process, the two processes were separate and not interdependent. The Airport Site Selection Program evaluated the potential of relocating San Diego International Airport to a site that could be developed and operated in a manner that meets the County’s projected long-term commercial aviation needs through 2030 and beyond. The Airport Master Plan is intended to identify and set forth a measured, incremental improvement program for existing San Diego International Airport that addresses the immediate needs of the airport, irrespective of the outcome of the Airport Site Selection Program process. Conversely, the completion of the Airport Site Selection Program was not dependent on the assumptions or outcome of the Airport Master Plan. Once the Airport Site Selection Program process was completed, including the vote on the November 2006 ballot measure recommendation, and if a formal decision was made by the Authority to advance a long-term airport solution toward implementation, then the various federal, state, and local permit and approval processes would need to be completed. This would include the necessary environmental reviews required under the California Environmental Quality Act and the National Environmental Policy Act. If the voters had determined to create a new airport and indicated the proposed location, the final selection and implementation of any new airport would have been subject to a separate review process as required by the California Environmental Quality Act. Neither this program Environmental Impact Report nor the Airport Master Plan are intended to cover or include a new airport. Because the specific information is not known about a new airport at this time, it would be speculative to attempt to analyze the environmental impacts of a new airport in this document.

### **2.4.3 Airport Land Use Compatibility Plan for San Diego International Airport**

San Diego County Regional Airport Authority, in its capacity as the Airport Land Use Commission for San Diego County, was mandated by state legislation to prepare and adopt a new San Diego County Airport Land Use Compatibility Plan addressing each public-use and military airport in the county. Airport Land Use Compatibility Plans are concerned with land use compatibility surrounding airports in terms of noise, overflight, safety and airspace protection. They are not plans for airport development and they do not require any changes to existing land uses. State law requires future land use development near airports to be consistent with compatibility criteria included in an Airport Land Use Compatibility Plan.

The Airport Land Use Compatibility Plan for San Diego International Airport consists of the following components: provision of airport information, updated noise contours, updated Airport Influence Area boundaries, revised compatibility policies and criteria, new compatibility zone maps, procedural policies, and land use information. The 2004 Airport Land Use Compatibility Plan for San Diego International Airport designates as “conditionally compatible” new residences and other noise sensitive uses located within 60 – ~~65~~ 85 decibel community noise equivalent level noise contours, provided that sound attenuation, avigation easements, and notice of airport operations is required. The Draft San Diego County Airport Land Use Compatibility Plan specific to San Diego International Airport, and its related Draft Environmental Impact Report, was released to the public for review in October 2005.

The San Diego County Regional Airport Authority Board directed the formation of the Airport Land Use Compatibility Plan Technical Advisory Group to assist in the preparation of the Final Airport Land Use Compatibility Plans for the airports within San Diego County. The Airport Land Use Compatibility Plan

Technical Advisory Group consisted of subcommittees which met to discuss specific groups of airports to maintain productivity. (For example, one subcommittee discusses “urban” airports and another subcommittee discusses “military” airports). These subcommittees have increased productivity through working together on similar airports with similar issues and resolving them collectively.

The San Diego International Airport Land Use Compatibility Plan is anticipated to be adopted by the San Diego County Regional Airport Authority by 2009.

#### **2.4.4 Former Naval Training Center Landfill Remediation Project Environmental Impact Report**

The San Diego County Regional Airport Authority released a ~~the Draft Final~~ Environmental Impact Report for the Former NTC Landfill Remediation in ~~August 31~~ November, 2007. The proposed remediation would result in the following:

- Removal and stockpiling of approximately 136,000 cubic yards of soil overburden
- Removal of approximately 112,000 cubic yards of municipal solid waste for transport to and disposal in area solid waste landfill facilities
- Removal of approximately 25,000 cubic yards of burn ash material for transport to and disposal in appropriate regulated landfills
- Removal of approximately and appropriate disposal of 38,000 additional cubic yards of soil to a depth of one (1) foot below the limits of landfill materials described above
- Import of a maximum of 100,000 cubic yards of clean fill soil to backfill the excavated area

The ~~Draft Final~~ Environmental Impact Report has identified one potential significant impact to air quality. Specifically, during the duration of the remediation project, total emissions of NO<sub>x</sub> would exceed the threshold of significance contained in the City of San Diego significance criteria and in guidance from the San Diego County Air Pollution Control District.

Although the threshold for NO<sub>x</sub> total emissions will be exceeded, the project itself will be of limited duration. Remediation activities are expected to be completed within nine months. In addition, a Community Health and Safety Plan and a Human Health Risk Assessment have been incorporated into the project. Given the provisions of the Community Health and Safety Plan, the Human Health Risk Assessment has concluded that there would be no significant impacts to human health resulting from the landfill remediation project.

#### **2.4.5 Utility Line Relocations**

The Authority is relocating two buried utility lines that traverse the former NTC landfill site: (1) a high-pressure gas line and (2) a 12-kilovolt (kV) electrical transmission line. The proposed relocations have independent utility from, and are not dependent on, the proposed landfill remediation project addressed in this EIR. The specific new alignments/easements for the utility line relocations have been finalized. The utility line relocations will occur prior to excavation of the former NTC landfill site for safety.

#### **2.4.6 McCain Road/North Harbor Drive Intersection**

The three-way intersection of McCain Road and North Harbor Drive is currently controlled by a stop sign on McCain Road. A landscaped median prevents left turns to/from McCain Road from/to North Harbor Drive. Installation of traffic signals, with an associated opening in the median, was included in the development approvals for Liberty Station, directly west of the Airport. Although the McCain Road/ North Harbor Drive intersection improvements have been approved under California Environmental Quality Act and the Coastal Act, it is not clear when or if the proposed intersection improvements will be implemented.

#### **2.4.7 Former Teledyne Ryan Remediation and Clean Closure**

The former Teledyne Ryan facilities are located on approximately 47.5 acres of State tidelands controlled by the Port of San Diego. This property was leased by the Port of San Diego to Teledyne Ryan, and subsequently to Allegheny Industries which operated a large aviation manufacturing facility. The aviation

manufacturing facility used hazardous materials and generated wastes that resulted in contamination of building foundations, soils, and groundwater. Allegheny Industries has been identified by state and local agencies as the responsible party for the remediation of the property. As a result of a legal settlement agreement, the Port of San Diego, Allegheny Industries and the San Diego County Regional Airport Authority are working cooperatively to address the remediation and disposition of contaminated materials. The Port of San Diego is conducting the environmental review of the remediation and disposition activities as the lead agency in accordance with the California Environmental Quality Act.

In October 2005, the San Diego County Regional Airport Authority entered into a 63-year lease with the Port of San Diego to secure the property of airport uses. Until the remediation and disposition activities of the former Teledyne Ryan facilities is completed, future development for airport uses is limited and the following issues must be addressed:

- **Site Contamination.** The Teledyne Ryan property has considerable surface and below ground contamination issues. The existing facilities and utilities on the site are deteriorating. Existing buildings and foundations have recorded asbestos-containing materials, lead-based paints, hazardous materials, and mold. Below ground issues include soil and groundwater contamination, sink-holes, and deteriorating drainage utilities connecting the onsite drains to outfalls in San Diego Bay.
- **Clean Up and Abatement Order.** The Teledyne Ryan property is subject to a Clean Up and Abatement Order issued by the California Regional Water Quality Control Board in 2004 to the facility operator Allegheny Industries instructing the soil and groundwater remediation of the project site. The property has been the subject of litigation involving Allegheny, the Port of San Diego, and the Airport Authority.
- **Multiple agency jurisdiction and coordination.** Coordination with multiple agencies to address the remediation of the site will be required including the Port of San Diego, the California Regional Water Quality Control Board, the San Diego Air Pollution Control District, the City of San Diego and the California Coastal Commission. The remediation is anticipated to take over 3-4 years to complete. Although not included in the Clean Up and Abatement Order, the Port of San Diego is required to address the disposition of the former Teledyne Ryan facilities concurrent with the remediation of the project site and in close coordination with the responsible parties and agencies involved.
- **Program level analysis of future land uses.** The proposed Airport Land Use Plan identifies future airport uses on the former Teledyne Ryan property as Airfield, Ground Transportation and Airport Support. These airport uses include land use assumptions to determine at a PROGRAM level the environmental effects including land use and traffic/circulation. Once the remediation is completed, the Airport Authority will develop specific project improvements consistent with the Airport Land Use Plan and conduct an environmental analysis at a PROJECT level for any airport facilities proposed to be constructed and operated.

## 2.5 Incorporation by Reference

Pursuant to California Environmental Quality Act Guidelines, §15150, this Environmental Impact Report incorporates, by reference, all or portions of other technical documents that are of public record. Any referenced documents either relate to the Proposed Action or provide additional information concerning the environmental setting in which the Action will occur.

Copies of ~~this~~ the Draft program Environmental Impact Report, the appendices and cited or referenced studies or reports ~~are~~ were available for review at the San Diego County Regional Airport Authority administrative offices located on the third floor of the Commuter Terminal, 3225 North Harbor Drive, San Diego, California 92101 from 8 AM to 5 PM. The Environmental Impact Report and technical appendices ~~are~~ were also available for review on the San Diego County Regional Airport Authority website ([www.san.org](http://www.san.org)) and at local libraries.

San Diego International Airport Aviation Activity Forecasts, SH&E, 2004 (Approved by FAA in June 2005).  
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California Environmental Quality Act Significance Determination Thresholds, City of San Diego Development Services Department, January 2007.

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San Diego County Regional Airport Authority, Draft Airport Transit Plan, October 2007.

California Advisory Handbook for Community and Military Compatibility Planning, February 2006.



# CHAPTER THREE: PROJECT OBJECTIVES

This chapter provides the project objectives for the proposed actions contained in the Airport Master Plan related to adopting 1) an Airport Land Use Plan; and 2) an Airport Implementation Plan with specific improvements that are proposed for construction and operation to meet forecast growth through 2015.

## Overview

The guidelines for implementing the California Environmental Quality Act require a statement of objectives for the Proposed Project. This chapter meets this requirement by describing the objectives of the Proposed Project through a review of the support and reasoning for the plan's elements.

The Airport Master Plan objectives are summarized as follows:

- Improve levels of service for Airport customers/users
- Improve Airport safety and security for Airport customers/users
- Utilize property and facilities efficiently by
  - Maintaining balance of passenger volumes and operations among the Airport's facilities
  - Improving tenant facilities
- Enhance Airport access as part of the region's transportation system
- Enhance regional economy by serving demand for air service
- Prepare measured, incremental improvements that are cost effective and respond to the region's forecast for air service for passengers and cargo
- Involve stakeholder and community input
- Consider compatibility with surrounding land uses and Airport Authority policies.

The Proposed Project is the Airport Master Plan. The Airport Master Plan includes adoption of an Airport Land Use Plan and proposed specific improvements to meet constrained high forecast demand through 2015. In keeping with the Airport Master Plan objectives and focusing on near-term development the Proposed Project Objectives are as follows:

1. Provide adequate facilities to accommodate air service demand (forecast growth through 2015) while improving Levels of Services, Airport safety and security, and enhancing Airport access.
2. Develop facilities that utilize the current Airport property and facilities efficiently and are compatible with surrounding land uses.
3. Provide for future public transit options in airport land use planning.

The Proposed Project to be evaluated in this Environmental Impact Report consists of two key components. The first is the Airport Land Use Plan and is considered on a PROGRAM level. The second component is implementation of specific projects contained in the Airport Master Plan, called the Proposed Airport Implementation Plan and is evaluated on a PROJECT level. A PROJECT level analysis focuses on the changes in the environment that would result from the development of a specific project and examines all phases, including planning, construction, and operation (CEQA Section 15161). However, a PROGRAM level analysis focuses on a series of related actions (CEQA Section 15168 (a)). As described in the discussion in CEQA Section 15168:

"The program EIR enables the agency to examine the overall effects of the proposed course of action and to take steps to avoid unnecessary adverse environmental effects. Use of the program EIR also enables the Lead Agency to characterize the overall program as the project being approved at that time. Following this approach when individual activities within the program are proposed, the agency would be required to examine the individual activities to determine whether their effects were fully analyzed in the program EIR."

Each component of this EIR is described as follows.

## **Proposed Airport Land Use Plan**

The Proposed Airport Land Use Plan depicts the boundaries of the San Diego International Airport and designates existing and future land uses. The Proposed Airport Land Use Plan guides the future project planning of Airport uses. The land use designations are analyzed at a PROGRAM level in this ~~Draft~~ Final Environmental Impact Report. This approach ensures that a responsible planning and mitigation program will be implemented at the San Diego International Airport that considers the full range of development possibilities, cumulative impacts, and mitigation opportunities.

## **Proposed Airport Implementation Plan**

The Proposed Airport Implementation Plan provides PROJECT-level review and approval for those elements that are to be developed at this time. The development of the Airport Master Plan was initiated by the San Diego County Regional Airport Authority to accommodate existing and future demand for air travel in the San Diego region. The Proposed Airport Implementation Plan consists of projects that will meet demand through the year 2015. As airport improvements beyond 2015 are proposed, additional environmental review will be undertaken by the San Diego County Regional Airport Authority.

The Airport Master Plan goal and objectives are described in Chapter Two, *Introduction, Background, and Project Description*. As described in Chapter Two, the San Diego County Regional Airport Authority prepared both constrained and unconstrained forecasts of aviation activity through 2030 that could be used for facilities planning and in evaluating Airport improvements. The unconstrained forecast represents projections of how San Diego regional area passenger demand, airline flights and other activity segments are likely to grow in the future, without consideration of the constraints on the growth that may be imposed by facility limitations at the San Diego International Airport. The constrained forecast reflects the limitations of the existing San Diego International Airport facilities, specifically its single runway, and represents a projection of how aviation activity would grow if no additional runway capacity is provided. In this case, airfield congestion and aircraft operational delay grow at an increasing rate over time. By 2015, operational delays are forecast to reach congestion levels that would slow further growth in airline flights without the addition of another runway at the San Diego International Airport. Between today and 2015, the existing Airport facilities will become increasingly congested and inadequate to safely and efficiently handle the forecast passenger volume. The remainder of this chapter discusses the facilities at the San Diego International Airport in detail and describes what improvements are required for the Airport to provide a reasonable level of safety and efficiency.

## **3.1 Need for Airport Land Use Plan**

The San Diego County Regional Airport Authority is adopting an Airport Land Use Plan to publicly identify its intentions for use of Airport property under its control at the San Diego International Airport. The Airport Land Use Plan as illustrated in **Figure 3.1** depicts the boundaries of the San Diego International Airport. The purpose of this plan is to designate existing and proposed land uses in areas under the San Diego County Regional Airport Authority's control, protect important and specialized uses unique to the San Diego International Airport, and preserve uses that must be adjacent to each other. It is important to note that the majority of the lands that comprise the San Diego International Airport are State tidelands, which are held in trust for the benefit of the citizens of the State of California. The Airport property (with the exception of a thin strip of land along Pacific Highway that is not designated as "tidelands"), while under the control and jurisdiction of the San Diego County Regional Airport Authority, remain in the public trust and any proposed land uses must be consistent with California Tidelands Trust requirements. The Airport Land Use Plan describes four general categories of land use on the Airport: Airfield, Terminal, Ground Transportation, and Airport Support all of which are consistent with California Tidelands Trust requirements. The disclosure of Airport land use plans informs the surrounding community and complements the airport planning of the San Diego International Airport. Where specific types of land use can be identified, impacts associated with such uses can also be assessed and disclosed to the public. The San Diego County Regional Airport Authority can also develop a general mitigation plan for any impacts found to be significant and adverse to the community. The following is a review of the need for each land use designation.

### **3.1.1 Describe Airport Boundaries and Land Uses**

In addition to the transfer of Airport operation and planning responsibilities to the San Diego County Regional Airport Authority, adjoining properties have recently been leased by the San Diego County Regional Airport Authority for Airport purposes. In January 2003, the former General Dynamics property (approximately 89 acres) per statute was leased by the SDCRAA for Airport purposes. In October 2005, the former Teledyne Ryan property (approximately 47.5 acres) was leased by the SDCRAA for future Airport uses. The Airport Land Use Plan incorporates these properties and describes the boundaries of the San Diego International Airport and the jurisdiction of the SDCRAA. In addition, the Airport Land Use Plan guides existing and future Airport uses to ensure comprehensive, efficient and compatible planning of these contiguous properties.

All of the former General Dynamics facilities have been demolished and removed from the property along Pacific Highway, with the exception of a wind tunnel facility now leased to the San Diego Air and Space Museum. This property is incorporated into the North Area, the Airport property located north of the runway. The North Area incorporates the former General Dynamics properties into the Airport boundaries and designates the property for Airfield, Ground Transportation and Airport Support land uses.

The former Teledyne Ryan aircraft manufacturing facility is occupied with numerous structures, buildings and utilities. This property is currently the issue of a legal settlement agreement related to a State clean-up order for this contaminated industrial site. Until the remediation regarding the property is completed, the land use plan only contemplates a preliminary analysis of potential future uses for this land. The San Diego County Regional Airport Authority is committed to disclosing its interest in future development of this property for Airport uses as one or more of the four Airport land use designations. Program-level mitigation may be established to guide redevelopment of the property once specific projects are identified to be constructed and operated. The Airport Land Use Plan designates the property for Airfield, Ground Transportation, and Airport Support land uses.

### **3.1.2 Airfield Land Use Designation**

The airfield is the most distinguishing characteristic of an airport. Runways, taxiways, aircraft hold areas, and aircraft parking areas (sometimes referred to as the “apron” area or “gates”) generally make up the airfield. Many navigational aids, which are used by aircraft to safely land and take-off, are also located on the airfield. The distinguishing characteristic of the airfield is that it is where aircraft are able to move about the Airport. These distinct characteristics necessitate the separation of an airfield land use category from other types of land uses within the Airport property.

The Federal Aviation Administration provides standards for developing facilities on the airfield. San Diego County Regional Airport Authority is required to prepare and submit an Airport Layout Plan to the Federal Aviation Administration which includes a detailed depiction of the entire airfield including dimensions and other important notations about the airfield. Many airports, including the San Diego International Airport, have been in operation for a very long period of time, during which aircraft and the nature of aviation have evolved. As aircraft and the nature of aviation have evolved, the standards established by Federal Aviation Administration regarding airport facilities have changed. However, many airports and airport facilities have not changed to reflect the evolution of aircraft design and the nature of aviation. Some of the projects included in the Proposed Airport Implementation Plan will update airfield facilities that do not currently meet Federal Aviation Administration design standards. Airfield facilities improvements are needed to meet current Federal Aviation Administration standards which would help improve airfield safety and efficiency.

### **3.1.3 Terminal Land Use Designation**

The most visible structures at a commercial airport are typically the passenger terminal facilities. This is certainly true at the San Diego International Airport. The Terminal land use designates the passenger processing facilities at existing and proposed locations at the San Diego International Airport. The Terminal land use is adjacent to the Airfield land use, as it serves to accommodate passenger loading onto aircraft and departure onto the airfield. The terminal land use is particularly critical because it is the location that all passenger processing occurs including security. Though passenger processing is a complex process including ticketing, baggage handling, sorting and boarding, the critical component of the process post-September 11, 2001, is security screening. Since late 2001, the Transportation Security

Administration of the Department of Homeland Security has controlled passenger security screening at the San Diego International Airport. Security screening limits access to terminal areas where passengers are able to board aircraft. Those portions of the terminal that are beyond the security checkpoints are known as “sterile” and have unique characteristics relative to other building types. The terminal facilities provide a unique set of functions relating to airline passenger processing. However, it is the sensitive nature of the security screening process, which takes place in the terminal facility, which necessitates its designation as a unique land use.

The sterile areas of the terminal facilities are accessible only by screened, ticketed passengers, previously screened and badged airport employees, concession staff, airline employees, United States Customs agents, and Transportation Security Administration staff. The more exhaustive passenger and baggage screening processes implemented as a result of September 11, 2001 have further taxed the existing terminal infrastructure. Facility improvements are needed to better accommodate modern airport security requirements.

### **3.1.4 Ground Transportation Land Use Designation**

Ground transportation uses include most airport areas accessible to motor vehicles including on-airport access roads; passenger curb front (pick-up and drop-off areas); public parking areas; transit plazas for public transportation, taxis, and shared ride vehicles; a transit center; transit corridors, and rental car facilities.

The Ground Transportation land use identifies those areas and informs the public and transit/roadway transportation agencies regarding the connectivity of the on-airport roadway improvements to off-airport roadways and traffic impacts. The Ground Transportation land use designates areas along the major streets, North Harbor Drive and Pacific Highway that may be used for future transit improvements including proposed transit corridors and dedicated lanes for shared vehicles along the major roads.

In addition to roadways and parking, the Ground Transportation land use designation also includes rental car facilities. Currently, there are no rental car facilities located on the San Diego International Airport. The existing rental car facilities that serve Airport passengers are located off-Airport at numerous locations along North Harbor Drive and along the Pacific Highway/Kettner Boulevard corridor. The rental car companies provide shuttle buses for Airport passengers from transit plazas at the terminals. Some existing rental car facilities are located off-Airport on state tidelands on East Harbor Island. These rental facilities occupy approximately 27.5 acres and include 2,364 rental car spaces. Additional rental car facilities are located off-Airport along the Pacific Highway/Kettner Boulevard corridor between Laurel and Washington Streets.

An analysis of rental car facility requirements is included in the Airport Master Plan based on a survey of rental car operators and passenger forecasts. The Airport Master Plan facility requirements determine that based upon the existing volumes of passengers, 46.2 acres are needed for rental car facilities currently and 60.6 acres are needed in the year 2015. The Airport Land Use Plan designates property for Ground Transportation uses that may serve rental car demand in the future by providing rental car facilities on the Airport. Future rental car development would involve extensive coordination, financial commitments, and long-term use agreements with third parties including the rental car operators. In addition, the areas designated as Ground Transportation land use would provide a future opportunity for consolidated rental car facilities and shared-ride shuttle transportation.

Lastly the Ground Transportation land use in the area north of the runway along Pacific Highway includes a transit center and proposed transit corridors. The facility would be integrated with or adjacent to the consolidated rental car facility (CONRAC) between Pacific Highway and the North Area access road at Sassafras. The development of a transit center will allow greater connectivity to regional transit fostering use of public transit to and from the Airport. A bus plaza would accommodate public and private transit and reduce the dependence on an increasingly congested North Harbor Drive. A passenger drop-off plaza or curbside would allow passengers to be dropped off on the north and ride a consolidated bus to the Terminals on the south. In addition to the transit and passenger drop-off plaza, it is envisioned that the transit center will include a pedestrian connection to the Washington Street Trolley Station, electronic ticket kiosks and luggage check, and will be served by a dedicated transit corridor potentially along Pacific Highway and North Harbor Drive connecting the North Area with the Terminals on the South.

### **3.1.5 Airport Support Land Use Designation**

Though most people consider a commercial airport's primary function to be a terminal for passenger air transportation, many other functions take place at the San Diego International Airport and substantial infrastructure is required for the Airport to operate smoothly. Airport support facilities include air cargo, general aviation, aircraft fueling and fuel storage, air traffic control, Airport fire fighting, airline maintenance, Airport maintenance, and Airport management. Some of these facilities need to be near the passenger terminal area, while some need to be adjacent to the airfield. The proper layout of these facilities is best accommodated by setting priorities for these adjacencies. The Airport Support land use helps identify those areas where these critical support facilities can be located.

The Airport Land Use Plan designates property for Airport Support uses that may serve forecast demand for air cargo and general aviation in the future by providing air cargo and general aviation facilities at San Diego International Airport. In regards to air cargo, the San Diego International Airport is lacking sufficient cargo apron and building facilities to accommodate the existing demand of air cargo in the region. Air cargo is sorted off-Airport and trucked to the San Diego International Airport for aircraft loading because there are limited areas for cargo sorting facilities on the Airport. The existing air cargo facilities are underdeveloped and insufficient to meet the existing and future demand for air cargo service at the San Diego International Airport. The Airport Master Plan analyzed the industry standards and utilization rates for cargo buildings and forecast air cargo volumes to determine the air cargo facility requirements. The Airport currently provides less than 70,000 square feet for dedicated air cargo buildings and 270,000 square feet of air cargo apron located in three different areas on the San Diego International Airport. By 2015, the air cargo building facility requirement would be 403,580 square feet of cargo building and 2,018,000 square feet of cargo apron.

The demand for air cargo facilities on the San Diego International Airport would continue to grow as demand is forecast to grow in future years. Approximately 32 acres designated as Airport Support land use in the Proposed Airport Land Use Plan may be used in the future for air cargo facilities including sorting facilities and aircraft apron. Future air cargo facilities would involve extensive coordination, financial commitments, and long-term use agreements with third parties including air cargo operators.

The existing general aviation facilities occupy 11.4 acres including aircraft apron, terminals/hangars, and vehicle parking. The existing general aviation facilities are poorly organized and constrained between the airfield (Taxiway C) and ground transportation uses (Pacific Highway). In particular, the location of the general aviation facilities has restricted the San Diego International Airport from implementing a standard separation distance between Runway 9-27 and Taxiway C for the safe and efficient circulation of aircraft.

The demand for general aviation facilities at the San Diego International Airport is anticipated to grow modestly as general aviation operations are forecast to increase 1% annually from 13,586 general aviation operations in 2005 to approximately 18,000 general aviation operations in 2015. As described in section 2.2.3.1, *Summary of Annual Forecasts*, general aviation operations are expected to level-out at approximately 18,000 operations in the constrained high scenario forecast for San Diego International Airport. Overall Airport efficiency and safety could be improved by relocation and expansion of the general aviation facilities to 12.4 acres designated for Airport Support uses and specifically planned for general aviation facilities including general aviation aircraft apron, terminals/hangars, and vehicle circulation and access.

## **3.2 Need for Airport Improvements**

The Federal Aviation Administration approved the aviation forecast for the San Diego International Airport on June 28, 2005. On June 29, 2005, the San Diego County Regional Airport Authority Board directed staff to prepare an Implementation Plan that includes the build-out of Terminal Two West as the preferred alternative, and to initiate environmental review of this project.

Increased passengers and operations forecast for the San Diego International Airport will result in excessive congestion at the San Diego International Airport, which already is experiencing crowding, and low Levels of Service in some locations of the terminals, curbside, aircraft and vehicle parking, cargo facilities, and airfield maneuvering areas. The San Diego International Airport operates a single runway, which is potentially capable of handling as much as 300,000 annual aircraft operations. However, the single runway airfield will result in excessive delays when annual operations reach approximately

260,000. The forecast of aviation activity at the San Diego International Airport projects both high and low growth scenarios. Under the high growth scenario, the 260,000 annual operations benchmark would be reached in 2015. Under the low growth scenario, the 260,000 annual operations benchmark would be reached in 2022. In 2005 and 2006, there were 211,365 and 220,839 operations at the San Diego International Airport tracking 1.7 and 4.2 percent above the high growth forecast scenario respectively. Additionally, since 2003 the enplanements at the San Diego International Airport have been generally tracking at or above the constrained high growth forecast approved in June 2005. Due to this trend, the constrained high growth forecast was used for the purposes of this analysis.

The Airport Master Plan process considered a variety of scenarios for addressing the future at San Diego International Airport. The forecast demand period for the Airport Master Plan and associated gate requirements for the terminal facilities were considered for two planning design levels (2015 and 2030) to accommodate the previous Airport Site Selection Program process. As described in Section 2.4.2, *Airport Site Selection Process*, the citizens of San Diego County voted not to move forward with obtaining land from MCAS Miramar to develop a commercial airport. This Environmental Impact Report contemplates only the near-term requirements (year 2015). The extended future of the San Diego International Airport would be determined in future phases of airport planning that would identify needed improvements to accommodate growth beyond 2015.

This Environmental Impact Report is being prepared to implement specific near-term (year 2105) Airport Master Plan improvements to meet near-term needs. Implementation of the near-term Airport Master Plan recommendations is needed because forecast growth cannot be reasonably accommodated within the existing Airport facilities. Without these improvements, passenger traffic through the existing terminal buildings will become severely congested during longer periods of each day and Level of Service would be reduced further beyond its existing degraded level. The specific need for the Proposed Airport Implementation Plan component of the Proposed Project is to meet airside, terminal, air cargo and ground transportation deficiencies through 2015. [Figure 3.2](#) illustrates the Proposed Airport Implementation Plan.

### **3.2.1 Airfield Improvements Needed**

The following text describes the airfield needs required to accommodate aviation operations through 2015.

#### **3.2.1.1 Additional Aircraft Gates**

An aircraft gate is a position for an aircraft to park while passengers, baggage, and belly cargo are loaded or unloaded. Each gate is a parking position for a single aircraft. Today, the San Diego International Airport has 41 contact gates capable of handling varying sizes of commercial jet aircraft spread among three terminals. The San Diego International Airport also has a separate commuter terminal where smaller turbo-prop and regional jet aircraft are parked and passengers are ground loaded. There are nine parking positions for small aircraft located at the Commuter Terminal.

A comprehensive analysis was conducted as part of the Airport Master Plan process to determine if the existing number of aircraft gates at the San Diego International Airport could accommodate the forecast passenger volumes for 2015. The analysis included review of the forecast of aviation activity, analysis of the existing facilities and their operational characteristics, and the assembly of a gated design day schedule<sup>1</sup>. The gated design day schedule is meant to present a plausible future scenario for flight activity at the San Diego International Airport based on the accepted forecast of aviation activity. The analysis resulted in a facility requirement of 51 jet gates and three commuter aircraft parking positions in 2015. This is an increase of ten additional jet aircraft contact gates relative to the Airport's existing facilities, while the nine existing commuter gates would accommodate demand for commuter flights in 2015.

The facility requirement for ten additional jet contact gates is based on the forecast of aviation demand and the assessment of the existing facilities and their operational characteristics. Failure to provide the required facility improvements will result in the continued degradation of Levels of Service at the San Diego International Airport with congested terminals, which would negatively impact passenger

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<sup>1</sup> The design day is an average weekday of the peak month.



convenience, passenger comfort, flight delay and its associated cost, safety, and overall Airport efficiency. See [Figure 3.2 Project Element Orange #1](#).

### 3.2.1.2 Additional Remain-Over-Night Aircraft Parking Positions

The San Diego International Airport has a high demand for remain overnight aircraft parking. The location of the Airport in the southwestern quadrant of the United States contributes to its role as a “spoke” airport. As a spoke airport, few airlines utilize the San Diego International Airport as a hub for connecting through-passengers to other final destinations. Spoke airports are typically characterized by the need for Remain-Over-Night parking. Typically the first round of flights each day is from spoke airports to the hubs, while the last round of flights is outbound from hubs to the spoke airports. The last aircraft arriving at night and leaving first the next morning are parked overnight at a terminal passenger gate. Other aircraft that leave after the first wave of outbound flights in the morning are parked at Remain-Over-Night aircraft parking positions. Because the San Diego International Airport is a relatively busy airport without hubbing activity, there is a high demand for Remain-Over-Night parking.

The gated design day schedule utilized to determine the aircraft gate facility requirement also determines the required number of Remain-Over-Night positions in the future year of 2015. It determines a need for three additional Remain-Over-Night positions in 2015.

In addition to the three new Remain-Over-Night positions, the Proposed Project would result in the removal of five existing Remain-Over-Night positions. Thus, a total of eight new and replacement Remain-Over-Night positions would be required for 2015.

Lastly, nine of the existing Remain-Over-Night positions are located on the North Ramp, north of the runway. Aircraft parked on the North Ramp must cross Runway 9-27 to reach the terminal area, which can cause delays. To help reduce the delays associated with runway crossings, two additional Remain-Over-Night positions would be relocated from the North Ramp to the West Ramp. This would reduce the number of aircraft parked on the other side of the runway from the terminal area.

The proposed project would provide a total of ten Remain-Over-Night parking positions (three new positions, five replacement positions, and two relocated positions). See [Figure 3.2 Project Element Orange #2](#).

### 3.2.1.3 Airfield Operational Improvements

The San Diego International Airport is the busiest single runway airport in the United States and as operations continue to increase, the airfield will become increasingly congested. The Airport Master Plan identifies a number of taxiway and hold apron improvements that are needed to ensure that airfield delays are not increased to intolerable levels as traffic volumes increase through 2015. The recommended airfield improvements may also reduce the need for some taxiing aircraft to cross the runway, resulting in improvements in both safety and efficiency.

There are four key airfield operational improvements associated with the Proposed Airport Implementation Plan:

- Taxiway C, east of Taxiway D, would be reconstructed and widened to Federal Aviation Administration recommended dimensions. At the current time, Taxiway C, east of Taxiway D, has a non-standard separation from the runway which results in the prohibition of some aircraft traffic on this portion of the airfield. The Proposed Airport Implementation Plan proposes that the taxiway be reconstructed so that its centerline is the proper distance from the runway centerline. To allow for these airfield improvements, the existing general aviation facilities need to be relocated as described in Section 3.2.4.1, *General Aviation Improvements*.
- An aircraft hold pad would be constructed at the Runway 27 end adjacent to and north of the relocated Taxiway C. This hold pad would provide a safe location for aircraft awaiting departure clearance on Runway 27 to hold without obstructing taxiway access to Runway 27.
- A new taxiway would be constructed north of the proposed hold pad. This taxiway would provide a circulation route for aircraft accessing the Runway 27 end or the hold pad area. This taxiway would also provide access to the relocated general aviation area, see Section 3.2.4, *Airport Support Improvements Needed*.

- A parallel taxiway would be striped adjacent to Taxiway B and Terminal Two West. This improvement would allow aircraft to pass near the proposed entrance to the expanded apron west of Terminal Two West, without affecting aircraft departing the runway onto Taxiway B.

These improvements would provide an increased margin of safety on the airfield by replacing an out-dated, non-standard taxiway, providing a full size hold pad, and enhancing aircraft circulation. The improvements in airfield safety and clearance would also provide an increased margin of efficiency reducing the probability that significant delays would be encountered within the planning horizon for San Diego International Airport. See [Figure 3.2 Project Elements Orange #3 and Green #5](#).

### **3.2.2 Terminal Improvements Needed**

The Airport Master Plan used the single-runway constrained forecast to develop Airport requirements for the terminal, as well as airfield and ground transportation facilities. While each of these facilities has unique characteristics, they operate collectively as a system for moving people and goods. The capacity of this Airport system is ultimately limited by its constraining component, the single runway. Capacity improvements made to the terminals (and ground transportation) components in this situation would increase the Level of Service experienced by the user without increasing the overall capacity of the San Diego International Airport. It is noted that when the first phase of Terminal Two West was opened in January 1998 the facility did not experience a spike in airport operations or passenger volumes. Indeed the total enplanements growth rate for San Diego International Airport from 1997 to 1998 was 3.26 percent while the growth rate from 1998 to 1999 was 3.18 percent. From 1999 to 2000 the growth rate in enplanements was 3.91 percent and then the impact of September 11, 2001 hampered growth for several years. It is expected that the terminal improvements needed to accommodate growth through 2015 would have a similar impact on enplanements as those experienced in 1998 when Terminal Two West terminal was opened.

Section 3.2.1.1, *Need for Additional Aircraft Gates*, noted that the gated design day schedule for the San Diego International Airport in 2015 shows a need for ten additional jet gates. The additional jet gates would be provided by expanding Terminal Two West which would feature additional passenger processing facilities to safely and efficiently accommodate the passengers that would utilize the additional gates. See [Figure 3.2 Project Element Orange 1](#). The expanded terminal facilities will be constructed to accommodate newer security screening processes including passenger screening and baggage screening.

The Level of Service generally used to develop the facility requirements in the Airport Master Plan is Level of Service B. Level of Service B is described as providing a high Level of Service condition of stable flow with very few delays and high level of comfort. The analysis in the Airport Master Plan shows that the existing terminal facilities are deficient in terms of providing Level of Service B in both the existing year and 2015. An additional area of approximately 165,500 square feet was needed to provide this Level of Service in the existing year. For 2015, approximately 623,000 additional square feet of terminal facilities are needed to provide Level of Service B. The terminal facility requirements are broken down by the following areas:

- Airline Functions – Airline functions include those areas directly related to airline operations and passenger processing, such as ticketing, departure lounges, baggage services, and airline administrative office space.
- Concessions – Concessions include those areas providing food, beverages, gifts, publications, and other items for purchase.
- Federal Inspection Services – The facilities provided for the federal inspection of arriving international passengers include: Customs and Immigration Services, baggage claim, Customs and Border Patrol, and the United States Department of Agriculture.
- Secure Public Area – Secured public areas include the security checkpoints, secure circulation, and public restrooms.
- Non-Secure Public Area – Non-secured public areas include circulation in the ticketing lobby and baggage claim lobby as well as general circulation such as entrance lobbies, fire stairs, vestibules, escalators, and elevators.

- Non-Public Area – Non-public areas include private office space for the San Diego County Regional Airport Authority, the Transportation Security Administration, other tenant offices, and building support spaces such as mechanical rooms, loading docks, maintenance, and storage.

**Table 3-1** shows the size of existing terminal facilities areas and the terminal facility requirements developed in the Airport Master Plan for the existing year (2004/2005) and 2015.

Though the facility requirements analysis shows that the existing Terminal One and Terminal Two East facilities are deficient for providing Level of Service B to passengers, the Proposed Airport Implementation Plan only contemplates constructing sufficient facilities to serve the ten new jet gates.

### **3.2.3 Ground Transportation Improvements Needed**

The following text describes ground transportation improvements needed to accommodate aviation activity through 2015.

#### **3.2.3.1 Alleviate Curbside Congestion**

The terminal curbside is the area where passengers are dropped off and picked up in front of the terminal. The Airport Master Plan analyzed terminal curbside requirements based on the existing conditions and the forecast increase in passenger activity at the San Diego International Airport. Curbside requirements were estimated separately for each of the two terminals as well as by curbside function (departing, arriving, and Transit Plaza). The Airport Master Plan estimated deficiencies associated with the terminal curbside based on existing passenger distributions among terminals. The existing terminal passenger distribution would result in a private vehicle curbside deficiency of approximately 300 feet at Terminal One, shown in **Table 3-2**.

The Proposed Airport Implementation Plan provides ten new jet gates and associated passenger processing facilities at Terminal Two West and shifts some passenger demand from Terminal One to Terminal Two. Curbside requirements for the Proposed Airport Implementation Plan, assuming 10 new gates at Terminal Two West, are shown in **Table 3-2**. The existing curbside at Terminal Two West consists of a single level roadway accommodating an arrivals and departures curb and a transit plaza. Under the Proposed Airport Implementation Plan, the existing Terminal Two curbside configuration would result in a deficiency of approximately 95 feet of private vehicle and 745 feet of transit plaza curb. As a result, the expanded terminal facilities at Terminal Two West, including additional aircraft gates, would require expansion of the Terminal Two curbside.

The Proposed Airport Implementation Plan accommodates the additional curbside requirement by providing an additional 1,050 linear feet of curb frontage for departing passengers on a second level roadway and 1,200 linear feet for arriving passengers on the ground level. Note that the existing curbside would be utilized as an arrivals curbside after construction of the second level roadway. A new transit plaza would also be provided on the ground level. See **Figure 3.2** Project Element Orange #1.

#### **3.2.3.2 On-Airport Road Improvements**

The expanded passenger terminal, reconfigured curbside areas for passenger drop-off and pick-up, as well as the improved and expanded public parking areas described in the following sections, necessitate changes to the on-Airport roadway system to safely and efficiently allow vehicle access between these areas and the public roadways. The entrance from North Harbor Drive to the Terminal Two West facilities is not contemplated for expansion as its capacity is sufficient for the anticipated future volume of traffic in 2015. However, with the construction of a second-level departure curb in front of Terminal Two, additional access ramps would be constructed to provide entrances and exits from the departure curb and public parking areas in front of Terminal Two. Access to the second level curbside would be provided from the Terminal Two entrance roadway and the Terminal Two exit roadways would be reconfigured to accommodate the second level curbside/roadway exit. See **Figure 3.2**, Project Element Orange #2.

In addition, Airport uses in the North Area would require an access road from the intersection of Pacific Highway and Sassafras Street to provide ground vehicle access to SAN Park Pacific Highway and the relocated general aviation facilities in the Proposed Airport Implementation Plan. See **Figure 3.2** Project Element Green #2.

Table 3-1  
Terminal Requirements

Description	Existing Facilities (2004/2005)		Existing Facility Requirements (2004/2005)		2015 Facility Requirements	
	Linear Feet	Square Feet	Linear Feet	Square Feet	Linear Feet	Square Feet
<b>Airline Functions</b>						
Ticket Counter Area		6,586		9,704		11,284
Ticket Counter Length	765		884		1,026	
Ticket Counter Queuing		9,426		17,689		20,517
Airline Ticket Office		28,495		28,495		33,062
Baggage Claim Area		51,040		44,384		60,002
Baggage Claim Frontage	1,177		1,402		1579	
Baggage Claim Devices	9 <sup>(1)</sup>		11 <sup>(1)</sup>		12 <sup>(1)</sup>	
Baggage Service Office		4,597		4,597		6,221
Outbound Baggage		50,010		50,010		58,004
EDS-In-Line Screening Area						29,002
Inbound Baggage		27,278		27,278		36,885
Airline Operations		61,035		61,035		91,224
Departures Lounges (Holdrooms)		102,788		89,700		122,650
Clubrooms		10,957		10,957		15,964
<b>Concessions</b>						
Concessions (Includes Storage)		68,914		91,646		136,836
<b>Federal Inspection Services</b>						
FIS (CIS, Claim, CBP, USDA)		7,000		10,000		41,600
<b>Secure Public Area</b>						
Passenger Screening Checkpoint	18 <sup>(2)</sup>		18 <sup>(2)</sup>		20 <sup>(2)</sup>	
Passenger Screening Area		10,203		23,465		24,700
Concourse Circulation		90,825		117,000		159,000
Restrooms						19,905
Other						11,403
<b>Non-Secure Public Area</b>						
Circulation - Ticketing		16,526		26,534		30,776
Circulation - Baggage Claim		7,380		11,680		15,790
Circulation - General		52,940		114,558		171,045
Restrooms						13,270
USO		6,520		6,520		6,520
Other						11,403
<b>Non-Public Area</b>						
TSA		4,676		4,676		5,422
San Diego County Regional Airport Authority		7,163		7,163		10,263
Circulation						45,156
Mechanical/Electric/ Maintenance/Storage		58,000		90,851		143,236
Other						79,038
<b>Total</b>		<b>682,359</b>		<b>847,960</b>		<b>1,410,180</b>

Notes:

(1) Number of Claim Devices

(2) Number of Screening Checkpoints

Source: HNTB analysis.

Table 3-2

## Terminal Curbside - Inventory and Requirements

Terminal Curbside - Inventory and Requirements	Curb	Lanes	Existing Curb Frontage (feet)	2004		2015 Existing Terminal Distribution		2015 Implementation Plan Terminal Distribution	
				Curb Req'mt (feet)	Surplus/Deficit (feet)	Curb Req'mt. (feet)	Surplus / Deficit (feet)	Curb Req'mt. (feet)	Surplus / Deficit (feet)
Terminal One	Enplaning - East	4	405	480	-75	555	-150	455	-50
	Deplaning	4	405	555	-150	755	-350	555	-150
	Enplaning - West	4	405	185	220	210	195	185	220
	<b>Sub-Total Public</b>		<b>1,215</b>	<b>1,220</b>	<b>-5</b>	<b>1,520</b>	<b>-305</b>	<b>1,195</b>	<b>20</b>
	Transit Plaza - For Hire		650	385	265	420	230	385	265
	Transit Plaza - Taxi		750	600	150	625	125	575	175
	Transit Plaza - Courtesy		510	600	-90	840	-330	520	-10
	<b>Sub-Total Transit Plaza</b>		<b>1,910</b>	<b>1,585</b>	<b>325</b>	<b>1,885</b>	<b>25</b>	<b>1,480</b>	<b>430</b>
<b>Sub-Total Terminal One</b>		<b>3,125</b>	<b>2,805</b>	<b>320</b>	<b>3,405</b>	<b>-280</b>	<b>2,675</b>	<b>450</b>	
Terminal Two	Deplaning - East	3	340	185	155	235	105	285	55
	Enplaning - East	2	140	160	-20	185	-45	235	-95
	Deplaning - West	4	500	330	170	405	95	580	-80
	Enplaning - West	4	380	280	100	305	75	355	25
	<b>Sub-Total Public</b>		<b>1,360</b>	<b>955</b>	<b>405</b>	<b>1,130</b>	<b>230</b>	<b>1,455</b>	<b>-95</b>
	Transit Plaza - For Hire		375	315	60	350	25	420	-45
	Transit Plaza - Taxi		585	550	35	575	10	625	-40
	Transit Plaza - Courtesy		500	480	20	680	-180	1,160	-660
<b>Sub-Total Transit Plaza</b>		<b>1,460</b>	<b>1,345</b>	<b>115</b>	<b>1,605</b>	<b>-145</b>	<b>2,205</b>	<b>-745</b>	
<b>Sub-Total Terminal Two</b>		<b>2,820</b>	<b>2,300</b>	<b>520</b>	<b>2,735</b>	<b>85</b>	<b>3,660</b>	<b>-840</b>	
Commuter Terminal	Enplaning	3	340	460	-120	525	-185	395	-55
	Deplaning	3	345	485	-140	575	-230	420	-75
	<b>Sub-Total Commuter</b>		<b>685</b>	<b>945</b>	<b>-260</b>	<b>1,100</b>	<b>-415</b>	<b>815</b>	<b>-130</b>
All Terminals	Enplaning		1,670	1,565	105	1,780	-110	1,625	45
	Deplaning		1,590	1,555	35	1,970	-380	1,840	-250
	Transit Plaza		3,370	2,930	440	3,490	-120	3,685	-315
	<b>Total</b>		<b>6,630</b>	<b>6,050</b>	<b>580</b>	<b>7,240</b>	<b>-610</b>	<b>7,150</b>	<b>-520</b>

Source: HNTB analysis, 2004.

### 3.2.3.3 Increase Public Parking Areas

Automobile parking is provided at the Airport for both passengers and Airport employees. Automobile parking allows passengers and employees to conveniently access the Airport while passenger parking is also a key source of revenue to the San Diego County Regional Airport Authority. The demand for public parking at the San Diego International Airport is unmet at the Airport today. The Airport Master Plan facility requirements provided in [Table 3-3](#) show that a total of 4,085 parking spaces are available at the terminal area today while demand for terminal area parking exceeds 6,000 spaces.

As the forecast passenger volumes continue to grow, the demand would continue to exceed the supply of public on-Airport parking. As discussed in the Airport Master Plan facility requirements, the demand for on-Airport public parking would exceed supply by 4,326 parking stalls in 2015. The Proposed Airport Implementation Plan addresses the public parking deficiency at Terminal Two by including a new five-level, 5,000-space parking structure over the existing Terminal Two West surface parking lot, providing a net total of 4,300 additional parking spaces in the terminal area.

The parking area directly south of the existing terminals is relatively small and constrained by Harbor Drive to the south, Airport facilities to the east and north, and the Airport property line to the west. Thus, the only available mechanism for providing the required parking in the immediate vicinity of the terminals is through construction of a parking structure. See [Figure 3.2](#), Project Elements Orange #4 and #5.

Table 3-3  
Public Parking - Stall Requirements

Year	MAP	Reqmt.		Terminal			Remote <sup>1</sup>			Total		
		Short-Term	Long-Term	Total	Supply	Surplus (Deficit)	Reqmt.	Supply <sup>2</sup>	Surplus (Deficit)	Reqmt.	Supply <sup>2</sup>	Surplus (Deficit)
2004	16.5	1,270	4,742	6,012	4,085	(1,927)	5,613	9,357	3,744	11,625	13,442	1,817
2015	22.8	1,705	6,706	8,411	4,085	(4,326)	7,938	9,357	1,419	16,348	13,442	(2,906)

<sup>1</sup> Includes all lots, both Authority-operated and privately operated, requiring shuttle bus transport to terminals.  
<sup>2</sup> Includes facilities currently planned or under construction.

Source: HNTB estimates, 2006.

### 3.2.3.4 Relocate and Reconfigure SAN Park Pacific Highway

The San Diego County Regional Airport Authority also operates three on-Airport long-term parking lots served by shuttles: one is located on the west side of the terminal area and is known as SAN Park Naval Training Center, one is located east of the commuter terminal along Harbor Drive and is known as SAN Park Harbor Drive, and the final remote parking lot is located in the North Area of the Airport and is known as SAN Park Pacific Highway.

While these parking facilities help meet some of the demand for Airport parking, numerous private parking lots are located in the vicinity of the San Diego International Airport and take advantage of the limited availability of on-Airport parking. Further, the Proposed Project would utilize the former Naval Training Center property for the construction of the expanded Airport terminal and aircraft apron areas. This would result in the reconfiguration of the existing SAN Park Naval Training Center, further limiting the available on-Airport remote parking.

The Proposed Airport Implementation Plan would expand SAN Park Pacific Highway by 500 parking stalls to accommodate the displaced parking currently available at SAN Park Naval Training Center. Along with an expansion of SAN Park Pacific Highway, the parking facility will be reconfigured to allow for other improvements in the North Area. Notably, the current SAN Park Pacific Highway facility is directly accessible from the intersection of Pacific Highway and Sassafras Street. A new access road to other facilities within the North Area would be constructed from this intersection. To accommodate the proposed access road, SAN Park Pacific Highway would be reconfigured and its entrance would be relocated so that it is accessible from the proposed North Area access road. See [Figure 3.2](#), Project Element Green #1.

### **3.2.3.5 Further Ground Transportation Improvements**

The Airport Master Plan identifies additional ground transportation facilities that may be contemplated including transit access and rental car facility requirements, both requiring extensive coordination with transportation/transit agencies and off-Airport tenants.

Near-term transportation and transit improvements are being coordinated through the Airport Roadway/Transit Committee that includes San Diego Association of Governments (SANDAG), the Metropolitan Transit System (MTS), the North County Transit District (NCTD), Caltrans, the City of San Diego, and the Port of San Diego. This Committee has developed a draft Airport Transit Plan recommending Airport transit marketing, service and infrastructure enhancements that can be made to the transit system to improve Airport user ridership volumes. In addition, off-Airport roadway improvements and cruise ship passengers connections are also being evaluated to determine how ground transportation improvements to the Airport can be implemented in a manner that supports these other needs.

### **3.2.4 Airport Support Improvements Needed**

The following text describes Airport support improvements needed to accommodate aviation activities through 2015.

#### **3.2.4.1 General Aviation Improvements**

The current general aviation facilities occupy 11.4 acres located at the west end of Runway 9-27 adjacent to Taxiway C and Pacific Highway. The current location of the general aviation facilities prevents compliance with Federal Aviation Administration design standards and presents the following safety concerns:

- The location of the general aviation facilities is adjacent to Taxiway C. As mentioned in Section 3.2.1.3, Taxiway C does not meet current Federal Aviation Administration design standards for taxiways and needs to be relocated to the north.
- The proximity of the general aviation facilities to Taxiway C and the Runway 27 end presents a safety concern. Aircraft taxiing on Taxiway C turn onto Runway 27 in the immediate vicinity of the general aviation facilities apron. These aircraft direct high velocity jet blast on to the general aviation apron where general aviation aircraft are loaded and unloaded as well as serviced.

In addition, the general aviation facilities have been expanded in a piece-meal fashion over the years and occupy a haphazardly organized area. The arrangement of apron, terminal, hangar, and parking facilities is inefficient relative to the acreage the facilities occupy. Relocating the general aviation facilities would allow the Authority to bring the taxiways into compliance with Federal Aviation Administration design directives, and to improve the safety of aircraft operations.

The existing general aviation facilities occupy 11.4 acres including aircraft apron, terminals, hangars, and vehicle parking. The demand for general aviation facilities at the San Diego International Airport is anticipated to grow modestly as general aviation operations are forecast to increase 1% annually from 13,586 operations in 2005 to approximately 18,000 operations in 2015.

Overall Airport efficiency and safety would be improved by the relocation and expansion of the general aviation facilities. The 12.4 acres would be better suited and planned for general aviation aircraft apron, terminals, hangars, vehicle circulation, and parking. These general aviation improvements on 12.4 acres would meet the minimum general aviation facility requirements for 2015 as outlined in the Airport Master Plan.

Relocating the general aviation facility further away from Taxiway C and the runway end would also prevent conflicts between taxiing aircraft and the associated jet blast on the general aviation facilities apron. Relocating and expanding the general aviation facilities would allow the Airport to provide improved general aviation facilities for use and access by general aviation aircraft while improving both safety and efficiency. See [Figure 3.2 Project Elements Green # 3, 4, and 5](#).

### **3.2.4.2 Further Airport Support**

The existing Airport support facilities at the San Diego International Airport are underdeveloped and insufficient to meet existing demand and future demand for air service including air cargo, airline maintenance, Airport maintenance, and Airport management. The services provided by each of the Airport support facilities will dictate the locations of the proposed improvements near the passenger terminal area or adjacent to the airfield.

## **3.3 Proposed Federal, State and Local Actions and Required Permits**

The proposed Federal actions include Federal Aviation Administration approval of the Airport Layout Plan showing the proposed development and the preparation and completion of the National Environmental Policy Act documentation.

The proposed State and local actions required for approval of the specific projects in the Proposed Airport Implementation Plan include the following:

- California Coastal Development Permit
- General NPDES Permit for Storm Water Discharges Associated with Construction Activities
- City of San Diego Building Permits
- San Diego Air Pollution Control District – Stationary Source Permit



# CHAPTER FOUR: PROPOSED PROJECT AND ALTERNATIVES

In addition to analyzing the impacts associated with the Proposed Project, the California Environmental Quality Act requires study of a range of reasonable alternatives. Section 15126.6 (a) of the California Environmental Quality Act Guidelines states that Environmental Impact Reports shall “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.”<sup>1</sup> The California Environmental Quality Act defines “reasonable alternatives” as those that are practical or feasible from the technical and economic perspective. Additionally, the merits of these alternatives must be evaluated in a comparative manner. The project to be evaluated in this Environmental Impact Report consists of two components. The first component is the Proposed Airport Land Use Plan, and the second is the implementation of the specific projects contained in the Airport Master Plan, called the Proposed Airport Implementation Plan. In accordance with the Airport Master Plan objectives, this chapter presents the Proposed Project (Preferred Alternative), which includes the Proposed Airport Land Use Plan and the Proposed Airport Implementation Plan, the East Terminal Alternative, the No Project Alternative, and alternatives eliminated from further consideration.

This chapter first provides a description of the Proposed Project and then describes the East Terminal and No Project Alternatives. The chapter then provides a summary of alternatives that were considered but rejected for both components of the Proposed Project. Alternatives to the Proposed Project were developed in consideration of the project objectives. Alternatives were rejected without further analysis if they did not meet the project objectives. Lastly, the alternatives considered are summarized.

## 4.1 Proposed Project (Preferred Alternative)

The Proposed Project is the Airport Master Plan. The Airport Master Plan consists of two components: adoption of an Airport Land Use Plan; and implementation of specific improvements to meet forecast demand through 2015. The Proposed Project includes adoption of the Proposed Airport Land Use Plan and the Proposed Airport Implementation Plan. The following sections describe each of these components.

### 4.1.1 Proposed Airport Land Use Plan

The Proposed Airport Land Use Plan as illustrated in [Figure 4.1](#):

- Depicts the boundaries of the San Diego International Airport; and
- Designates the land uses on the Airport.

The Proposed Airport Land Use Plan includes four general categories of land use at the San Diego International Airport: Airfield, Terminal, Ground Transportation, and Airport Support. The Proposed Airport Land Use Plan designates existing and proposed land uses in areas that are under the San Diego County Regional Airport Authority’s control and is a policy planning document only.

The Proposed Airport Land Use Plan is a program level planning guide to ensure that Airport facilities are planned with thought and foresight to serve the greatest number of Airport users. With limited physical space available for Airport purposes, the Proposed Airport Land Use Plan guides and groups similar Airport uses to insure compatible, shared, and orderly development of Airport facilities. The adoption of the Proposed Airport Land Use Plan may incorporate mitigation measures that would be requirements and conditions for future projects to reduce environmental impacts. In addition, the Proposed Airport Land Use Plan may be modified or amended in the future to respond to changes in the demand for Airport facilities as identified in future passenger, operations, and cargo forecasts.

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<sup>1</sup> California Code of Regulations (CEQA Guidelines), Title 14, Division 6, Chapter 3.

Specific projects to be developed, constructed, and operated are included in the Proposed Airport Implementation Plan (see Section 4.1.2, *Proposed Airport Implementation Plan (with Parking Structure)*). Any future projects to be developed that are not included in the Proposed Airport Implementation Plan would be (1) evaluated to ensure consistency with the Proposed Airport Land Use Plan and (2) reviewed at a PROJECT level to determine environmental impacts and incorporate the mitigation measures required by the adoption of the Proposed Airport Land Use Plan.

The Proposed Airport Land Use Plan designates properties that are contemplated by the San Diego County Regional Airport Authority to be used for future Airport purposes. The former Teledyne Ryan property generally located between the Airport and North Harbor Drive, south of Taxiway B and east of the Commuter Terminal, is depicted for use by airfield, ground transportation, and airport support. Until such time as the area is remediated and determined available for development the land use can not be specifically determined. Once the remediation is complete, the San Diego County Regional Airport Authority will develop specific project improvements consistent with the Proposed Airport Land Use Plan and conduct an environmental analysis at a PROJECT level for any airport facilities proposed to be constructed and operated.

The four general categories of Airport land use are described as follows:

- **Airfield land uses** include runways, taxiways, aircraft parking aprons, and other facilities associated with the accommodation of aircraft. The land use plan designates additional area north of the runway for taxiway improvements, apron area, and relocation of cargo aircraft parking positions. Additionally to the south along the runway, the Airfield land use designation would accommodate the removal of aircraft movement obstructions south of Taxiway B adjacent to and within the former Teledyne Ryan property.
- **Terminal land uses** include areas associated with passenger processing such as ticketing, baggage claim, security screening, concourse space, and other facilities required to be housed in the terminal structure.
- **Ground Transportation land uses** include public and employee parking, access and circulation roadways, terminal curbsides, rental car facilities, commercial vehicle and taxicab staging areas, and all other vehicle and transit access facilities. There are three parcels in the North Area designated for ground transportation totaling approximately 41 acres. The first, and largest at approximately 37 acres, is located along Pacific Highway between Sassafras Street and Washington Street. The second area, totaling approximately 2.5 acres, is located along Pacific Highway, south of Sassafras Street. The smallest area, at approximately 1.5 acres, is located along Pacific Highway south of the existing Wind Tunnel facility. The Ground Transportation areas north of the runway would accommodate new and relocated Ground Transportation uses such as parking, roads, and rental cars. For the purpose of estimating environmental impacts resulting from the Proposed Airport Land Use Plan, a public Parking/CONRAC structure and a Transit Center is assumed in the north area between Pacific Highway and the north access road. The Airport Transit Center would be integrated with, or immediately adjacent to, a potential Public Parking/CONRAC structure and share a consolidated shuttle to the south terminals. The shuttle would operate along a dedicated transit corridor connecting the north and south areas. A pedestrian connection would also be provided between the Airport Transit Center and Washington Street Trolley station.

All of the existing and expanded access roadways and parking facilities located along Harbor Drive adjacent to the terminal area are also designated Ground Transportation. Areas on the former Teledyne Ryan site are designated for Ground Transportation land uses in the Proposed Airport Land Use Plan.

- **Airport Support land uses** include general aviation, air cargo, air traffic control and aircraft navigational aid facilities, fuel storage, aircraft rescue and fire fighting facilities, and Airport maintenance facilities. The Airport Support land use designation is applied primarily in the North Area and along the east portion of Harbor Drive, and includes new and replacement air cargo and general aviation facilities. In addition, areas on the former Teledyne Ryan property are designated for Airport Support uses in the Proposed Airport Land Use Plan.

## California Tidelands Trust

The majority of the lands that comprise the San Diego International Airport are State tidelands, which are held in trust for the benefit of the citizens of the State of California. The State enabling legislation that created the San Diego Unified Port District also conveyed and granted in trust to the Port District the tidelands and submerged lands surrounding San Diego Bay, including most of those lands upon which the San Diego International Airport is situated. The Airport property (with the exception of a thin strip of land along Pacific Highway that is not designated as “tidelands”) and the former Teledyne Ryan property, while under the control and jurisdiction of the San Diego County Regional Airport Authority, remain in the public trust and any proposed land uses must be consistent with California Tidelands Trust requirements.

Because the Airport property and the former Teledyne Ryan site are State tidelands, they must be used to serve statewide public purposes. The State Lands Commission policy on the Public Trust Doctrine states, in part:

Public trust uses include, among others, ports, marinas, docks and wharves, buoys, hunting, commercial and sport fishing, bathing, swimming, and boating. Public trust lands may also be kept in their natural state for habitat, wildlife refuges, scientific study, or open space. Ancillary or incidental uses, that is, uses that directly promote trust uses, are directly supportive and necessary for trust uses, or that accommodate the public’s enjoyment of trust lands, are also permitted. Examples include facilities to serve visitors, such as hotels and restaurants, shops, parking lots, and restrooms. Other examples are commercial facilities that must be located on or directly adjacent to the water, such as warehouses, container cargo storage, and facilities for the development and production of oil and gas. Uses that are generally not permitted on public trust lands are those that are not trust use related, do not serve a public purpose, and can be located on non-waterfront property, such as residential and non-maritime related commercial and office uses.

Airport uses at the San Diego International Airport, which was originally part of the Port District, serve a public purpose and are allowed on State tidelands. Specific to Airport uses, the lands may be used for the establishment, improvement, and conduct of Airport and heliport or aviation facilities. The Airport Land Use Plan proposes to adopt land uses consistent with California Tidelands Trust requirements.

### **4.1.2 Proposed Airport Implementation Plan (with Parking Structure)**

The San Diego County Regional Airport Authority has identified specific physical improvements at the San Diego International Airport to allow the Airport to effectively continue its mission of serving San Diego’s commercial air transportation needs as forecast through 2015. The project elements are described as follows and are depicted on [Figure 4.2](#).

#### **4.1.2.1 Expand Existing Terminal Two West with Ten New Gates**

Construct an addition to the existing Terminal Two West that would include approximately 430,100 square feet of new space, ten additional jet aircraft contact gates and an additional 1,050 linear feet of curb frontage for departing passengers on a second level roadway and 1,200 linear feet for arriving passengers on the ground level (the existing departures curbside would be utilized as an arrivals curbside after construction of a second level roadway). The terminal would provide passenger processing facilities including airline ticketing, security screening, departure holdrooms, restrooms, concessions, public circulation, and outbound baggage areas. The existing Terminal Two West baggage claim area would be reconfigured to improve service for arriving passengers and their baggage from both Terminal Two West and Terminal Two East. The additional aircraft gates would reduce existing crowding in Terminal One, accommodate passenger volumes forecast through 2015, and reduce severe crowding in all terminals expected from the growth in Airport-wide traffic and flights. The proposed terminal expansion would also include an extension of the existing Terminal Two West vehicle curbside used for pick-up and drop-off of arriving and departing passengers. This project feature also includes a reconfiguration of the existing Terminal Two curbside to improve automobile flow and passenger convenience. The new roadway system for Terminal Two would vertically segregate arriving and departing vehicle traffic between the

existing ground level and a new second level (see Section 4.1.2.4, *Construct New Second Level Road/Curb and Vehicle Circulation Serving Terminal Two*). See [Figure 4.2](#) Project Element Orange #1.

#### **4.1.2.2 Construct New Aircraft Parking and Replacement Remain-Over-Night Aircraft Parking Apron**

As part of the Proposed Airport Implementation Plan, a new apron facility would be constructed to accommodate up to ten jet aircraft in a configuration suitable for Remain-Over-Night parking. Remain-Over-Night parking provides airlines a location to park aircraft near the terminal area without occupying a contact gate where passenger boarding and deplaning occurs. The Airport Master Plan facility requirements anticipate a need for eight new Remain-Over-Night positions in 2015, including five replacement positions. The facility requirements also propose relocating two existing Remain-Over-Night positions from a location north of the runway to a location at the west end of the terminal area. This would help reduce the number of airlines from taxiing aircraft across the runway to reach the terminal gates. Total demand for Remain-Over-Night positions would grow to 22 positions from 19 existing positions. The proposed Remain-Over-Night positions would meet a portion of the total demand while other existing Remain-Over-Night positions would remain in use after construction of the new facilities.

The proposed Remain-Over-Night positions would accommodate up to four wide-body aircraft and six narrow-body aircraft. See [Figure 4.2](#) Project Element Orange #2.

#### **4.1.2.3 Airfield Improvements Including Construct New Apron and Aircraft Taxilane**

The Terminal Two West expansion modifies the current aircraft parking positions located at the concourse end to accommodate proposed changes to airfield taxiway geometry. These modifications include providing dual parallel taxiway/taxilane access to Runway 9 and the west side of the Terminal Two concourse area. In addition, the service drive would be relocated to provide clearance for a new apron edge Aircraft Design Group IV taxilane segment approximately 500 feet in length. This new taxilane segment would be configured parallel to Runway 9-27 and provide access to aircraft parking positions located on either the east or west side of the Terminal Two West concourse. The proposed dual taxiway/taxilane access to the proposed aircraft parking apron would allow Group IV and smaller aircraft to operate in either direction without obstructing ingress or egress from the proposed apron area west of existing Terminal Two West.

The modification is also required to minimize obstructions to aircraft taxiing on Taxiway B to the west end of Runway 9-27. By providing an additional taxilane at the north end of the Terminal Two West concourse, aircraft could taxi in each direction simultaneously.

The proposed apron area west of the proposed terminal facility would feature a single Group V taxilane loop providing access to all gates and Remain-Over-Night parking positions. The loop taxiway would surround the six narrow body aircraft Remain-Over-Night positions. The proposed taxiway would typically operate in a single direction to provide efficient access to the proposed gates and Remain-Over-Night positions. These airfield improvements are necessary to provide safe and efficient access to the proposed gates and Remain-Over-Night positions. See [Figure 4.2](#) Project Element Orange #3.

#### **4.1.2.4 Construct New Second Level Road/Curb and Vehicle Circulation Serving Terminal Two**

A new second level curbside would be integrated into the parking structure or constructed as a stand-alone facility adjacent to Terminal Two in order to accommodate forecast growth of passengers expected by 2015. The second level curbside would serve as a private vehicle departure curb with airline check-in facilities and elevated pedestrian walkways connecting to the upper level Terminal Two ticket lobbies. Access to the second level curbside would be provided from the Terminal Two entrance roadway. The Terminal Two exit roadways would be reconfigured to accommodate the second level curbside/roadway exit. Access to McCain Road would also be provided from the Terminal Two roadways and would serve the taxi and Airport shuttle staging area and SAN Park NTC. See [Figure 4.2](#) Project Element Orange #4.

#### **4.1.2.5 Construct New Parking Structure and Vehicle Circulation Serving Terminal Two**

A new multi-level parking structure accommodating a departure curb on the second level would be built adjacent to Terminal Two to accommodate forecast growth of passengers expected by 2015. This structure would provide approximately 5,000 additional parking spaces on five levels and would be built over a portion of the existing surface parking lot providing approximately a net total of 4,300 additional parking spaces in the terminal area. Development of the parking structure would also include a second-level departure curb either integrated or as an adjacent stand-alone facility (See previous section 4.1.2.4), and a commercial vehicle curb accommodating shuttles, buses, taxis, and shared-ride vans. Elevated pedestrian walkways would connect the second level of the structure with the upper level Terminal Two ticketing facilities. The new parking structure would be centralized within an expanded roadway loop. Vehicles approaching the terminal area would be directed to parking or passenger pick-up and drop-off well in advance of decision points in the roadway. New access roadways would eliminate the need for vehicles to utilize the curbside roadway to enter structured or surface parking areas. Removing these circulating vehicles from the roadway would reduce congestion during peak periods. See [Figure 4.2](#) Project Element Orange #5.

#### **4.1.2.6 Relocate and Reconfigure SAN Park Pacific Highway**

The existing SAN Park Pacific Highway parking facility, with approximately 1,670 public parking spaces, would be relocated and reconfigured with 500 additional spaces. The parking facility would be relocated to the north of its current location to accommodate construction of new airfield and general aviation facilities. The site would be bounded by Pacific Highway to the east and a new access road to the south and west. Access/egress to the parking facility would be provided from the new access road. The parking spaces currently utilized by the Port of San Diego, approximately 210 parking spaces, would remain in the existing location along Pacific Highway. See [Figure 4.2](#) Project Element Green #1.

#### **4.1.2.7 Construct a New Access Road from Sassafras Street/Pacific Highway Intersection**

A new access road would be constructed to provide access to SAN Park Pacific Highway and new general aviation facilities. The access road would utilize the existing Sassafras Street/Pacific Highway intersection and existing traffic signal. Underground utilities required for Airport facilities including, water, electric, sanitary sewer, and storm drains, would be constructed in conjunction with the access road and connect with existing utilities located along the Pacific Highway corridor. See [Figure 4.2](#) Project Element Green #2.

#### **4.1.2.8 Construct New General Aviation Facilities Including Access, Terminal/Hangars and Apron to Improve Airport Safety for Airport Customers/Users**

New general aviation facilities would be constructed on 12.4 acres to accommodate forecast general aviation operations through 2015. General aviation uses must be relocated to allow for the construction of airfield/taxiway improvements and apron hold pads. New general aviation terminal/hangars and apron would be located immediately north of the taxiway improvements and provide access to the airfield for general aviation aircraft. Landside access for vehicles and parking would be provided from the new access road through the Sassafras Street/Pacific Highway intersection. See [Figure 4.2](#) Project Element Green #3.

#### **4.1.2.9 Demolish Existing General Aviation Facilities to Improve Airport Safety and Circulation on Airfield**

The existing general aviation facilities would be demolished to accommodate airfield/taxiway improvements. The removal of subsurface structures and site remediation, including removal of existing underground storage tanks, would be conducted. See [Figure 4.2](#) Project Element Green #4.

#### **4.1.2.10 Reconstruct Taxiway C, Construct New Apron Hold Pads and New Taxiway East of Taxiway D**

The existing Taxiway C pavement would be rehabilitated and the taxiway centerline established 400 feet north of the runway centerline to separate and accommodate the movement of Aircraft Design Group V commercial aircraft. A new 195-foot wide aircraft apron and hold pads would be constructed north of Taxiway C and east of Taxiway D to allow aircraft to hold for extended periods while awaiting departure, but also allowing aircraft movement to continue unimpeded on adjacent taxiways. A new parallel taxiway north of the new apron and east of Taxiway D would also be constructed. This taxiway would facilitate efficient and safe aircraft movement by allowing aircraft to bypass those on the apron and also provide airfield access to the new general aviation facilities. See [Figure 4.2](#) Project Element Green #5.

#### **4.1.2.11 Proposed Project (Preferred Alternative) Summary**

[Table 4-1](#) illustrates the components and key elements of the Proposed Project compared to project objectives identified in Chapter Three, *Project Objectives*.

#### **4.1.3 Proposed Airport Implementation Plan (without Parking Structure)**

For this variation of the Preferred Alternative all elements of the Proposed Airport Implementation Plan are the same as described in section 4.1.2, *Proposed Airport Implementation Plan (with Parking Structure)* except that no parking structure would be constructed. This variation of the Preferred Alternative assumes that excess parking demand would be served by off-property parking facilities and alternate modes of transportation. A second level roadway at Terminal 2 would be constructed independent of the parking structure to serve curbside demand. All of the project objectives would be met by this variation of the Proposed Project (Preferred Alternative) with the exception of providing an adequate Level of Service to meet forecast parking demand within the current Airport property. [Figure 4.3](#) illustrates this alternative.

## **4.2 East Terminal Alternative**

The East Terminal Alternative includes adoption of an Airport Land Use Plan and the Airport Implementation Plan Alternative. The following sections describe each of these components.

With the Proposed Airport Land Use Plan, all lands under the San Diego County Regional Airport Authority's jurisdiction would be designated as an Airport land use, and described as one of four types of Airport uses: Airfield, Terminal, Ground Transportation, or Airport Support. Therefore there are no other land uses for the San Diego County Regional Airport Authority to consider. In consideration of these Airport and Airport-related land uses, the San Diego County Regional Airport Authority has determined that there are no feasible and less environmentally significant alternatives to the Proposed Airport Land Use Plan. The East Terminal Alternative includes the previously described Proposed Airport Land Use Plan, 4.1.1 *Proposed Airport Land Use Plan*, as a component.

Table 4-1

**Comparison of Proposed Project and Project Objectives**

<b>Proposed Project Component/Element</b>	<b>Objective Met</b>
<i>Proposed Airport Land Use Plan</i>	Provides land use guidance to utilize the current Airport property efficiently and provides for future public transit options in airport land use planning
<i>Proposed Airport Implementation Plan (with Parking Structure)</i>	
Expand existing Terminal Two West with 10 new gates	Provides for full service facility at adequate Level of Service to meet forecast growth projected at San Diego International Airport through 2015 and utilizes the current Airport property and facilities efficiently.
Construct new aircraft parking and replacement Remain-Over-Night aircraft parking apron	Provides facilities to meet forecast growth projected at San Diego International Airport through 2015 and utilizes the current Airport property and facilities efficiently.
Airfield improvements including constructing new apron and aircraft taxiway	Provides facilities to meet forecast growth projected at San Diego International Airport through 2015 and utilizes the current Airport property and facilities efficiently.
Construct new second-level curb/road and vehicle circulation serving Terminal Two	Provides facilities with adequate Level of Service to meet forecast growth projected at San Diego International Airport through 2015 and utilizes the current Airport property and facilities efficiently.
Construct new parking structure and vehicle circulation serving Terminal Two	Provides facilities with adequate Level of Service to meet forecast growth projected at San Diego International Airport through 2015 and utilizes the current Airport property and facilities efficiently.
Relocate and reconfigure SAN Park Pacific Highway	Provides facilities with adequate Level of Service to meet forecast growth projected at San Diego International Airport through 2015 and utilizes the current Airport property and facilities efficiently.
Construct a new access road from Sassafras Street/Pacific Highway intersection	Provides facilities to meet forecast growth projected at San Diego International Airport through 2015 and utilizes the current Airport property and facilities efficiently.
Construct new general aviation facilities including access, terminal/hangars and apron to improve Airport safety for Airport customer/users	Utilizes the current Airport property efficiently and improves Airport safety and security for Airport customers/users.
Demolish existing general aviation facilities to improve Airport safety and circulation on airfield	Utilizes the current Airport property efficiently and improves Airport safety and security for Airport customers/users.
Reconstruct Taxiway C and construct new apron hold pads and new taxiway east of Taxiway D	Provides facilities to meet forecast growth projected at San Diego International Airport through 2015 and utilizes the current Airport property efficiently; improves Airport safety and security for Airport customers/users.

Source: HNTB Analysis, 2007.

## **4.2.1 Airport Implementation Plan Alternative (with Parking Structure)**

The San Diego County Regional Airport Authority has identified an alternate build scenario that would allow the Airport to effectively continue its mission of serving San Diego's commercial air transportation needs as forecast through 2015. The project elements are described as follows and are depicted in [Figure 4.4](#).

### **4.2.1.1 Construct New Unit Terminal with Five Replacement Gates and Seven New Gates**

A new 400,000 square foot, three story unit terminal with 12 gates would be constructed under the Airport Implementation Plan Alternative. This facility would be constructed east of Terminal One and include seven new aircraft gates, plus five replacement gates. New facilities for the unit terminal would be constructed within the structure, including holdrooms, ticketing area, baggage claim, security screening, concessions, and a walkway linking the new facility to the existing Terminal One facility. The additional aircraft gates would reduce existing crowding in Terminals One and Two while accommodating passenger volumes forecast through 2015. The proposed terminal expansion would also include a reconfiguration of the existing roadway to gain access to the vehicle curb. Three of the five replacement gates would be required because the proposed unit terminal would be constructed in the area currently utilized by gates 1, 2, and 3. The remaining two replacement gates result from the relocation of commuter flights to Terminals One and Two East. See [Figure 4.4](#) Project Element Orange #1.

### **4.2.1.2 Expand Existing Terminal Two West with Three New Jet Gates**

Expansion of the north end of Terminal Two West passenger concourse to include approximately 30,000 square feet would accommodate three new gates and associated holdrooms. The total new gates for this build alternative would be ten new gates, the same as the Proposed Project. However in this alternative, the ten additional gates would be split between two locations and would require replacement of five existing gates at Terminal One. See [Figure 4.4](#) Project Element Orange #2.

### **4.2.1.3 Relocate Commuter Aircraft to Terminal One and Terminal Two**

In order to accommodate construction of the proposed unit terminal between Terminal One and the Commuter Terminal, the apron area presently located behind the Commuter Terminal would be utilized for aircraft parking at the proposed unit terminal. Therefore, the commuter flights now operating out of the Commuter Terminal would be relocated to Terminal One and Terminal Two to operate with their parent airline companies (United Airlines and American Airlines). United Express flights would be relocated to Gate 19 at Terminal One and American Eagle flights would be relocated to Gate 23 at Terminal Two East. The relocation of commuter flights to these existing jet gate locations accounts for two of the five required replacement gates associated with this alternative.

The existing Commuter Terminal structure would remain in place. Because the facility would no longer be utilized for commuter flight operations, it would be feasible to relocate the remaining San Diego County Regional Airport Authority offices from their temporary location near Harbor Drive and Stillwater Road to the ground floor of the facility, which is currently used for commuter flight passenger processing. See [Figure 4.4](#) Project Element Orange #3.

### **4.2.1.4 Construct New Aircraft Parking and Replacement Remain-Over-Night Aircraft Parking Apron**

Similar to the Proposed Project (Preferred Alternative), a new aircraft parking apron would be constructed to accommodate up to ten aircraft for use as Remain-Over-Night parking. See [Figure 4.4](#) Project Element Orange #4.



#### **4.2.1.5 Construct New Apron and Aircraft Taxilane**

New aircraft parking apron would be constructed in two locations. Approximately 315,000 square feet of new apron would be required on the airside of the proposed unit terminal. The apron would accommodate parking for the twelve newly constructed gates at this facility.

Additionally, 765,000 square feet of new apron would be constructed west of Terminal Two West to accommodate three new aircraft gate parking positions and ten additional Remain-Over-Night parking positions. The apron west of Terminal Two West would also accommodate ingress and egress of aircraft to and from the proposed aircraft gates and Remain-Over-Night parking positions. See [Figure 4.4](#) Project Elements Orange #2 and 5.

#### **4.2.1.6 Construct New Surface Parking and Vehicle Circulation West of Terminal Two West**

This new surface parking lot would be constructed to accommodate forecast growth of passengers expected by 2015 and the associated need for additional employee parking. Other uses would include staging for taxis, Airport shuttle vans, and temporary public parking during the construction of the new parking structure south of Terminal One. The same area would include a roadway entrance for delivery trucks to drop off Airport supplies and concessions and to remove refuse from the terminals. See [Figure 4.4](#) Project Element Orange #6.

#### **4.2.1.7 Construct New Surface and Structured Parking and Vehicle Circulation at Terminal One and New Unit Terminal**

Construction of a new unit terminal between existing Terminal One and the Commuter Terminal would require reconfiguration and construction of new Airport access road from Harbor Drive. The access road would provide efficient access to the newly constructed curbside passenger drop-off and pickup area associated with the new unit terminal. The proposed roadway would then tie into the existing roadway system serving Terminal One and Terminal Two. The roadway would be designed to accommodate the expected passenger volume at the new unit terminal.

A new parking structure would be constructed adjacent to the roadway providing parking for the new unit terminal and for Terminal One. An expansion of the surface parking in this area would also be included. The new garage and surface parking lot would be constructed to accommodate forecast growth of passengers expected by 2015. See [Figure 4.4](#) Project Element Orange #7.

#### **4.2.1.8 Relocate and Reconfigure SAN Park Pacific Highway**

The existing SAN Park Pacific Highway parking facility, approximately 1,670 public parking spaces, would be relocated and reconfigured with 500 additional spaces to the north of the existing parking facility to accommodate construction of new airfield and general aviation facilities. The site would be bounded by Pacific Highway to the east and a new access road to the south and west. Access/egress to the parking facility would be provided from the new access road. The parking spaces currently utilized by the Port of San Diego, approximately 210 parking spaces, would remain in the existing location along Pacific Highway. See [Figure 4.4](#) Project Element Green #1.

#### **4.2.1.9 Construct a New Access Road from Sassafras Street/Pacific Highway Intersection**

A new access road would be constructed to provide access to SAN Park Pacific Highway and new general aviation facilities. The access road would utilize the existing Sassafras Street/Pacific Highway intersection and existing traffic signal. Underground utilities required for Airport facilities including water, electric, sanitary sewer, and storm drains would be constructed in conjunction with the access road and connect with existing utilities located along the Pacific Highway corridor. See [Figure 4.4](#) Project Element Green #2.

#### **4.2.1.10 Construct New General Aviation Facilities including Access, Terminal/Hangars and Apron to Improve Airport Safety for Airport Customer/Users**

New general aviation facilities would be constructed on 12.4 acres to accommodate forecast general aviation operations through 2015. The existing general aviation facility's location prevents the realignment of Taxiway C to provide for standard separation from Runway 9-27. The location of the existing general aviation facility is at the east of Taxiway C. Taxiway C, in this location, has a non-standard separation from Runway 9-27 and a non-standard separation from the service road parallel to Taxiway C, separating the general aviation leasehold from Taxiway C. Although keeping general aviation in its existing location was considered to allow for overall Airport efficiency, the general aviation uses must be relocated to allow for the construction of airfield/taxiway improvements and apron hold pads. New general aviation terminal/hangars and apron would be located immediately north of the Taxiway C improvements and provide access to the airfield for general aviation aircraft. Landside access for vehicles and parking would be provided from the new access road through the Sassafras Street/Pacific Highway intersection. See [Figure 4.4](#) Project Element Green #3.

#### **4.2.1.11 Demolish Existing General Aviation Facilities to Improve Airport Safety and Circulation on Airfield**

The existing general aviation facilities would be demolished to accommodate airfield/taxiway improvements. The removal of subsurface structures and site remediation, including removal of existing underground storage tanks, would be conducted. See [Figure 4.4](#) Project Element Green #4.

#### **4.2.1.12 Reconstruct Taxiway C, Construct New Apron Hold Pads and New Taxiway East of Taxiway D**

The existing Taxiway C pavement would be rehabilitated and the taxiway centerline established 400 feet north of the runway centerline to separate and accommodate the movement of Aircraft Design Group V commercial aircraft. A new 195-foot wide aircraft apron and hold pads would be constructed north of Taxiway C and east of Taxiway D to allow aircraft to hold for extended periods while awaiting departure, as well as allowing aircraft movement to continue unimpeded on adjacent taxiways. A new parallel taxiway north of the new apron and east of Taxiway D would also be constructed. This taxiway would facilitate efficient and safe aircraft movement by allowing aircraft to bypass those on the apron and also provide airfield access to the new general aviation facilities. See [Figure 4.4](#) Project Element Green #5.

#### **4.2.1.13 East Terminal Alternative Summary**

[Table 4-2](#) illustrates the components and key elements of the East Terminal Alternative compared to the project objectives identified in Chapter Three, *Project Objectives*.

#### **4.2.2 Airport Implementation Plan Alternative (without Parking Structure)**

For this variation of the East Terminal Alternative, all elements of the Airport Implementation Plan Alternative are the same as described in section 4.2.1, *Airport Implementation Plan Alternative (with Parking Structure)* except that no parking structure would be constructed. This variation of the East Terminal Alternative assumes that excess parking demand would be served by off-property parking facilities and alternate modes of transportation. A second level roadway at the unit terminal would be constructed independent of the garage to serve curbside demand. All of the project objectives would be met by this variation of the Proposed Project with the exception of providing an adequate Level of Service to meet forecast parking demand with the current Airport property. [Figure 4.5](#) illustrates this variation of the alternative.

Table 4-2

## Comparison of East Terminal Alternative and Project Objectives

Project Component/Element	Meets Project Objectives	Reasons for Meeting or Not Meeting Project Objectives
<i>Airport Land Use Plan</i>	Yes	Provides land use guidance to utilize the current Airport property efficiently and provides for future public transit options in airport land use planning
<i>Airport Implementation Plan (with Parking Structure)</i>		
Construct new unit terminal with five replacement gates and seven new gates	Yes In combination with next project element	The additional aircraft gates would reduce existing crowding in Terminals One and Two, while partially accommodating passenger volumes forecast through 2015. This element must be combined with expansion of Terminal Two West to adequately address forecast growth and Levels of Service.
Expand existing Terminal Two West with three new jet gates	Yes In combination with previous project element	Expansion of the north end of Terminal Two West passenger concourse to include approximately 30,000 square feet would accommodate three new gates and associated holdrooms.
Relocate commuter aircraft to Terminal One and Terminal Two	Yes	Meets forecast growth, however does not allow for most efficient use of Airport property.
Construct new aircraft parking and replacement Remain-Over-Night aircraft parking apron	Yes	Provides facilities to meet forecast growth projected at San Diego International Airport through 2015 and utilizes the current Airport property and facilities efficiently.
Construct new apron and aircraft taxiway	Yes	New aircraft parking apron would be constructed in two locations to accommodate forecast growth. Some efficiency is lost with this alternative.
Construct new surface parking and vehicle circulation west of Terminal Two West	Yes	A new surface parking lot west of Terminal Two West would be constructed to accommodate terminal area public and employee parking and commercial vehicle staging requirements with adequate Level of Service to meet forecast growth projected at San Diego International Airport through 2015 and utilize the current Airport property and facilities efficiently.
Construct new surface and structured parking and vehicle circulation at Terminal One and new unit terminal	Yes	A new surface parking lot and a new parking structure would be constructed to accommodate forecast growth at adequate levels of service for passengers expected by 2015.
Relocate and reconfigure SAN Park Pacific Highway	Yes	Provides facilities to meet forecast growth projected at San Diego International Airport through 2015 and utilizes the current Airport property and facilities efficiently.
Construct a new access road from Sassafras Street/Pacific Highway intersection	Yes	Provides facilities to meet forecast growth projected at San Diego International Airport through 2015 and utilizes the current Airport property and facilities efficiently.
Construct new general aviation facilities including access, terminal/hangars and apron to improve Airport safety for Airport customer/users	Yes	Utilizes the current Airport property efficiently and improves Airport safety and security for Airport customers/users.
Demolish existing general aviation facilities to improve Airport safety and circulation on airfield	Yes	Utilizes the current Airport property efficiently and improves Airport safety and security for Airport customers/users.
Reconstruct Taxiway C, construct new apron hold pads and new taxiway east of Taxiway D	Yes	Provides facilities to meet forecast growth projected at San Diego International Airport through 2015 and utilizes the current Airport property efficiently; improves Airport safety and security for Airport customers/users.

Source: HNTB Analysis, 2007.

## 4.3 No Project Alternative

The No Project Alternative assumes that no Airport Land Use Plan would be developed and assumes no projects beyond those that have already received or will receive environmental approval prior to approval of this Environmental Impact Report. [Figure 4.6](#) illustrates the No Project Alternative. CEQA guidelines require the evaluation of a “No Project” alternative and the purpose of this analysis is “to allow the decisionmakers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed Project’s environmental impacts maybe significant, unless it is identical to the existing environmental setting analysis which does establish that baseline” California Code of Regulations Title 14, §15126.6(e)(1). Additionally, §15126.6(e)(3)(B) of this same Code states, “where failure to proceed with the project would not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project’s non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.”

Only one development project will receive environmental approval prior to the project timeline assumed for the Proposed Project analyzed in this Environment Impact Report. The Former Naval Training Center Landfill Remediation Environmental Impact Report was issued for public review on August 27, 2007. comments are due by October 15, 2007. The project includes the required remediation of the contaminated areas on the former Naval Training Center. The Naval Training Center is approximately 51 acres of land transferred from the Navy to the Port District for Airport use. The remediation includes removal of existing municipal waste and burnt ash, grading and capping landfill areas, monitoring and analyzing the ground water, and reporting the results to the Regional Water Quality Control Board and the City of San Diego Office of Environmental Protection and Sustainability. Remediation and monitoring of the Naval Training Center landfill began July 18, 2004. Completion of this project will result in remediation of the landfill. The current schedule for the remediation indicates the project will require approximately nine months and this project is expected to be complete by the end of 2008. This project is necessary in and of itself and will be completed prior to the beginning of construction of the specific improvements analyzed in this environmental impact report. The remediation of the former Navy Training Center landfill provides a positive environmental effect.

The following sections describe how the major areas/functions of the San Diego International Airport would accommodate increased operations and passengers. Additionally, the No Project Alternative does not include development of an Airport Land Use Plan.

### 4.3.1 Airfield

In order to accommodate increased operations and passenger levels without constructing additional gates, San Diego County Regional Airport Authority and various airlines would need to identify areas on the Airport where aircraft could be staged for ground loading at remote locations from the terminals. Ground loading would require that passengers deplane via a stairway to the apron level and board busses for transport to the existing terminal facilities. Some of the concerns associated with ground loading are that it does not allow passengers requiring assistance the comfort of boarding via loading bridge and it requires an additional step in the boarding and deplaning process, the transport between the waiting aircraft and the terminal facility. At the current time there is not sufficient apron area to provide parking for ten additional aircraft to be ground loaded in a location that is considered safe for passengers. However, it was assumed in the No Project Alternative that when sterile gates were unavailable, remote parking would be used for non-precleared international flights. Remote parking was not assumed for any domestic flights. Lastly, in spite of San Diego’s excellent weather, ground loading fails to offer passengers protection from inclement weather and direct sun/heat. Ground loading of passenger aircraft does not meet the project objectives set forth in the Airport Master Plan process. Namely, ground loading would not allow San Diego County Regional Airport Authority to improve upon existing levels of service or even maintain existing Levels of Service. The existing facilities were not designed to accommodate the existing or future demand.

### 4.3.2 Terminal

Increasing passenger demand would continue to erode Levels of Service within the terminal facility in four key areas: ticketing, security screening, hold rooms, and baggage claim.

### **4.3.2.1 Ticketing**

Continued passenger growth without an increase in ticketing capacity would continue to increase wait times for check-in. Levels of Service would continue to erode. Although passengers are able to check-in at electronic kiosks or from home via the Internet, baggage check-in must remain at the San Diego International Airport. The existing facilities were not designed to accommodate the existing demand. The current demand for ticket counters from new airline entrants is being met by compressing existing airlines' space. This is causing increased wait times and reduced levels of service.

### **4.3.2.2 Security Screening**

The existing infrastructure was not designed to accommodate the security screening requirements associated with Transportation Security Administration and current guidelines for baggage screening. Passenger queues at security screening areas would increase, resulting in wait times of up to an hour. Such wait times are not consistent with the goals set forth at the outset of the Airport Master Plan to provide a high Level of Service for the traveling public at the San Diego International Airport.

### **4.3.2.3 Hold Rooms**

Existing facilities are not sufficient to handle additional passengers and flights. Several gates at Terminal Two East do not currently have hold rooms. Without construction of new gates, congestion in the existing hold rooms would increase. Aircraft turn-around time can be kept to a minimum. However, such schedules are more vulnerable to disruption during events such as system-wide weather related delay and airfield delays due to additional congestion associated with the increased demand for airline service.

### **4.3.2.4 Baggage Claim**

The growth in passenger volumes from 2004 to 2006 has exceeded the high forecast, causing an early demand for airport infrastructure. The existing baggage claim facilities were designed to accommodate the existing volume of passenger traffic at the San Diego International Airport. However, without construction of the expanded terminal, baggage claim wait times would deteriorate as passenger demand continues to grow. The baggage claim hall was sized to add additional claim devices for forecast growth.

## **4.3.3 Ground Transportation**

Growing demand for air service results in increasing numbers of visitors to the Airport and an increase in demand for transportation and parking at the Airport. Without increasing the parking capacity at the Airport to accommodate the forecast level of demand, the price of Airport parking would continue to increase at a rapid rate to reflect a lack of balance between supply and demand. Some demand may be met by off-site airport parking companies, directly impacting the Airport's ability to maximize potential revenue for maintaining and supporting facilities to meet passenger demand and customer convenience. Congestion would also increase on the circulation roads through and around the terminal curbsides and parking areas. This congestion would lead to delay.

## **4.3.4 Airport Support**

Existing Airport support facilities are already deficient in areas of cargo facilities, ground support equipment, maintenance and storage, airfield maintenance and other support infrastructure. Further, there is limited existing potential for expansion of existing facilities. Without improvements to the air cargo facilities in San Diego, additional cargo may be transported via truck or rail out of the region. Adequate support facilities are needed to maintain efficient and safe airport operation. In addition, existing general aviation facilities are located so as to prevent taxiways from being relocated in order to meet Federal Aviation Administration design standards. Thus, continuation of general aviation facilities at the current location would directly conflict with the objective to improve Airport safety for Airport customers/users.

## **4.3.5 Summary of No Project Alternative**

Aircraft operations activity forecasts for the year 2015 would be handled by the existing airfield system, including apron, however, without new terminal facilities, gate demand by passengers would not be met by 2015. Without expanding facilities to serve the forecast demand for air service in and out of San

Diego, it is not possible for San Diego County Regional Airport Authority to maintain existing Levels of Service. The No Project Alternative would result in a steady deterioration of Levels of Service due to an overall increase in delay associated with overburdened passenger processing and other facilities (See Section 4.4.2.4, *Use of Other Terminal Locations on Airport*). As delay continues to increase with demand, costs would begin to rise for the passengers and airlines using the San Diego International Airport. This is directly in conflict with the Airport's project objectives of providing facilities that can meet the forecast demand for operations and passengers in an efficient, safe, and environmentally responsible manner as laid out in the Airport Master Plan.

**Table 4-3** illustrates the key elements of the No Project Alternative compared to project objectives identified in Chapter Three, *Project Objectives*.

Table 4-3  
**Comparison of No Project Alternative Elements and Project Objectives**

Project Element	Meets Project Objectives	Reasons for Meeting or Not Meeting Project Objectives
<b>No Airport Land Use Plan Adopted</b>	No	Does not provides land use guidance to utilize the current Airport property efficiently and does not provide for future public transit options in airport land use planning
<b>Airfield</b>	No	Existing Levels of Service would continue to deteriorate as passenger demand continues to increase.
<b>Terminal</b>		
<i>Ticketing</i>	No	Levels of Service would continue to erode. The existing facilities were not designed to accommodate the existing demand, nor security and baggage screening requirements.
<i>Security Screening</i>	No	Passenger queues at security screening areas would increase, resulting in wait times of up to an hour. Such wait times are not consistent with the goal set forth at the outset of the Airport Master Plan to provide a high Level of Service for the traveling public at San Diego International Airport.
<i>Hold Rooms</i>	No	Existing facilities are not sufficient to handle additional passengers and flights.
<i>Baggage Claim</i>	No	The existing baggage claim facilities were not designed to accommodate the existing or forecast volume of passenger traffic.
<b>Ground Transportation</b>	No	Without increasing the parking capacity at the Airport to accommodate the forecast level of demand, congestion would also increase on the circulation roads through and around the terminal curbside and parking areas, thereby reducing Levels of Service.
<b>Airport Support</b>	No	Existing Airport support facilities are already deficient; therefore, this Alternative could not accommodate forecast growth at adequate Levels of Service.

Source: HNTB Analysis, 2007.

## 4.4 Alternatives Considered and Rejected

Alternatives for the Proposed Project were considered. The following sections describe alternatives that were considered and rejected for the Proposed Airport Land Use Plan and the Proposed Airport Implementation Plan.

### 4.4.1 Proposed Airport Land Use Plan

There are only three types of land uses that were originally designated by the San Diego Unified Port District Master Plan for aviation uses: Airport, Airport-related commercial, and Aviation-related industrial. As stated previously, *California Tidelands Trust*, the State Enabling Legislation that created the San Diego Unified Port District also conveyed and granted in trust to the Port District the tidelands and

submerged lands surrounding San Diego Bay, including those lands upon which the San Diego International Airport is located. The Airport property (with the exception of a thin strip of land along Pacific Highway that is not designated as “tidelands”) including the former Teledyne Ryan property is held in public trust in accordance with California Legislature that protects tidelands, submerged lands, and navigable waters. Because the Airport property and the former Teledyne Ryan site are State tidelands, they must be used to serve statewide public purposes. Specific to Airport uses, the lands may be used for the establishment, improvement, and conduct of Airport and heliport or aviation facilities. Additionally, all commercial and industrial uses must have a statewide purpose. Projected Airport land uses include Airport Support and Ground Transportation, both of which support statewide uses. As San Diego County Regional Airport Authority is mandated to plan and operate only Airport uses, San Diego County Regional Airport Authority has determined that there are no reasonable alternatives to the Proposed Airport Land Use Plan, beyond the No Action Alternative, that would avoid or substantially lessen the potential environmental impacts of the Proposed Project. Land uses that are not allowed because the Airport property and the former Teledyne Ryan property are State tidelands are not considered to be a reasonable alternative for meeting the purpose and need/project objectives of the Proposed Project.

Additionally, there are no alternatives to the Proposed Airport Land Use Plan that would meet the project objectives or reduce the environmental effects because:

- **Existing airfield/runway configuration cannot be altered.** The majority of the Airport property is occupied with existing Airfield uses including a runway configuration that cannot be modified without halting the airport’s operations and failing to meet FAA requirements for commercial passenger service. These existing airport facilities are designated as Airfield and include the runway, the runway protection zones, and taxiways. To modify or relocate these Airfield uses would require the acquisition of property, right-of-way, or easements on Federal or State tidelands not presently within the jurisdiction of the San Diego County Regional Airport Authority.
- **Airport uses dependent on connection to airfield/runway have a priority.** Airport uses dependent upon access to the airfield and runway have a priority to be located adjacent to the Airfield. These airport uses are designated as Airfield in the Land Use Plan and require that the runway connect to taxiways and taxilanes, aircraft movement areas, aircraft apron and aircraft parking areas that are designated as Airfield. Therefore the Proposed Airport Land Use Plan must respect the proximity, placement, and connection of the runway to the necessary Airfield components. In addition, the Terminal and Airport Support uses have a requirement to be adjacent and connected with the Airfield to connect terminal facilities, air cargo and general aviation uses, as well as the aircraft rescue and fire fighting, airport traffic control tower, and fuel farm facilities directly. The majority of these airport uses are already existing and altering the Terminal or Airport Support uses would increase the taxi distances and times for commercial aircraft, create inefficient aircraft circulation, increase the taxi times and thus aircraft engine emissions.
- **Airport uses such as Terminal and Ground Transportation serve commercial passengers and require more acres.** Since 90 percent of airport operations at the San Diego International Airport are commercial passenger service, airport uses such as Terminal and Ground Transportation have a priority over some Airport Support uses such as air cargo and general aviation. Commercial passengers demand Terminal and Ground Transportation uses. Therefore, a larger portion of available property within the Proposed Airport Land Use Plan is designated for Terminal and Ground Transportation uses, including circulation roads, transit, parking and rental cars facilities. Since less than 10 percent of airport operations are dedicated air cargo and general aviation, a smaller portion of the Proposed Airport Land Use Plan is designated for Airport Support uses such as air cargo and general aviation.

Lastly, including Terminal land uses in the North Area was given consideration but also rejected. Specifically a north terminal providing 10 gates would not meet the project objectives because:

- **Site limitations.** Limited property and access constrains the site for adequate aircraft and vehicle circulation systems that are efficient and safe. There are significant grade and elevation differences between the North Area and connecting roads and freeways, as well as rail and transit crossings on Sassafras Street. The access to the site is severely constrained by Washington Avenue which is shared with an entrance gate to the Marine Corps Recruit Depot. In

addition, the limited property in the North Area would not allow adequate separations and distances in aircraft and roadway circulation areas.

- **Taxiway C extension requirements.** A critical extension to Taxiway C would be required to connect the runway to a north passenger terminal. Presently, an arriving aircraft cannot exit the runway to the north because of adjoining federal property (Marine Corps Recruit Depot). Approximately 27 acres of federal property would need to be acquired to extend Taxiway C for the entire length of the runway. A north passenger terminal without this Taxiway C extension would require aircraft to exit to the south to Taxiway B and then cross the active runway to reach the north terminal. This would decrease the safety and efficiency of aircraft circulation on the runway.
- **Ground access limitations.** No circulation road exists on the north to serve a new unit terminal. Additional road improvements would be required beyond Airport boundaries to provide a circulation road that could serve a unit terminal with adequate public access, curbside, and parking.
- **Utility limitations.** Few utilities exist on the North Area to serve a new unit terminal. The installation of water, sewer and electrical utilities would be required with significant off-airport improvements along the Pacific Highway corridor.
- **Existing infrastructure use.** Terminal Two was constructed to allow the expansion for 10 additional gates with many existing terminal components including a major terminal concourse, baggage claim, and circulation road improvements already in place. In addition, building upon the existing infrastructure reduces the costs of construction and operation.

Therefore, no additional Airport land use plans were retained for detailed analysis.

#### **4.4.2 Proposed Airport Implementation Plan**

The following sections describe alternatives that were considered and then rejected for the Proposed Airport Implementation Plan. Alternatives were considered in four general areas:

- Airport Relocation
- Use of Other Airport
- Use of Other Modes of Transportation
- Use of Other Terminal Locations on the Airport

The alternatives described in the following sections were rejected as they did not feasibly achieve most of the basic objectives of the Proposed Project in addition to avoiding or substantially lessening any of the potential environmental effects of the Proposed Project.

##### **4.4.2.1 Airport Relocation**

Considering another location for the San Diego International Airport does not meet the project objectives for the Proposed Project. The main project objective requires that the acceptable alternative accommodate forecast growth through 2015 with an acceptable Level of Service. Developing a new facility to accommodate market demand for the San Diego region would require that a new facility be fully studied, designed, land acquired, and constructed by 2015 to meet forecast needs. Construction of a new Airport would likely take a minimum of 10 years and is not possible in consideration of all necessary requirements (i.e., site selection, environmental documentation, property right-of-way and acquisition, permitting, design, and construction). The previous Airport Site Selection Program considered a new site for Lindbergh Field, this study ended in November 2006 when the people of San Diego voted to not move operations to MCAS Miramar.

San Diego County Regional Airport Authority launched a study to investigate the potential consumer and airline interest in a cross-border terminal tied to Tijuana Rodriguez Field in August 2007. There are four options being examined, ranging from constructing a walkway across the border to designing a full facility



on the U.S. side with ticket and check-in counters, and transportation for passengers to Tijuana.<sup>2</sup> Despite the fact that Mexico has responded positively to the ideas, the concept is still speculative at the writing of this Environmental Impact Report. The South County Economic Development Council (SCEDC) has been evaluating the cross-border connection for about 10 years.<sup>3</sup> It is very likely that it would be as long, or longer, before a potential plan was agreed upon by the involved parties and the appropriate legislation was in place to make the idea a realization. The Proposed Project is necessary to accommodate air service demand (forecast growth through 2015) while improving Levels of Service at the San Diego International Airport, a cross-border terminal tied to Tijuana Rodriguez Field does not meet the project objective.

#### **4.4.2.2 Use of Other Airports**

Encouraging use of other airports does not meet the project objectives (i.e., accommodate forecast growth at the San Diego International Airport through 2015) for the Proposed Project. However, using other airports to accommodate near term (i.e., through 2015) operations and passengers was considered as an alternative to the Proposed Project. The following text details specific reasons why the use of other airports does not meet the project objectives.

#### **Inadequate Certification for Passenger Service**

Title 14 Code of Federal Regulations Part 139 requires the Federal Aviation Administration to issue airport operating certificates to airports that serve scheduled and unscheduled air carrier aircraft with more than 30 seats. The San Diego International Airport holds a Part 139 certification and is classified as a Class I airport under this Part. A Class I airport is certificated to serve scheduled operations of large air carrier aircraft that can also serve unscheduled passenger operations of large air carrier aircraft and/or scheduled operations of small air carrier aircraft. The Federal Aviation Administration website<sup>4</sup> provides more information on the Part 139 certification process. In order to use another airport instead of the San Diego International Airport, the alternative airport would need to hold a Class I Part 139 certification. The only other airport in San Diego County that holds a Class I Part 139 certification is McClellan-Palomar Airport. Although McClellan-Palomar Airport holds a Class I Part 139 certification, it does not have adequate runway length to accommodate the commercial aircraft fleet mix or volume of operations that is present at the San Diego International Airport. The runway length at McClellan-Palomar Airport is 4,897 feet with a displaced threshold of 297 feet. In order to extend the runway at McClellan-Palomar Airport to a minimum of 7,000 feet of useable runway, to be consistent with runway length requirements at the San Diego International Airport, extensive environmental analysis that would include consideration of moving roadways and ultimately an environmental review process both on a state and federal level.

#### **Inadequate Runway Length**

The existing runway length is adequate for the typical operation at the San Diego International Airport, which is a narrow-body, medium or long-haul, domestic passenger jet. Aircraft of this type typically require a minimum of 7,000 feet of usable runway for departure when fully loaded on a standard temperature day. Therefore, in order for another airport to accommodate the most common operations from the San Diego International Airport, the facilities must include a runway of at least 7,000 feet in length.

The nearest airports with the necessary runway length are Ontario International Airport and Long Beach Airport. However, both airports are approximately 100 miles and depending on traffic congestion a minimum of two hours away from downtown San Diego. Given that the San Diego International Airport is located less than five mile from downtown San Diego, Ontario and Long Beach Airports are not considered to be reasonable alternatives to the San Diego International Airport.

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<sup>2</sup> "Cross-boarder Terminal Study Receives Mexico's Assurance" South County Economic Development Corporation: March 20, 2007< [http://www.sandiegobusiness.org/article\\_template.asp?articleID=532](http://www.sandiegobusiness.org/article_template.asp?articleID=532)>

<sup>3</sup> Ibid.

<sup>4</sup> "Part 139 Certification" Accessed August 29, 2007  
<[http://www.faa.gov/airports/airtraffic/airports/airport\\_safety/part139\\_cert](http://www.faa.gov/airports/airtraffic/airports/airport_safety/part139_cert)>

John Wayne Airport, in Santa Ana is located 87 miles north of the San Diego International Airport and a minimum of an hour and half depending on traffic congestion. However, John Wayne Airport's main runway is only 5,701 feet long. The Airport is also at or very near its capacity in addition to being subject to heavy operational and time restrictions.

Brown Field Municipal Airport is located 18 miles south of downtown San Diego near the international border with Mexico. Brown Field Municipal Airport's main runway is 7,972 feet. However, Brown Field Municipal Airport is not Part 139 certified for commercial operations by the Federal Aviation Administration. In spite of the Brown Field Municipal Airport's runway length, there are terrain issues associated with nearby mountains and airspace issues due to the Airport's proximity to the international border less than two miles south of the Airport. These constraints make it infeasible to use Brown Field as an alternative to the San Diego International Airport.

### **Inadequate Taxiway/Apron Areas**

The San Diego International Airport is the only airport in San Diego County that is constructed with the infrastructure to accommodate a commercial fleet mix of aircraft that the San Diego International Airport currently accommodates. The San Diego International Airport currently accommodates aircraft as large as the Boeing 767-400ER and has recently had Boeing 747-400 and Boeing 777-200 operations. These aircraft are classified as Aircraft Design Group IV and V aircraft, respectively. Their size and weight require specialized runway, taxiway and apron area infrastructure that can safely accommodate the dimension of the aircraft as well as the weight of the aircraft. Such infrastructure is not present at any other commercial airport within San Diego County.

### **Inadequate Terminals**

Because the San Diego International Airport remains the only commercial service airport within San Diego County that supports air carrier jet service, it is the only Airport with terminal facilities designed to accommodate regularly scheduled commercial passenger flights (McClellan-Palomar Airport services regional airline service). Should an alternative airport within the region be designated as having the appropriate airfield infrastructure for handling the commercial air traffic unable to operate at the San Diego International Airport, sufficient terminal facilities would need to be constructed to provide adequate processing, boarding and security screening of passengers. Prior to constructing such terminal facilities at an alternative airport, the appropriate airfield infrastructure would need to be planned, approved, funded, and constructed. This is not considered to be a feasible alternative to meet the 2015 passenger demand at the San Diego International Airport.

### **Extensive Distance and Limited Growth Capacity for Closest Comparable Airports**

The two closest commercial airports to the San Diego International Airport are John Wayne Airport and Long Beach Airport; these airports are 82 miles and 104 miles away respectively. The driving distance for both of these airports from downtown San Diego is one and a half hours to several hours or more depending on traffic congestion. John Wayne Airport, approximately 1.5-hours away, served 9.6 million passengers in 2006, which exceeds the Airport's projected capacity of 8.4 million annual passengers. Orange County, the Airport's operator, has agreed to an annual limit of 10.3 million passengers per year through 2015. Although the Airport has plans for a new terminal and new passenger gates as part of an expansion plan, it is not likely that additional passengers could be accommodated at John Wayne Airport. In 2006, Long Beach Airport, accommodated nearly 3.0 million passengers. The capacity with existing facilities is 3.8 million passengers with capacity being reached by as early as 2007. Long Beach Airport is contemplating terminal expansion to meet local growth needs (Final Environmental Impact Report No. 37-03 for Long Beach Airport Proposed Terminal Area Improvement Project adopted June 2006); however, additional demands from the San Diego International Airport are not likely accommodated at Long Beach Airport.

Los Angeles International Airport is approximately 125 miles away and a minimum two-hour drive from the San Diego International Airport. Los Angeles International Airport has been considering options for accommodating projected passenger and operational growth for over 10 years. It is expected that Los Angeles International Airport will reach passenger capacity by as early as 2015 with moderate improvements. Ontario International Airport is approximately 95 miles away, with an estimated driving time of minimum of two hours from the San Diego International Airport. Ontario International Airport is

being considered to support regional growth demands that can not be accommodated at Los Angeles International Airport. Ontario International Airport could accommodate additional operations and passengers in the near term (i.e., through 2015); however the extensive driving time eliminates this option as a viable alternative.

None of these airports are, however, considered reasonable substitutions for users of the San Diego International Airport due to the driving distance and typical traffic congestion along the primary roadways between the San Diego region and these airports. Additionally, with the exception of Ontario International Airport, these airports are reaching passenger and/or operational capacity and therefore, could not accommodate additional operations from the San Diego International Airport.

### **Operator Chooses Facilities to Service**

The use of an airport is determined by aircraft operators and not the San Diego County Regional Airport Authority or the Federal Aviation Administration. Aircraft operators choose to serve an airport in response to consumer demand for air service. No regulatory mechanism exists for San Diego County Regional Airport Authority or the Federal Aviation Administration to redistribute air traffic to other airports. Federal legislation would be needed in order to give the Federal Aviation Administration the necessary authority to redistribute air traffic, which would represent a fundamental change to the nation's policy of a deregulated aviation system. In consideration of this deregulatory trend, legislation is not likely to be enacted.

Therefore, this category of alternative is not considered to be a reasonable alternative for meeting the purpose and need/project objectives of the Proposed Project and is not retained for detailed analysis.

### **4.4.2.3 Use of Other Modes of Transportation**

This alternative would seek to expand the use of rail, bus, or auto travel, thereby reducing operations at the San Diego International Airport in the future. Examples of alternatives within this category include developing a high-speed rail system to serve major population areas and developing dedicated highway lanes for Bus Rapid Transit systems, both of which may help to reduce travel between major metropolitan areas (i.e. San Diego to Los Angeles and San Francisco).

#### **Rail**

The California High-Speed Rail Authority introduced a plan in 2000 for a system that would link all of the State's major population centers including the San Francisco Bay Area, Los Angeles, Sacramento, the Inland Empire, Orange County and San Diego. The California High-Speed Rail Authority and Federal Railroad Administration developed a Program Level Environmental Impact Report/Environmental Impact Statement considering the development of high speed rail to connect the population areas in the State. In November 2005, the Record of Decision for the environmental study was issued with high speed rail connecting these population areas identified as the preferred alternative. The Program Level Environmental Impact Report/Environmental Impact Statement considered a modal alternative that included increasing capacity at airports and highway improvements; however, this alternative was ultimately not chosen, as it would help to meet intercity travel needs but would have significant disadvantages such as increased congestion at airports and highways compared to existing conditions. Additionally, it was determined that the modal alternative (improvements to highways and airports) would have potentially significant environmental impacts. The Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century would provide for the issuance of general obligation bonds, some of which would be used in conjunction with available federal funds for funding the planning and construction of the proposed high-speed train system. The bond issue was slated to go before the voters as a proposition in 2004, and then again in the November 7, 2006 general election. However, the bond issue was delayed, and is now scheduled to appear on the November 4, 2008 ballot. The California High-Speed Rail Authority estimates that the rail project would begin initial operations in eight to eleven years. Therefore this alternative does not meet the objective of providing adequate facilities to accommodate air service demand (forecast growth through 2015) while improving Levels of Service.

#### **Bus**

Use of bus travel may accommodate short trip travel (e.g., Los Angeles commuter travel); however, bus travel would require that the traveling public use a potentially less convenient mode of transportation. Bus travel would be less convenient travel in that it would take longer to reach a destination. Additionally,

more bus service would need to be added to accommodate higher traffic levels and multiple trips to meet public demand. Potentially, this type of alternative would also serve to increase environmental impacts compared to the Proposed Project as it may add to congestion on the roadway system. This type of alternative does not provide a solution to long distance travel which, according to the approved forecast for the San Diego International Airport, will be the largest increase in operations in the future.

## **Vehicular Travel**

Automobile travel is clearly not an environmentally preferred alternative, as this type of travel would potentially increase congestion unless improvements were made to the highway system. Use of automobiles may serve to meet commuter travel demand (e.g. Los Angeles), but as with bus travel it does not provide a solution for long distance travel. According to the approved forecast for the San Diego International Airport, long distance travel will have the largest increase in operations in the future.

It is also considered infeasible to substitute trucking cargo for air cargo. Because of the relatively high costs of air cargo relative to other shipping modes, air cargo is primarily made up of specialized goods that are either in need of being transported overseas or in need of time sensitive delivery. Because air cargo is not typically utilized for trips less than 250 miles, trucking is not considered a feasible alternative for trans-oceanic shipping or for the shipping of time sensitive materials.

## **Summary**

Although this category of alternative may have the potential to decrease air travel at the San Diego International Airport, it does not meet the project objectives for the Proposed Project. The Proposed Project is needed to accommodate a specific mode of transportation (i.e., air travel) and any significant improvements to highways or high speed rail would not be implemented prior to 2015. Additionally this category of alternatives would only serve to meet in-State demands for air travel (e.g. approximately 37 percent of the travel needs in 2005). The forecast for the San Diego International Airport indicates that the largest growth in operations will be in longer haul operations (i.e. travel outside of California) with in-State travel dropping to about 29 percent of overall operations by 2015.

Therefore, this category of alternatives is not considered to be a reasonable alternative for meeting the project objectives of the Proposed Project and is not retained for detailed analysis.

### **4.4.2.4 Use of Other Terminal Locations on Airport**

As previously described, the existing airport property is constrained and consists of 661 acres. The San Diego International Airport is the smallest of the large hub airports, as classified by Federal Aviation Administration, in the United States. Currently, the majority of airport property is being used for airfield/airspace, terminal, ground transportation, and air cargo and airport support facilities. The existing property layout consists of terminal facilities south of Runway 9-27. Extensive area is needed to accommodate consolidated terminal facilities and associated parking.

The previous Technical Report for the Draft Master Plan for the San Diego International Airport (HNTB, 2001), which was never approved, recommended a long-term concept for the San Diego International Airport that involved the potential development of a unit terminal facility north of the runway in the North Area. In order for this unit terminal to be used for commercial aircraft operations, extensive airfield improvements were required including the acquisition of approximately 27 acres on the Marine Corps Recruit Depot to extend Taxiway C for the entire length of the runway. This taxiway extension was a mandatory airfield improvement for arriving commercial aircraft to exit the runway after landing and taxi to a unit terminal facility in the North Area. This taxiway extension would require a land exchange and reconstruction of numerous Marine Corps Recruit Depot facilities. Also, during the development of the previous Draft Master Plan, potential concepts contemplated second runway and expanded terminal scenarios that would require the availability and use of the entire Marine Corps Recruit Depot property.

The most recent federal Base Realignment and Closure process, completed in 2005, did not identify the Marine Corps Recruit Depot as a military facility identified to be realigned or closed. The Airport Master Plan reconsidered the ultimate use of the Marine Corps Recruit Depot property and it was determined that the potential for acquisition or a land exchange with the Marine Corps Recruit Depot is not feasible. Without a land exchange and development of Marine Corps Recruit Depot property for airfield improvements, the development of terminal facilities on the north could not be conducted with a safe and

efficient taxiway for aircraft. In addition, development of a unit terminal on the north would require that terminal operations be split between the existing infrastructure on the south and the new infrastructure in the north. Splitting the terminal infrastructure between two locations would require the duplication of many infrastructure components which would not avoid or substantially lessen any of the significant effects of the projects.

Specifically, accommodating terminal facilities in other locations on the Airport has the following issues:

- **Taxiway C does not extend for the length of the runway.**

Without a full length parallel taxiway north of Runway 9-27, it is not possible to efficiently operate a terminal facility north of the runway. A large increase in runway crossings would be required if a terminal facility were to be constructed north of Runway 9-27 without extending Taxiway C to the west end of the runway. The extension of Taxiway C has been contemplated and analyzed and requires acquiring land from the adjacent Marine Corps Recruit Depot north of the San Diego International Airport. The extension of Taxiway C has been environmentally reviewed under California Environmental Quality Act (Negative Declaration finding 2001) and National Environmental Policy Act (Finding of No Significant Impact, 2001). However, the acquisition of additional land along the taxiway from the Marine Corps could not be negotiated within the economic capacity of the San Diego County Regional Airport Authority.

- **Constrained land envelope does not allow for adequate terminal space, road/circulation system, and utilities.**

The existing land envelope north of Runway 9-27 is not suitable for terminal development due to several issues. First and foremost, Marine Corps Recruit Depot is not currently planned for closure or acquisition by San Diego County Regional Airport Authority. Further, the Marine Corps Recruit Depot is federal land outside the San Diego County Regional Airport Authority jurisdiction and is not available for possible use to meet the project objectives within the relevant time horizon. The remaining land envelope north of Runway 9-27 is heavily constrained and has limited roadway access. Existing Pacific Highway would have to be extensively altered to support access to a proposed terminal facility due to the existing connection between Interstate 5 and Pacific Highway. The existing vehicle flyovers that characterize this connection would conflict with access to a terminal roadway system.

The utility infrastructure in the vicinity of the North Area is also not adequate to support a terminal facility without construction of additional heating and cooling facilities. Currently, the San Diego International Airport is served by a Central Utility Plant located south of Terminal Two along Harbor Drive. This facility is not adequately sized or located to support a facility located north of Runway 9-27. In addition, water, sewer, and electrical utilities could not be accommodated.

- **Split terminal operations would be confusing for passengers/airport users, require duplicate shuttle buses, and would create challenges for airline/tenant operations.**

The operation of two independent terminals in two different locations is problematic both externally and internally.

Externally, passengers attempting to find their airline would be required to navigate very confusing signage directing them to two wholly separate areas at the Airport on the north and south sides of the runway. Without at least a common access roadway it would be very challenging to direct traffic to the appropriate terminal in an efficient and safe manner.

Internally, the splitting of operations between two terminals separated by a runway would require duplication of many facilities that support airline operations as well as limit the ability for airlines to grow their operation with flexibility and economy.

- **Build upon the existing terminal and roadway complex.**

Moving terminal facilities would not build upon the existing terminals or roadway system; therefore, new or improved systems would need to be built. In developing new terminal areas and roadway improvements, the previous extensive investments that were made to continue development in the existing area would be reduced. It is clear that expanding facilities in the existing terminal area is the most cost effective means of accommodating forecast growth through 2015.

Therefore, this category of alternatives is not considered to be a reasonable alternative for meeting the project objectives of the Proposed Project and is not retained for detailed analysis.

## 4.5 Summary of Alternatives Considered

To summarize, **Table 4-4** shows the alternatives considered and whether they would meet the project objectives identified in Chapter Three, *Project Objectives*.

Table 4-4  
Comparison of Alternatives

Alternative	Meets Project Objectives	Reasons for Meeting or Not Meeting Project Objectives
Proposed Project with Parking Structure (Preferred Alternative)	Yes	Accommodates forecast growth through 2015 while improving Level of Service and utilizing Airport property efficiently.
Proposed Project without Parking Structure	No	Accommodates forecast growth through 2015 and utilizes airport property efficiently but would not improve Level of Service/convenience for airport users including business travelers, "meeters and greeters," and other passengers such as families being accompanied to and from the terminal.
East Terminal with Parking Structure Alternative	Yes	Accommodates forecast growth through 2015 with potential improving Level of Services. Does not make most efficient use of Airport property.
East Terminal without Parking Structure Alternative	No	Accommodates forecast growth through 2015 but would not improve Level of Service/convenience for airport users including business travelers, "meeters and greeters," and other passengers such as families being accompanied to and from the terminal. Does not make most efficient use of Airport property.
No Project Alternative	No	Does not provide for airport land use guidance. Does not provide for adequate Level of Service to accommodate forecast growth through 2015. Would require that ground loading be used to accommodate increased passenger demand. Terminal crowding would increase and queues for security screening would require upwards of an hour.
Airport Relocation	No	Can not be developed within project timeline (available by the year 2015).
Use of Other Airports	No	Other airports within the San Diego region do not currently have adequate certification for passenger service, runway lengths, taxiway/apron areas, or terminals. Additionally, commercial airports closest to San Diego International Airport are in excess of 80 miles from the existing Airport and also have limited capacity for growth. Lastly, aircraft operators chose which airports they use and service therefore use of another airport can not be mandated by the San Diego County Regional Airport Authority.
Use of Other Modes of Transportation	No	Use of other modes of transportation could not be implemented with out assistance from other governmental agencies and any additional bus lanes or rail option could not be implemented within the project timeline. Increasing vehicular travel is clearly not the environmentally preferred alternative.
Use of Other Terminal Locations on Airport	No	Land is not currently available anywhere else on the Airport property that could accommodate the needed terminal area. If adequate land was available in the North Area it would require splitting terminal operations which would require duplication of many infrastructure components leading to inefficient operations . Splitting terminal operations is also confusing for departing passengers.

# CHAPTER 5: ENVIRONMENTAL SETTING, CONSEQUENCES, AND MITIGATION MEASURES

## INTRODUCTION

The following sections describe the approach and methodology, regulatory framework, significance criteria, existing conditions, potential impacts, potential construction impacts, potential cumulative impacts, and if necessary potential mitigation measures for reducing impacts associated with each environmental impact category required to be considered by the California Environmental Quality Act (CEQA).

As part of the evaluation of the comments received on the Draft Environmental Impact Report (EIR), revisions were made to the Draft EIR to clarify and provide additional information in this Final EIR. Text to be deleted is shown in strike out, and text that has been inserted is shown in underline.

For all analyses conducted for this ~~Final Environmental Impact Report (EIR)~~ baseline conditions are for the year 2005. The year 2005 was used as the baseline conditions for the following reasons:

- The original Notice of Preparation (NOP) was issued in September 2005 and analysis was started considering 2005 as the baseline year (California Environmental Quality Act guidelines *Title 14 California Code of Regulations, Division 6 Chapter 3 Guidelines for Implementing the California Environmental Quality Act, §15125(a)*). The revised NOP identified additional project elements to be considered in the program EIR but did not change the project objections for the Proposed Project nor necessitate a new baseline year.
- Use of 2005 as the baseline conditions allowed the use of the most recent available traffic data and models agreed to by San Diego Association of Governments, California Department of Transportation, and the City of San Diego.

The San Diego County Regional Airport Authority (SDCRAA) adopted the California Environmental Quality Act guidelines, *Title 14 California Code of Regulations, Division 6 Chapter 3 Guidelines for Implementing the California Environmental Quality Act*, and the Environmental Checklist questions from *Appendix G* for impact criteria on February 2, 2004. The SDCRAA has used these guidelines as their own since adoption. Where other agencies have differing or additional criteria those criteria are specifically defined within the introduction of each resource category in this chapter.

As described in Chapter Two, *Introduction, Background, and Project Description*, the Draft EIR issued by the SDCRAA in May 2006 limited environmental consideration to the year 2015. As a result of comments received on the May 2006 Draft EIR this document considers potential environmental impacts through the year 2030. Although the environmental analysis for potential impact considers operational growth for the Airport through 2030 no additional improvements are proposed beyond those needed to accommodate growth through 2015. The SDIA Master Plan considers improvements through 2030 at a conceptual level which informs the overall land use plan; however, an implementation plan for specific improvements is developed only through 2015. Future planning efforts for SDIA will focus on specific improvements beyond 2015. As these future improvements are proposed, defined, and analyzed, additional environmental review will be required and undertaken by the SDCRAA.

Because the impact analysis contained in this ~~Draft Final~~ EIR includes years beyond those for which the proposed improvements are needed, the operational levels beyond 2020 are constrained to show that the terminal expansion of 10 gates will not meet the market demand. Thus, through the year 2020 the impact analysis for this ~~Draft Final~~ EIR uses the same operational levels for all alternatives. For the years 2025 and 2030, the No Project Alternative includes less operations, however, with the terminal improvements both the Proposed Project (Preferred Alternative) and the Airport Plan Alternative (East Terminal) would accommodate the constrained high growth forecast. Again as described in Section 2.2.2 *Aviation Forecast Update and Planning Horizon Used for Environmental Analysis*, the single runway at SDIA will ultimately constrain the airport facility. Future planning efforts will consider the long term consequences of the existing one runway airfield system.

This ~~Draft~~ EIR analyzes the impact of the Proposed Project and its alternatives for the years 2010, 2015, 2020, 2025, and 2030. Because of the expanse of the data and the fact that the 2030 analysis discloses

the most potential environmental impact due to the Proposed Project, analysis for the year 2030, as well as the previously analyzed years of 2010 and 2015 are included in the main volume of this ~~Draft~~ Final EIR. The analyzed years of 2010 and 2015 have been updated to reflect continued planning efforts. The analysis of noise, traffic and circulation, and air quality for the years 2020 and 2025 are provided in the appropriate appendix dealing with these impact categories.

### **Development of the No Project Alternative**

This ~~Draft~~ Final EIR evaluates the Proposed Project and its alternatives along with the 2005 baseline and the future No Project condition. CEQA guidelines require the evaluation of a “No Project” alternative and the purpose of this analysis is “to allow the decisionmakers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed Project’s environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline,” California Code of Regulations Title 14, §15126.6(e)(1). Additionally, this Code, within §15126.6(e)(3)(B) states, “where failure to proceed with the project would not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project’s non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.” Further, § 15126.2(e)(3)(A), which is applicable to CEQA documents addressing the impact of a plan, as opposed to a specific project, states: ‘When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the ‘no project’ alternative will be the continuation of the existing plan, policy or operation in the future. Typically this a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the project impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.’ It is forecast that passenger traffic will continue to grow at SDIA with or without the proposed improvements as discussed in Chapter Two, *Introduction Background, and Project Description*. Ultimately, the airfield will constrain operations at SDIA, however, the timeline for constraint is beyond 2015, the year for which the improvements included in the Airport Implementation Plan are designed. For these reasons the SDCRAA, as lead agency, has determined the most valid measure of impact due to the Proposed Project is the comparison of the future Proposed Project versus the future No Project Alternative.

### **The Proposed Project Does Not Induce Operations Until Sometime Beyond 2020**

Per California Code of Regulations Title 14, §§15121(a), 15126.2(d), and 15130, the impacts of the Proposed Project must be caused by the project and distinguished from those that would result regardless of whether the project is approved or not. Air transportation, like any other type of transportation, is a derived demand. The demand arises from the need of a given person or a given product to be at a given location at a given time. People travel because they desire or need to be at a certain place, whether for pleasure, business or personal reasons. Likewise, shippers transport commodities because consignees need the product to be at a given location, whether for personal or business use, or for resale. In short, the desire or need to travel or to ship a product is generated by factors unrelated to the transportation mode or facility.

The role of an airport or any other part of the transportation infrastructure is to accommodate the need or desire to relocate from one location to another location. It does not, in and of itself, generate that need or desire. Master planning forecasts are based upon this understanding. Projections are based on the size of the market and the cost of travel and are independent of any assumptions about the airport facility. Once the demand is estimated, airport plans are prepared to accommodate that demand. This is also the method that the Federal Aviation Administration (FAA) uses to prepare Terminal Area Forecasts for individual facilities. Unconstrained forecasts developed for the SDIA Master Plan future years are demand based. The SH&E Aviation Activity Forecast (approved by the FAA in June 2005) prepared for SDIA considers the ultimate constraining factor at SDIA to be the single runway. The constrained forecast considers runway congestion and reduces operations to match a desired service level in the situation where the airfield at SDIA is not improved to meet the market demand.

As demonstrated in the 2007 Draft Airport Master Plan within Chapter Seven, *Facilities Requirements Analysis*, multiple aspects of the airport service areas did not meet the demand required in 2004 when the facilities analysis was completed. Specifically, the facilities analysis determined that terminal facilities do not accommodate at an adequate Level of Service 2004 passenger requirements. For example, the



current layout of the non-secure public area for general circulation is approximately half as large as it should be to provide a high Level of Service for airport users. In general the total terminal was approximately 165,500 square feet deficient in supplying a high level of service for the year 2004. This deficiency increases as operational levels continue to grow at SDIA. The SH&E Aviation Activity Forecast indicates that operations/ enplanements will continue to grow even under airfield constrained conditions through approximately 2022. Thus, the proposed improvements to accommodate traffic through 2015 at SDIA will not generate additional traffic, but provide a high level of service to Airport users who would otherwise be using insufficient facilities. As described in section 3.2.2., *Terminal Improvements Needed*, when the first phase of Terminal Two West was opened in January 1998 the facility did not experience a spike in airport operations or passenger volumes. It is expected that the terminal improvements needed to accommodate growth through 2015 would have a similar impact on enplanements as those experienced in 1998 when Terminal Two West terminal was opened.

### **Impacts of the Proposed Project Beyond 2020**

Because the impact analysis contained in this ~~Draft~~ Final EIR includes years beyond those for which the proposed improvements are needed, the operational levels beyond 2020 are constrained to show that without the terminal expansion of 10 gates SDIA will not be able to meet the market demand. Thus, through the year 2020 the impact analysis for this ~~Draft~~ Final EIR uses the same operational levels for all alternatives. For the years 2025 and 2030, the No Project Alternative includes less operations, however, with the terminal improvements both the Proposed Project (Preferred Alternative) and the Airport Plan Alternative (East Terminal) would accommodate the constrained high forecast. The differences in potential impact between Proposed Project and the No Project Alternative are identified specifically for impact categories that are impacted by the operational difference (i.e. noise, traffic and circulation, air quality, and human health risk assessment). Again as described in Section 2.2.2 *Aviation Forecast Update and Planning Horizon Used for Environmental Analysis*, the single runway at SDIA will ultimately constrain the facility. Future planning efforts will consider the long term consequences of the existing one runway airfield system.



## 5.1 Noise

This section describes the general approach and methodology, regulatory framework, significance criteria, and environmental setting in consideration of potential aviation, surface transportation, and construction noise impacts associated with the Proposed Project (Preferred Alternative) and its alternatives. Additionally, this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts. Comments in response to the NOP specific to potential noise impacts were received from the following agencies and individuals:

- City of San Diego – potential affect on the Quiet Home Program and installation of additional remote monitoring sites.
- Peninsula Community Planning Board - aircraft noise from operations and construction noise.
- SANNoise - increase noise due to departing flights, off-course departures, after curfew departures, increase late night (during curfew) arrivals and missed approaches, increased frequency of non-runway missed approaches, inability of the Quiet Home Program to pace with expanding contours.
- Naval Training Center - shifting of cumulative noise contours.
- Richard Phillips, resident of Golden Hills, - impact of increase noise due to increased operations and noise impacts on historically designated properties.
- Kathleen Bush - increased noise.
- Oral comments during scoping meetings expressed concern about increased noise, continuance of the Quiet Home Program, noise abatement, and noise impact to schools.

All written and oral comments during the NOP process are provided in [Appendix A](#). Comments received specific to noise impacts are addressed within this section of the EIR.

Comments received on the previous Draft EIR circulated in May 2006 included comments such as:

- Provide more detail on individual noise events.
- Provide more detail that passenger and flight numbers would be the same with or without the proposed expansion.
- Concern over impact to the Quieter Homes Program.
- Monitored baseline data should be disclosed not just projections.
- Noise analysis did not include cargo operations.
- Noise-sensitive land uses should be analyzed (schools, places of worship, etc.).

Comments received on the previous Draft EIR are also addressed in this section or within [Appendix B](#).

To assist reviewers in interpreting noise metrics, [Appendix B](#) presents an introduction to the relevant fundamentals of acoustics, noise terminology, and the effects of noise on human activity, including community annoyance, speech interference, and sleep disturbance. Additionally, [Appendix B](#) provides detailed information on the modeling conducted for the noise analysis.

### 5.1.1 Aircraft Cumulative Noise Exposure

Noise exposure levels for aircraft and other sources are expressed in terms of cumulative, or total, noise effects. Description of aircraft noise exposure in environmental documents is primarily based on using the Community Noise Equivalent Level (CNEL) metric. CNEL is the average noise level over a 24-hour period with a 3 5 dB increase attributed to evening operations (i.e., operations between 7 PM to 10 PM) and a 10 dB increase attributed to nighttime operations (i.e., operations between 10 PM and 7 AM). The 35 dB and 10 dB increases during evening and nighttime hours, respectively, are intended to account for the added intrusiveness of aircraft noise during time periods when ambient noise due to vehicle traffic and other sources is typically less than during the daytime. See [Appendix B](#) for additional information on noise metrics.

### **5.1.1.1 General Approach and Methodology**

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center. In the analysis of aviation noise, the Airport Land Use Plan component of the Proposed Project does not affect the number of aircraft operations and therefore does not influence the noise analysis for aircraft operations.

Aircraft-induced noise exposure level contours with the CNEL metric were prepared using the latest version (7.0 released April 2007) of the Federal Aviation Administration's (FAA's) Integrated Noise Model (INM) for each alternative and year of analysis. INM uses annual average daily operations to compute existing and forecast noise exposure. Annual average daily operations are representative of all aircraft operations that occur over the course of a year, including variations in runway and flight track usage. The total annual operations are divided by 365 days to determine the number of operations on the average day. Runway use, flight track location and use, and aircraft profiles define the paths that aircraft traverse as they fly to and from the Airport.

INM calculates the overall annual average daily noise exposure (i.e., CNEL) at points on the ground around San Diego International Airport (SDIA). From the grid of points, contours of equal daily sound level are calculated for overlay onto land use maps and subsequent analyses. As a computer-based noise model, the use of INM allows for the projection of forecast noise exposure.

In addition to CNEL contours, Time Above 65 dB (TA65) contours were prepared for each alternative and year of analysis. The TA65 contours show the number of minutes on the average 24-hour day that aircraft noise levels are above 65 dB. Since CNEL does not represent the sound level heard at any particular time, but rather represents the total (and partially weighted) sound exposure, the TA65 contours are presented to show the amount of time, on an average day, that noise levels are above 65 dB. While there are no specific or subjective significance criteria for the TA65 contours, this information is presented as an aid in understanding the significance of the CNEL contours.

[Appendix B](#) provides detailed information on the noise modeling assumptions used in this analysis, including average weather conditions, fleet mix, runway use, and flight tracks.

### **5.1.1.2 Regulatory Framework**

The State of California has adopted the CNEL metric as the standard for assessing community noise impact. As described in the following section, FAA criteria as outlined in FAA Order 1050.1E (with adaptation to the CNEL metric, as permitted in the State of California) are also used in the study as Federal environmental documentation will ultimately be required prior to project implementation.

### **5.1.1.3 Significance Criteria**

Significance criteria for potential cumulative noise effects are described in this section. These criteria are based on established procedures adopted by local, state, and federal agencies as well as on results of the noise effects research discussed in [Appendix B](#).

Based upon applicable standards as described in the following two subsections, changes to aircraft noise exposure levels that are a direct result of the Proposed Project (Preferred Alternative) or East Terminal Alternative would constitute a significant impact if there would be:

- A 1.5 dB or more increase resulting in noise sensitive areas being exposed to 65 CNEL or greater, as compared to ~~either existing CNEL values or~~ future conditions under the No Project Alternative; or
- A 3 dB or more increase resulting in noise sensitive areas being exposed to 60 CNEL or greater, as compared to ~~either existing CNEL values or~~ future conditions under the No Project Alternative.

## **Federal and State Standards**

The FAA has established noise criteria pertaining to aircraft-induced and airport-associated noise exposure levels. The FAA noise exposure assessment procedure uses the annual average day-night average sound level (DNL) in noise exposure analyses to determine cumulative noise exposure from airports. In 14 CFR Part 150, the FAA has established compatibility guidelines for aircraft noise exposure levels with land uses in the vicinity of an airport. These guidelines consider all land uses to be compatible with noise levels less than 65 DNL. Some land uses, such as residences, schools, hospitals, and places of worship are considered to be noise sensitive and non-compatible with aircraft noise exposure levels at and above 65 DNL. Governmental services, transportation, parking, and some outdoor recreational uses are considered compatible with noise levels up to 70 DNL.

According to FAA Order 1050.1E, a significant increase in noise exposure would occur if the Proposed Project (Preferred Alternative) results in an increase of 1.5 DNL or higher that results in a noise sensitive land use having an exposure level of or greater than 65 DNL. The FAA has adopted the recommendation of FICON for analysis of noise for areas exposed to noise levels between 60 to 65 DNL. Under this recommendation, if screening shows that noise sensitive areas at or above 65 DNL would have an increase of 1.5 DNL or more, further analysis should be conducted to identify noise sensitive areas between 60 to 65 DNL having an increase of 3 DNL or more due to the Proposed Project. The FAA then uses this information during its consideration of potential mitigation for those areas.<sup>1</sup>

In this study, the CNEL metric is used to describe average annual daily noise exposure levels and evaluate changes in noise due to the project, as mandated by California law and accepted by the FAA for the State.<sup>2</sup> CEQA also requires comparison of post-project noise levels to the baseline conditions.

## **City of San Diego Standards**

The transportation element in the General Plan for the City of San Diego has identified sound levels compatible with various land uses. The maximum acceptable sound level is 65 CNEL for residential development and 75 CNEL for commercial, industrial, and manufacturing facilities. These standards typically apply to usable exterior living areas adjacent to transportation noise sources such as roadways, railways, and areas of aircraft activity.

The Airport Land Use Compatibility Plan (ALUCP) contains policies regarding the attenuation of noise levels within the 60 CNEL for SDIA. According to the ALUCP and Section 59.5.0701 of the Municipal Code, interior noise attenuation is required for new residential construction to reduce the interior noise levels of residential structures to 45 CNEL within the 60 CNEL contour of SDIA.

### **5.1.1.4 Environmental Setting**

As shown in [Figure 5.1-1](#), average annual daily noise contours were developed for the Baseline Condition 2005, based upon the existing facilities at the Airport and the number and type of annual operations that were projected for 2005.<sup>3</sup> A comparison of 2005 and 2006 monitored CNEL values to those modeled in 2005 is provided in [Table 5-1.1](#). [Figure 5.1-2](#) shows Baseline Conditions 2005 in terms of TA65 contours. For example, the TA65 contours in [Figure 5.2](#) demonstrate that a residence in Ocean Beach, with CNEL levels between 60 dB and 65 dB, would experience aircraft noise levels above 65 dB

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<sup>1</sup> FICON, August 1992.

<sup>2</sup> FAA Order 5050, 4A, pp.30, paragraph G.

<sup>3</sup> Analysis of noise started prior to 2005 year end, therefore operations were necessarily projected for completion of 2005.

for approximately 45 to 60 minutes per day. [Table 5-1.2](#) shows population and housing units within the Baseline Conditions 2005 CNEL contours.

There are some differences between the CNEL contours shown in this study versus those published by SDIA in the quarterly noise reports. Specifically, SDIA adjusts the contours in the quarterly noise reports based upon noise monitoring data, including measurements of the lateral attenuation effects<sup>4</sup> with takeoff noise in the vicinity of the Runway 27 approach end.

Noise monitoring efforts by SDIA staff have indicated that lateral attenuation due to takeoff noise in the vicinity of the Runway 27 approach end, as measured by noise monitors, differs from that calculated by INM. The INM-calculated noise exposure levels in the vicinity of the runway end could be overstated or understated, depending on the location. This is due to the terrain (including buildings) in the vicinity of SDIA and the prevalence of both hard and soft ground coverage. INM assumes that surfaces are soft and absorb some sound energy; however, the hard surfaces (such as water, streets, etc.) in the vicinity of SAN tend to reflect and increase noise exposure. As a result of these differences, SDIA staff adjusts the CNEL contours published in the quarterly noise reports based upon the noise monitoring data.

In contrast to the CNEL contours published in the quarterly noise reports, which show existing and historic data, this study must consider noise exposure contours for future conditions in 2010 through 2030 with each of the alternatives. Since noise monitoring data does not exist for future events, noise monitoring data is not used in this study's CNEL contours. Similarly, noise monitoring data is not included in the study's Baseline Conditions 2005 CNEL contours. CEQA requires that the noise impact evaluation assess change in noise exposure levels with the project alternatives in future years versus the baseline conditions. The incorporation of noise monitoring data and other adjustments into the baseline contours, but not the future year contours, would result in an inconsistent methodology between the baseline and future year conditions. A consistent methodology is needed in order to facilitate a reasonable and appropriate comparison of noise exposure levels. As a result, noise monitoring data cannot be used in the CNEL contours for this study. [Appendix B](#) does, however, provide a comparison between the modeled 2005 conditions and the noise monitoring annual CNEL contours. This comparison provides validation that the modeled noise levels for the year 2005 reasonably represent the actual levels experienced in 2005 as measured by the SDIA permanent noise monitors.

Additionally, for federal documents, the FAA directs that noise exposure contours be calculated by INM without incorporation of noise monitoring data. In order to maintain consistency between this analysis and the federal environmental assessment that will be prepared for the SDIA Master Plan, FAA approval requirements (per FAA Order 1050.1E) were used in this study.

The 2005 baseline and future contours are intended to provide a reasonable and methodologically consistent basis for comparing noise impact between the alternatives as required by CEQA. Although noise monitoring data is not used in this study, the Baseline Conditions 2005 shown in Figures 5.1-1 and 5.1-2 are a reasonable evaluation of existing aircraft noise exposure levels. Note that the contours in this study are not intended to supplant those used in the quarterly noise reports, sound insulation program, and/or other programs.

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<sup>4</sup> Lateral attenuation includes the affect of the ground and aircraft engine installations on the propagation of noise.

Table 5-1.1

## Comparison of 2005 and 2006 Monitored CNEL and 2005 Modeled CNEL

RMT #	Location	2005 Annual Monitored CNEL	2006 Annual Monitored CNEL	2005 Modeled CNEL (with 5 dB evening penalty)
1	Park & Recreation Building – Balboa Park	70.0	<u>69.8</u>	<u>72.4</u>
2	1328 ½ Dale Street	66.2	<u>65.9</u>	<u>67.1</u>
3	740 ½ Cedar Street	62.5	<u>59.8</u>	<u>65.1</u>
4	2425 ½ Third Avenue	62.5	<u>58.8</u>	<u>63.9</u>
6	Marine Corps Recruit Depot	69.8	<u>69.2</u>	<u>71.4</u>
7	Naval Training Center Building #187	75.3	<u>74.8</u>	<u>75.3</u>
8	Naval Training Center Building #8	73.8	<u>no data available</u>	<u>68.1</u>
9	1134 ½ Redwood Street	67.6	<u>66.7</u>	<u>62.4</u>
10	3225 ½ Michaelmas Terrace	N/A <sup>a</sup>	<u>63.2</u>	<u>63.5</u>
11	4313 ½ Browning Street	72.4	<u>71.5</u>	<u>72.4</u>
12	3232 ½ Duke Street	61.1	<u>60.7</u>	<u>61.2</u>
13	4669 ½ Larkspur Street	66.3	<u>65.5</u>	<u>66.6</u>
14	4823 ½ Saratoga Avenue	65.6	<u>64.7</u>	<u>66.8</u>
15	809 ½ Dover Court	60.1	<u>59.7</u>	<u>59.3</u>
16	3385 ½ “B” Street	64.3	<u>63.6</u>	<u>64.5</u>
17	2651 ½ “A” Street	64.7	<u>64.3</u>	<u>66.4</u>
19	1290 ½ West Thorn Street	63.9	<u>62.7</u>	<u>59.3</u>
20	1944 ½ Plum Street	61.4	<u>60.8</u>	<u>62.2</u>
21	1615 ½ Froude Street	58.4	<u>58.5</u>	<u>59.7</u>
22	5029 ½ Lotus Street	65.0	<u>64.2</u>	<u>64.6</u>

<sup>a</sup> RMT #10 was knocked over (termite rot of pole) and shutdown on October 19, 2004

Sources: Airport Noise Mitigation Office, San Diego International Airport HNTB noise analysis, 2007 8.

New data added for 2006 monitored data and new values provided for 2005 model with 5 dB evening penalty. This information does not represent significant new information because it does not affect the significance determinations presented in the Draft EIR.

Table 5-1.2

## Population and Housing Units within the Baseline Conditions 2005 CNEL Contours

Decibel Level	Baseline 2005 CNEL	
	Population	Housing Units
60dB	<del>32747</del> <u>34,729</u>	<del>14992</del> <u>15,395</u>
65dB	<del>27067</del> <u>28,577</u>	<del>40893</del> <u>11,837</u>
70dB	<del>3547</del> <u>5,112</u>	<del>4784</del> <u>2,285</u>
75dB	<del>40</del> <u>91</u>	<del>6</del> <u>55</u>

Source: HNTB analysis using SANDAG GIS land use coverage and 2000 Census Block Demographics. This information does not represent significant new information because it does not affect the significance determinations presented in the Draft EIR.

### 5.1.1.5 Impact Analysis

This section provides the potential cumulative noise impacts associated with the Proposed Project (Preferred Alternative) and its alternatives. It is noted that the variations of the preferred Alternative and the East Terminal Alternative to include or not include a Parking Structure does not affect the noise analysis.

#### **Proposed Project - With and Without Parking Structure**

Aircraft noise analysis is limited to the Proposed Airport Implementation Plan as the land uses within the Proposed Airport Land Use Plan would have a less than significant impact on airfield operations. Specifically, while additional cargo facilities are included with the North Area projects, aircraft operations, including nighttime cargo operations, are not forecasted to increase, for a given year, due to the Proposed Airport Land Use Plan.

**Figures 5.1-3, and 5.1-4A, and 5.1-4B,** provide a comparison of the Proposed Project (Preferred Alternative) and No Project Alternative for the 2010, 2015, and 2030 years of analysis. In addition, the Baseline Conditions 2005 CNEL contours are also shown for comparison. **Table 5-1.3** provides a comparison of the population and housing units within the CNEL contours.

**Figures 5.1-5, 5.1-6, and 5.1-7** show TA65 contours for the Proposed Project (Preferred Alternative) in 2010, 2015, and 2030, respectively. TA65 contours for the No Project Alternative are shown in **Figures 5.1-8, 5.1-9, and 5.1-10,** or 2010, 2015, and 2030, respectively.

As would be expected, the differences between the contours for the Proposed Project (Preferred Alternative) versus the No Project Alternative are small, as both alternatives have a similar number of operations and a similar flight schedule for a given year of analysis. Beyond 2020 the number of daily operations varies by no more than 50 operations because the No Project Alternative can not accommodate all forecast operations beyond 2020. The primary differences in the noise contours for the same year of analysis are due to small variations in the time of day (i.e., daytime, evening, and nighttime periods in CNEL) of aircraft operations that result from delay levels estimated with the SIMMOD analysis. As discussed in **Appendix C**, SIMMOD is a SIMulation MODel that simulates the movement of each aircraft operation on the airfield and in the airspace, in order to calculate aggregate delay and travel time.

According to a detailed grid analysis of points spaced at 0.1 nautical mile intervals within the 60 CNEL, including noise sensitive uses such as schools, hospitals, places of worship, and historic sites, there are no locations that would experience a change of 1.5 CNEL or more within the 65 CNEL, or 3.0 or more within the 60 CNEL, due to the Proposed Project (Preferred Alternative) as compared to the No Project Alternative for 2010, 2015, and 2030. Therefore, the Proposed Project (Preferred Alternative) would have a less than significant impact in terms of cumulative aircraft-induced noise exposure.



Table 5-1.5 3

## Population and Housing Units within the Proposed Project (Preferred Alternative) CNEL Contours

Decibel Level	2010 Proposed Project (Preferred Alternative) CNEL		2010 No Project CNEL		Baseline 2005 CNEL	
	Population	Housing Units	Population	Housing Units	Population	Housing Units
60dB	<del>36123</del> <u>38,945</u>	<del>46118</del> <u>16,781</u>	<del>33834</del> <u>37,369</u>	<del>45406</del> <u>16,262</u>	<del>32717</del> <u>34,729</u>	<del>44992</del> <u>15,395</u>
65dB	<del>27600</del> <u>29,389</u>	<del>40963</del> <u>11,924</u>	<del>27384</del> <u>29,280</u>	<del>40959</del> <u>11,930</u>	<del>27067</del> <u>28,577</u>	<del>40893</del> <u>11,837</u>
70dB	<del>3292</del> <u>4,072</u>	<del>4686</del> <u>1,937</u>	<del>3289</del> <u>4,112</u>	<del>4680</del> <u>1,982</u>	<del>3547</del> <u>5,112</u>	<del>4784</del> <u>2,285</u>
75dB	<del>56</del> <u>260</u>	<del>34</del> <u>168</u>	<del>44</del> <u>138</u>	<del>9</del> <u>85</u>	<del>40</del> <u>91</u>	<del>6</del> <u>55</u>
Decibel Level	2015 Proposed Project (Preferred Alternative) CNEL		2015 No Project CNEL		Baseline 2005 CNEL	
	Population	Housing Units	Population	Housing Units	Population	Housing Units
60dB	<del>39826</del> <u>41,075</u>	<del>47460</del> <u>17,484</u>	<del>39877</del> <u>41,320</u>	<del>47513</del> <u>17,621</u>	<del>32717</del> <u>34,729</u>	<del>44992</del> <u>15,395</u>
65dB	<del>28387</del> <u>30,525</u>	<del>41323</del> <u>12,910</u>	<del>28354</del> <u>30,570</u>	<del>41281</del> <u>12,866</u>	<del>27067</del> <u>28,577</u>	<del>40893</del> <u>11,837</u>
70dB	<del>3329</del> <u>5,039</u>	<del>4563</del> <u>1,915</u>	<del>3260</del> <u>4,784</u>	<del>4550</del> <u>1,844</u>	<del>3547</del> <u>5,112</u>	<del>4784</del> <u>2,285</u>
75dB	<del>222</del> <u>481</u>	<del>442</del> <u>319</u>	<del>225</del> <u>488</u>	<del>444</del> <u>323</u>	<del>40</del> <u>91</u>	<del>6</del> <u>55</u>
Decibel Level	2030 Proposed Project (Preferred Alternative) CNEL		2030 No Project CNEL		Baseline 2005 CNEL	
	Population	Housing Units	Population	Housing Units	Population	Housing Units
60dB	<del>46724</del> <u>47,227</u>	<del>49706</del> <u>19,600</u>	<del>47144</del> <u>47,140</u>	<del>49956</del> <u>19,688</u>	<del>32717</del> <u>34,729</u>	<del>44992</del> <u>15,395</u>
65dB	<del>34493</del> <u>34,011</u>	<del>42798</del> <u>14,295</u>	<del>30770</del> <u>33,450</u>	<del>42485</del> <u>13,826</u>	<del>27067</del> <u>28,577</u>	<del>40893</del> <u>11,837</u>
70dB	<del>4468</del> <u>6,450</u>	<del>4682</del> <u>2,211</u>	<del>3673</del> <u>5,580</u>	<del>4528</del> <u>1,956</u>	<del>3547</del> <u>5,112</u>	<del>4784</del> <u>2,285</u>
75dB	<del>724</del> <u>912</u>	<del>474</del> <u>590</u>	<del>712</del> <u>900</u>	<del>466</del> <u>583</u>	<del>40</del> <u>91</u>	<del>6</del> <u>55</u>

Source: HNTB analysis using SANDAG GIS land use coverage and 2000 Census Block Demographics. This information does not represent significant new information and does not affect the significance determinations presented in the Draft EIR.

## **East Terminal Alternative - With and Without Parking Structure**

The SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the Proposed Airport Land Use Plan. See Chapter Four, Section 4.2.1 *Airport Land Use Plan* for a detailed explanation. Therefore, the East Terminal Alternative includes the Proposed Airport Land Use Plan. However, the aircraft noise analysis is limited to the Airport Implementation Plan Alternative as the land uses within the Airport Land Use Plan would have a less than significant impact on airfield operations.

**Figures 5.1-11, 5.1-12, and 5.1-13** provide a comparison of the East Terminal Alternative and No Project Alternative for the 2010, 2015, and 2030 years of analysis. In addition, the Baseline Conditions 2005 CNEL contours are also shown for comparison. **Table 5-1.4** provides a comparison of the population and housing units within the CNEL contours. **Figures 5.1-14, 5.1-15, and 5.1-16** show TA65 contours for the East Terminal Alternative in 2010, 2015, and 2030, respectively. TA65 contours for the No Project Alternative are shown in previously referenced **Figures 5.1-8, 5.1-9, and 5.1-10** for 2010, 2015, and 2030, respectively.

As would be expected, the differences between the contours for the East Terminal Alternative versus the No Project Alternative are small, as both alternatives have a similar number of operations and a similar flight schedule for a given year of analysis. The primary differences in the noise contours for the same year of analysis are due to small variations in the time of day (i.e., daytime, evening, and nighttime periods in CNEL) of aircraft operations that result from delay levels estimated with the SIMMOD analysis. **Appendix C** provides the description of the SIMMOD analysis and results.

According to a detailed grid analysis of points spaced at 0.1 nautical mile intervals within the 60 CNEL, including noise sensitive uses such as schools, hospitals, places of worship, and historic sites, there are no locations that would experience a change of 1.5 CNEL or more within the 65 CNEL, or 3.0 or more within the 60 CNEL, due to the East Terminal Alternative as compared to the No Project Alternative for both 2010, 2015, and 2030. Therefore, the East Terminal Alternative would have a less than significant impact in terms of cumulative aircraft-induced noise exposure.

## **No Project Alternative**

Previously referenced **Figure 5.1-1** also provides a comparison of the 2010 and 2015 No Project Alternative CNEL contours with the Baseline 2005 conditions. **Figure 5.1-17**, provides a comparison of the 2015 and 2030 No Project Alternative CNEL contours with the Baseline 2005 contours. **Table 5-1.5** provides a comparison of the population and housing units within the CNEL contours. Previously referenced **Figures 5.1-8, 5.1-9, and 5.1-10** also show TA65 contours for the No Project Alternative in 2010, 2015, and 2030 respectively, for comparison to the Baseline Conditions 2005 shown in previously referenced **Figure 5.1-2**.

The growth in the CNEL contours from 2005 through 2030 is a result of the natural growth in aircraft operations that is forecast to occur.

Table 5-1.4

## Population and Housing Units within the East Terminal Alternative CNEL Contours

Decibel Level	2010 East Terminal CNEL		2010 No Project CNEL		Baseline 2005 CNEL	
	Population	Housing Units	Population	Housing Units	Population	Housing Units
60dB	<del>32944</del> <u>36,417</u>	<del>45004</del> <u>15,846</u>	<del>33834</del> <u>37,369</u>	<del>45406</del> <u>16,262</u>	<del>32717</del> <u>34,729</u>	<del>44992</del> <u>15,395</u>
65dB	<del>27909</del> <u>29,098</u>	<del>41376</del> <u>12,209</u>	<del>27384</del> <u>29,280</u>	<del>40959</del> <u>11,930</u>	<del>27067</del> <u>28,577</u>	<del>40893</del> <u>11,837</u>
70dB	<del>3803</del> <u>5,234</u>	<del>4817</del> <u>2,215</u>	<del>3289</del> <u>4,112</u>	<del>4680</del> <u>1,982</u>	<del>3547</del> <u>5,112</u>	<del>4784</del> <u>2,285</u>
75dB	<del>43</del> <u>128</u>	<del>8</del> <u>78</u>	<del>44</del> <u>138</u>	<del>9</del> <u>85</u>	<del>40</del> <u>91</u>	<del>6</del> <u>55</u>
	2015 East Terminal CNEL		2015 No Project CNEL		Baseline 2005 CNEL	
	Population	Housing Units	Population	Housing Units	Population	Housing Units
60dB	<del>39676</del> <u>40,985</u>	<del>47389</del> <u>17,436</u>	<del>39877</del> <u>41,320</u>	<del>47513</del> <u>17,621</u>	<del>32717</del> <u>34,729</u>	<del>44992</del> <u>15,395</u>
65dB	<del>28564</del> <u>30,647</u>	<del>44457</del> <u>13,004</u>	<del>28354</del> <u>30,570</u>	<del>41284</del> <u>12,866</u>	<del>27067</del> <u>28,577</u>	<del>40893</del> <u>11,837</u>
70dB	<del>3446</del> <u>5,147</u>	<del>4583</del> <u>1,950</u>	<del>3260</del> <u>4,784</u>	<del>4550</del> <u>1,844</u>	<del>3547</del> <u>5,112</u>	<del>4784</del> <u>2,285</u>
75dB	<del>223</del> <u>484</u>	<del>442</del> <u>320</u>	<del>225</del> <u>488</u>	<del>444</del> <u>323</u>	<del>40</del> <u>91</u>	<del>6</del> <u>55</u>
	2030 East Terminal CNEL		2030 No Project CNEL		Baseline 2005 CNEL	
	Population	Housing Units	Population	Housing Units	Population	Housing Units
60dB	<del>46774</del> <u>47,209</u>	<del>49728</del> <u>19,573</u>	<del>47144</del> <u>47,140</u>	<del>49956</del> <u>19,688</u>	<del>32717</del> <u>34,729</u>	<del>44992</del> <u>15,395</u>
65dB	<del>34494</del> <u>34,033</u>	<del>42813</del> <u>14,359</u>	<del>30770</del> <u>33,450</u>	<del>42185</del> <u>13,826</u>	<del>27067</del> <u>28,577</u>	<del>40893</del> <u>11,837</u>
70dB	<del>4527</del> <u>6,641</u>	<del>4694</del> <u>2,257</u>	<del>3673</del> <u>5,580</u>	<del>4528</del> <u>1,956</u>	<del>3547</del> <u>5,112</u>	<del>4784</del> <u>2,285</u>
75dB	<del>727</del> <u>913</u>	<del>475</del> <u>591</u>	<del>742</del> <u>900</u>	<del>466</del> <u>583</u>	<del>40</del> <u>91</u>	<del>6</del> <u>55</u>

Source: HNTB analysis using SANDAG GIS land use coverage and 2000 Census Block Demographics. This information does not represent significant new information and does not affect the significance determinations presented in the Draft EIR.

Table 5-1.3 5

**Population and Housing Units within the No Project Alternative CNEL Contours**

	<b>2010 No Project CNEL</b>		<b>Baseline 2005 CNEL</b>	
	Population	Housing Units	Population	Housing Units
60dB	<del>33834</del> <u>37,369</u>	<del>15406</del> <u>16,262</u>	<del>32717</del> <u>34,729</u>	<del>14992</del> <u>15,395</u>
65dB	<del>27384</del> <u>29,280</u>	<del>40959</del> <u>11,930</u>	<del>27067</del> <u>28,577</u>	<del>40893</del> <u>11,837</u>
70dB	<del>3289</del> <u>4,112</u>	<del>4680</del> <u>1,982</u>	<del>3547</del> <u>5,112</u>	<del>4784</del> <u>2,285</u>
75dB	<del>44</del> <u>138</u>	<del>9</del> <u>85</u>	<del>40</del> <u>91</u>	<del>6</del> <u>55</u>
	<b>2015 No Project CNEL</b>		<b>Baseline 2005 CNEL</b>	
	Population	Housing Units	Population	Housing Units
60dB	<del>39877</del> <u>41,320</u>	<del>47513</del> <u>17,621</u>	<del>32717</del> <u>34,729</u>	<del>14992</del> <u>15,395</u>
65dB	<del>28354</del> <u>30,570</u>	<del>41284</del> <u>12,866</u>	<del>27067</del> <u>28,577</u>	<del>40893</del> <u>11,837</u>
70dB	<del>3260</del> <u>4,784</u>	<del>4550</del> <u>1,844</u>	<del>3547</del> <u>5,112</u>	<del>4784</del> <u>2,285</u>
75dB	<del>225</del> <u>488</u>	<del>144</del> <u>323</u>	<del>40</del> <u>91</u>	<del>6</del> <u>55</u>
	<b>2030 No Project CNEL</b>		<b>Baseline 2005 CNEL</b>	
	Population	Housing Units	Population	Housing Units
60dB	<del>47144</del> <u>47,140</u>	<del>49956</del> <u>19,688</u>	<del>32717</del> <u>34,729</u>	<del>14992</del> <u>15,395</u>
65dB	<del>30770</del> <u>33,450</u>	<del>42485</del> <u>13,826</u>	<del>27067</del> <u>28,577</u>	<del>40893</del> <u>11,837</u>
70dB	<del>3673</del> <u>5,580</u>	<del>4528</del> <u>1,956</u>	<del>3547</del> <u>5,112</u>	<del>4784</del> <u>2,285</u>
75dB	<del>712</del> <u>900</u>	<del>466</del> <u>583</u>	<del>40</del> <u>91</u>	<del>6</del> <u>55</u>

Source: HNTB analysis using SANDAG GIS land use coverage and 2000 Census Block Demographics. This information does not represent significant new information and does not affect the significance determinations presented in the Draft EIR.

## 5.1.2 Supplemental Analysis of Aircraft Noise

This analysis considers the potential impact of aircraft noise to schools and sleep disturbance in residential areas, in order to supplement the cumulative noise exposure analysis by considering specific noise impacts.

### 5.1.2.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center. In the analysis of aviation noise, the Airport Land Use

Plan component of the Proposed Project does not affect the number of aircraft operations and therefore does not influence the noise analysis for aircraft operations.

Two specific supplemental analyses are conducted for this study:

1. In order to assess potential impacts to schools, time above specific noise thresholds due to aircraft operations is assessed for each alternative and year of analysis.
2. In order to assess potential sleep disturbance impacts, the number of nighttime flights above specific thresholds is assessed for each alternative and year of analysis.

The supplemental noise modeling that is used in this analysis is developed from the cumulative noise modeling that is discussed in Section 5.1.1, *Aircraft Cumulative Noise Exposure* and in [Appendix B](#). Single event noise results from a single aircraft operation or flyover. Single event noise can be measured using several metrics (e.g., maximum sound level (Lmax), sound exposure level (SEL), and time-above (TA) cumulative levels) as described in [Appendix B](#).

### **5.1.2.2 Regulatory Framework**

This study considers the potential impact of specific noise events (e.g., single event noise) in response to legal proceedings in the state of California, primarily resulting from the California Court of Appeal's ruling in *Berkeley Keep Jets over the Bay Committee vs. Board of Port Commissioners of the City of Oakland*. Per the ruling of the court, supplemental/single event analyses are used in addition to the evaluation of time-averaged cumulative noise exposure levels (as discussed in Section 5.1.1, *Aircraft Cumulative Noise Exposure*).

Also, the California Airport Land Use Planning Handbook is required to be used as a technical resource in the preparation of noise analysis for an EIR.<sup>5</sup> A standard application of cumulative noise exposure metrics is to predict the effects of increased noise resulting from proposed or projected physical or operational changes at an airport. Addressing these anticipated effects is one of the functions of environmental impact documents prepared for airport-related projects. The handbook states: "[N]ot reflected in [the] screening criteria is that noise increases of several decibels may also be significant in quieter environments (ones below DNL 60)."<sup>6</sup> The supplemental analysis of noise supports the evaluation of impact to specific uses that may not be fully understood when only considering cumulative noise exposure.

### **5.1.2.3 Significance Criteria**

As discussed in the following sections, the Proposed Project (Preferred Alternative) and its alternatives would have a significant supplemental noise impact if they result in:

- A substantial increase in the amount of time that aircraft-induced noise would affect classroom learning; or
- A substantial increase in the number of nighttime flight operations that produce exterior SELs sufficient to awaken an increasing proportion of the population.

As discussed in the preceding section, the California Court of Appeal's ruling in *Berkeley Keep Jets over the Bay Committee vs. Board of Port Commissioners of the City of Oakland* requires the analysis of supplemental/single event noise impacts. While no specific significance criteria exist, this study analyzes the supplemental noise impacts in good faith in order to provide results that are reliable and reasonable.

## **Schools**

Ongoing research is evaluating impacts to the learning ability of children due to aircraft noise exposure. However, none of the research has resulted in an accepted methodology or threshold of significance. A 1992 Federal Interagency Committee on Noise (FICON) study assessed the degree of speech

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<sup>5</sup> California Environmental Quality Act, Title 14, Chapter 3, Article 10, Section 15154.

<sup>6</sup> State of California Department of Transportation: Division of Aeronautics. 2002. Airport Land Use Planning Handbook, page 7-40.

interference (such as in a classroom) at various noise levels. Specifically, the FICON report acknowledged that learning would be decreased if classroom communication was disrupted by aircraft noise and that “some degree of indoor speech interference would be expected whenever exterior noise levels exceed 75 dB to 85 dB (windows open and windows closed).<sup>7</sup> Additional information on speech interference is included in [Appendix B](#).

As a means of evaluating and comparing noise levels at schools, this study calculates the amount of time during which noise levels exceed a specified range (i.e., time above levels) due to aircraft operations at SDIA, for each alternative and year of analysis. Then, assessment and comparison of this quantitative time above level data is used to determine if there would be a substantial change that would reasonably constitute a significant impact. For the purposes of this study, a significant impact to schools would be a substantial increase in the amount of time that aircraft-induced noise would affect classroom learning.

## **Sleep Disturbance**

Several studies have been undertaken to examine the relationship between a noise event and sleep disturbance, including awakenings.

In 1992 FICON examined existing aviation noise sleep disturbance studies.<sup>8</sup> Research as of that date did not find clear evidence that sleep disturbance resulted in adverse health effects. However, FICON did determine that sleep disturbance was considered undesirable and that it may be a result of aircraft noise exposure. FICON also found that much more research was required. In the interim FICON recommended a dose-response curve to predict the percent of people awakened by a single event noise level. Lastly, FICON recommended that a new Federal interagency committee be formed to identify and encourage further research. This committee is known as the Federal Interagency Committee on Aircraft Noise (FICAN).

Two studies of note were completed prior to FICAN publishing information regarding aviation noise and sleep disturbance: (1) the Fidell 1994 Study<sup>9</sup> and (2) U.K. Department of the Environment, Transport, and the Regions (DETR) Studies.<sup>10</sup> The Fidell study found that regardless of aircraft noise people spontaneously awake twice per night on average. In addition, Fidell found that awakenings were not related to the sum of the noise over an evening, but to the noise level of an individual event. The U.K. DETR Studies concluded that the normal rate of sleep disturbance was unlikely to increase when outdoor noise events were below 90 dB Sound Exposure Level (SEL).

In 1997, FICAN published a report to update the FICON finding based on the studies completed since 1992.<sup>11</sup> As a result of the research conducted, FICAN revised the dose-response curve as shown in [Figure B-9](#) of [Appendix B](#). To use this curve, exterior noise is adjusted to determine the indoor sound exposure level. Exterior noise would be reduced to reflect whether homes are insulated and whether the windows would be closed or open. FICAN stated that the curve reflects the upper limit of the data available and thus predicts the maximum percent of the population that is awakened. This curve is meant to be only to be applied to long time residents exposed to aviation noise.

Research into sleep disturbance is ongoing and additional studies have been published since the 1997 FICAN report. As the 1997 FICAN curve provides for a direct comparison between single event aircraft noise levels and the maximum probability of awakening using single event sound exposure levels (SEL), this study utilizes the 1997 FICAN curve as the basis of estimating the maximum population that would be awakened due to a specific aircraft noise event. By using SEL, the methodology can account for the total

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<sup>7</sup> Federal Interagency Committee on Noise (FICON). 1992. Federal Agency Review of Selected Airport Noise Analysis Issues. August.

<sup>8</sup> Federal Interagency Committee on Noise (FICON). 1992. Federal Agency Review of Selected Airport Noise Analysis Issues. August.

<sup>9</sup> Fidell, Sanford, et al. 1994. Noise-Induced Sleep Disturbance in Residential Settings, February.

<sup>10</sup> Ollerhead, J.B., C.J. Jones, R.E. Cadoux, A. Woodley, B.J. Atkinson, J.A. Horne, F. Pankhurst, L. Reyner, K.I. Hume, F. Van, A. Watson, I.D. Diamond, P. Egger, D. Holmes, and J. McKean (1992). Report of a Field Study of Aircraft Noise and Sleep Disturbance. London: Department of Safety, Environment and Engineering.

<sup>11</sup> Federal Interagency Committee on Aviation Noise (FICAN). 1997. Effects of Aviation Noise on Awakenings from Sleep. June.

sound energy during the duration of a nighttime event (as opposed to a maximum sound level measure, without consideration of duration). This is similar to the methodology developed by the Port of Oakland in response to *Berkeley Keep Jets over the Bay Committee vs. Board of Port Commissioners of the City of Oakland*.<sup>12</sup>

**Table 5-1.6** shows the relationship between exterior SEL values and probability for awakenings. This table was developed by reducing the exterior SEL value by the appropriate Noise Level Reduction (NLR) to arrive at the interior SEL value and then using the dose-response curve to determine the maximum probability of awakenings. Note that the percent of awakening determined from the FICAN curve is considered conservative, as it is a maximum probability. Also, the FICAN analysis does not account for cumulative events because the dose-response curve does not take into account the number of events. A standard to evaluate the impact of cumulative events has not been established.

For the purposes of this study, a significant impact in regards to sleep disturbance would be a substantial increase in the number of nighttime flight operations that produce exterior SELs sufficient to awaken an increasing proportion of the population. This study assesses and compares quantitative data (i.e., the number of nighttime flight operations at specific SELs), to determine if there would be a substantial change that would reasonably constitute a significant impact.

Table 5-1.6

**Exterior SEL and Maximum Percent of Awakenings**

Condition	Noise Level Reduction (NLR)	Exterior SEL (dB)					
		90 dB		85 dB		80 dB	
		Interior SEL	Maximum Percent Awakened	Interior SEL	Max Percent Awakened	Interior SEL	Max Percent Awakened
Windows closed, construction provides for above average attenuation	30 dB	60 dB	3.8%	55 dB	2.8%	50 dB	1.9%
Windows closed, construction provides for average attenuation	25 dB	65 dB	5.1%	60 dB	3.8%	55 dB	2.8%
Windows open	15 dB	75 dB	7.9%	70 dB	6.4%	65 dB	5.1%

Sources: Interpretation of 1997 FICAN dose-response curve given typical NLR construction.

**5.1.2.4 Environmental Setting**

**Schools:** **Table 5-1.7** shows the existing amount of time that noise levels exceed certain levels at schools in the vicinity of SDIA. Time above levels (in minutes) are shown for noise levels ranging from 65 to 95 dB. Note that typical school construction would be expected to provide for exterior to indoor attenuation of 25 to 30 dB, resulting in interior noise levels of between 35 and 70 dB.

As the data includes all daytime flights (between 7 a.m. and 7 p.m.), the results are conservative as most school days are somewhat shorter. However, that data does provide a comprehensive evaluation of the time period when many school activities occur, including after-school functions.

The data shows that most schools in the vicinity of SDIA do not experience substantial periods of time with exterior noise levels above 80 dB, which equates to a typical interior noise level of about 55 dB. According to **Figure B-8** in **Appendix B**, a steady 55 dB sound level is the threshold above which sentence intelligibility would begin to degrade.

<sup>12</sup> 111 Cal.Rptr.2d 598, 2001.

Sleep Disturbance: **Figures 5.1-18 and 5.1-19** show contours for the number of aircraft operations above 80 and 90 SEL, respectively, for the Baseline Conditions 2005. These contours show areas that are affected by an approximate number of aircraft overflights that produce noise levels at or above a specific SEL threshold. The contours are referenced as NA80 and NA90 (i.e., Number Above a specified SEL), representing the number of aircraft events above 80 SEL and 90 SEL, respectively. As discussed in **Appendix B**, SEL normalizes the sound energy from an aircraft flight to a duration of one second. Therefore, SEL has a larger magnitude than the maximum A-weighted level for an event that lasts longer than one second. In fact, for most aircraft overflights, the SEL is on the order of 7 to 12 dB higher than the maximum sound level.

**Figure 5.1-18** shows that most areas within the 60 CNEL contour of the Baseline Conditions 2005 (see Section 5.1.1.4, *Environmental Setting*, and **Figure 5.1-1**) experience, on an average day, from between 10 to 30 nighttime aircraft events with SELs greater than 80 dB (i.e., NA80). A comparatively smaller area experiences 10 to 30 nighttime events above 90 SEL (i.e., NA90), as shown in **Figure 5.1-18**. Many of the nighttime events are arrivals and departures that occur just after the beginning of the nighttime period at 10 p.m. and just before the end of the nighttime period at 7 a.m. (e.g., early morning departures). The existing curfew on nighttime departures between 11:30 p.m. and 6:30 a.m. (and Stage 2 departures from 10:00 p.m. to 7:00 a.m.) is included in this analysis.<sup>13</sup>

The number of event contours is derived from INM noise calculations on a grid with points at 0.1 nautical mile intervals.

### **5.1.2.5      Impact Analysis**

This section provides the potential supplemental noise impacts associated with the Proposed Project (Preferred Alternative) and its alternatives.

#### **Proposed Project - With and Without Parking Structure**

Aircraft noise analysis is limited to the Proposed Airport Implementation Plan as the land uses within the Proposed Airport Land Use Plan would have a less than significant impact on airfield operations. Specifically, while additional cargo facilities are included with the North Area projects, aircraft operations, including nighttime cargo operations, are not forecasted to increase for a given year due to the Proposed Airport Land Use Plan.

The Proposed Airport Implementation Plan would have the following potential impact.

Schools: **Table B-811** in **Appendix B** provides a comparison of time above exterior noise levels for schools with the Proposed Project, as compared to Baseline Conditions 2005 and future conditions with the No Project Alternative.

When comparing the Proposed Project (Preferred Alternative) and the Baseline 2005 data, the largest increase in TA65 is 50.8 minutes, while the largest difference between the Baseline 2005 and the No Action 2030 is 40.6 minutes. The largest increase in TA65 when comparing the Proposed Project (Preferred Alternative) and the No Project levels in 2030 is 10.2 minutes. In the TA75 category, the largest difference between the Proposed Project (Preferred Alternative) and the Baseline 2005 is 16.3 minutes, while 13.9 is the difference between the Baseline 2005 and the No Action 2030. The largest increase between the Proposed Project (Preferred Alternative) and the No Action 2030 is 2.8 minutes. For the TA80 category, the largest difference between the Proposed Project (Preferred Alternative) and the Baseline 2005 is 9.6 minutes, while the largest difference between the Baseline 2005 and the No Action Project 2030 is 8.8 minutes. The largest difference between the Proposed Project (Preferred Alternative) and No Action Project 2030 is 1.1 minutes.

In consideration of the small differences in time above levels at schools between the Proposed Project and the No Action Project 2030, there is not a substantial change in noise at schools and there is less than a significant impact.

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<sup>13</sup> See [http://www.san.org/authority/environmental\\_affairs/airport\\_noise/airport\\_use\\_regulations.asp](http://www.san.org/authority/environmental_affairs/airport_noise/airport_use_regulations.asp).



Table 5-1.7

## Time Above Exterior Noise Levels for Schools in Baseline Conditions 2005

School Name	Minutes above Exterior Noise Level in dB (minutes)					
	65	75	80	85	90	95
Baker Elementary	0.20	0.00	0.00	0.00	0.00	0.00
Balboa City	49.20	23.00	12.00	4.70	0.20	0.00
Balboa Elementary YR	0.00	0.00	0.00	0.00	0.00	0.00
Barnard Elementary	49.60	3.50	0.50	0.00	0.00	0.00
Brooklyn Elementary	55.70	11.60	0.70	0.00	0.00	0.00
Burbank Elementary	0.00	0.00	0.00	0.00	0.00	0.00
Cabrillo Elementary	0.30	0.00	0.00	0.00	0.00	0.00
Chancellor William McGill School of Success	8.50	0.10	0.00	0.00	0.00	0.00
Charter School of San Diego	6.40	0.00	0.00	0.00	0.00	0.00
Chavez (Cesar) Elementary	0.00	0.00	0.00	0.00	0.00	0.00
Chollas/Mead Elementary	40.20	0.00	0.00	0.00	0.00	0.00
City Tree Christian	42.00	4.50	0.20	0.00	0.00	0.00
Correia Middle	64.80	16.10	3.40	0.50	0.00	0.00
Cortez Hill Academy	1.20	0.10	0.00	0.00	0.00	0.00
Creative, Performing, and Media Arts	4.10	0.00	0.00	0.00	0.00	0.00
Dana Middle	27.90	0.40	0.00	0.00	0.00	0.00
Dewey Elementary	69.20	6.00	0.60	0.00	0.00	0.00
El Toyon Elementary	0.00	0.00	0.00	0.00	0.00	0.00
Emerson/Bandini Elementary	0.00	0.00	0.00	0.00	0.00	0.00
Emmanuel Arts Academy	0.30	0.00	0.00	0.00	0.00	0.00
Garfield High	29.30	0.40	0.10	0.00	0.00	0.00
Gompers Secondary	2.40	0.00	0.00	0.00	0.00	0.00
Harborside	3.60	0.10	0.00	0.00	0.00	0.00
High Tech High	70.40	13.40	2.50	0.20	0.00	0.00
High Tech International	60.80	5.10	0.70	0.00	0.00	0.00
High Tech Middle	72.70	16.30	3.10	0.40	0.00	0.00
Holly Drive Leadership Academy	16.60	0.00	0.00	0.00	0.00	0.00
Horton Elementary	20.20	0.00	0.00	0.00	0.00	0.00
Integrity Charter	0.00	0.00	0.00	0.00	0.00	0.00
Johnson Elementary	0.30	0.00	0.00	0.00	0.00	0.00
Kennedy Elementary	0.80	0.00	0.00	0.00	0.00	0.00
Kimbrough (Jack) Elementary	0.80	0.00	0.00	0.00	0.00	0.00
King (Martin Luther, Jr.) Elementary	1.70	0.00	0.00	0.00	0.00	0.00
King/Chavez Charter	0.10	0.00	0.00	0.00	0.00	0.00
KIPP Adelante Preparatory Academy	20.70	0.40	0.10	0.00	0.00	0.00
Knox Elementary	0.20	0.00	0.00	0.00	0.00	0.00
Logan Elementary	0.10	0.00	0.00	0.00	0.00	0.00
Loma Portal Elementary	72.10	25.30	10.60	2.30	0.50	0.10

Table 5-1.7  
**Time Above Exterior Noise Levels for Schools in Baseline Conditions 2005**

School Name	Minutes above Exterior Noise Level in dB (minutes)					
	65	75	80	85	90	95
Memorial Academy of Learning & Technology	0.00	0.00	0.00	0.00	0.00	0.00
Metro Region Community Day Schools	2.10	0.20	0.00	0.00	0.00	0.00
Monarch Elementary Community Day	12.90	0.30	0.10	0.00	0.00	0.00
Montessori School of San Diego	72.00	1.70	0.00	0.00	0.00	0.00
Mt. Erie Christian Academy	0.50	0.00	0.00	0.00	0.00	0.00
Museum	5.40	0.30	0.10	0.00	0.00	0.00
Nativity Prep Academy	19.70	0.10	0.00	0.00	0.00	0.00
New Horizons Elementary	0.00	0.00	0.00	0.00	0.00	0.00
Ocean Beach Elementary	50.60	7.90	2.10	0.50	0.00	0.00
Our Lady's School	0.80	0.10	0.00	0.00	0.00	0.00
Perkins Elementary	0.00	0.00	0.00	0.00	0.00	0.00
Point Loma Nazarene University	0.00	0.00	0.00	0.00	0.00	0.00
Point Loma Senior High	67.60	20.10	6.20	1.40	0.20	0.00
Promise Charter	0.70	0.00	0.00	0.00	0.00	0.00
Roosevelt Middle	0.10	0.00	0.00	0.00	0.00	0.00
Rowan Elementary	1.00	0.00	0.00	0.00	0.00	0.00
Sacred Heart Academy	52.10	7.60	2.20	0.60	0.00	0.00
San Diego Academy	0.00	0.00	0.00	0.00	0.00	0.00
San Diego City College	26.10	0.40	0.10	0.00	0.00	0.00
San Diego Continuing Education	0.30	0.00	0.00	0.00	0.00	0.00
San Diego Cooperative Charter	1.20	0.00	0.00	0.00	0.00	0.00
San Diego Senior High	42.00	2.60	0.20	0.00	0.00	0.00
Sherman Elementary	0.60	0.00	0.00	0.00	0.00	0.00
Silver Gate Elementary	11.80	0.10	0.00	0.00	0.00	0.00
St. Augustine High School	0.00	0.00	0.00	0.00	0.00	0.00
St. Charles Borromeo Academy	89.50	25.20	6.60	1.30	0.10	0.00
St. Jude Academy	0.00	0.00	0.00	0.00	0.00	0.00
St. Rita's	27.90	0.10	0.00	0.00	0.00	0.00
Sunset View Elementary	0.20	0.00	0.00	0.00	0.00	0.00
Valencia Park Elementary	24.80	0.00	0.00	0.00	0.00	0.00
Warren-Walker School, Inc.	10.30	0.00	0.00	0.00	0.00	0.00
Washington Elementary	36.20	1.00	0.20	0.00	0.00	0.00
Webster Elementary	0.40	0.00	0.00	0.00	0.00	0.00

Source: HNTB analysis.

Sleep Disturbance: **Figures 5.1-20 through 5.1-25** show the change in the number of nighttime aircraft operations above 80 SEL with the Proposed Project (Preferred Alternative), as compared to existing CNEL values and future conditions under the No Project Alternative. **Figures 5.1-26 through 5.1-31** provide a similar comparison for noise levels above 90 SEL.

As can be seen in **Figures 5.1-20, 5.1-22, 5.1-24, 5.1-26, 5.1-28, and 5.1-30** the change in the number of nighttime events at 80 or 90 SEL is most pronounced when comparing the Proposed Project (Preferred Alternative) with the Baseline Conditions 2005. This is a result of the natural growth in aircraft operations that is forecast to occur at SDIA (without change to the current departure curfew discussed in Section 5.1.2.4, *Supplemental Analysis of Aircraft Noise Environmental Setting*). By comparison, the difference in the number of nighttime events above 80 or 90 SEL with the Proposed Project (Preferred Alternative) versus the future conditions under the No Project Alternative (see **Figures 5.1-21, 5.1-23, 5.1-25, 5.1-27, 5.1-29 and 5.1-31**) shows that residential areas would typically experience small variations in the number of nighttime flights (between a reduction of up to 5 flights and an increase of up to 5 flights). ~~Because the forecasted future year flight schedules for the alternatives are similar and have the same number of operations, and as the existing nighttime departure curfew would remain in effect,<sup>14</sup> this result is logical and reflects the fact that small variations in nighttime activity would occur due to the effects of delay throughout the day. This result is because the existing nighttime departure curfew would remain in effect<sup>14</sup> and because there will be the same number of operations through the year 2020 and after that date only a slight increase in operations, resulting in small variation in nighttime activity due to the effects of delay throughout the day. Accordingly, there is not a substantial change in noise affecting sleep and therefore no significant impact.~~

### **East Terminal Alternative - With and Without Parking Structure**

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the Proposed Airport Land Use Plan. See Chapter Four, Section 4.2.1 *Airport Land Use Plan* for a detailed explanation. Therefore the East Terminal Alternative includes the Proposed Airport Land Use Plan. However, the aircraft noise analysis is limited to the Airport Implementation Plan Alternative as the land uses within the Airport Land Use Plan would have a less than significant impact on airfield operations.

The East Terminal Alternative would have the following potential impacts.

Schools: **Table B-912** in **Appendix B** provides a comparison of time above exterior noise levels for schools with the East Terminal Alternative, as compared to Baseline Conditions 2005 and future conditions with the No Project Alternative.

When comparing the East Alternative and the Baseline 2005 data, the largest increase in TA65 is 49.9 minutes. The largest difference between the Baseline 2005 and the No Action 2030 is 40.6 minutes. The largest increase in TA65 when comparing the East Alternative and the No Project levels in 2030 is 9.3 minutes. In the TA75 category, the largest difference between the East Alternative and the Baseline 2005 is 16.4 minutes, while 13.9 minutes is the difference between the Baseline 2005 and the No Action 2030. The largest increase between the East Alternative and the No Action 2030 is 2.5 minutes. For the TA80 category, the largest difference between the East Alternative and the Baseline 2005 is 9.6 minutes, while the largest difference between the Baseline 2005 and the No Action 2030 is 8.8 minutes. The largest difference between the East Alternative and No Action 2030 is 0.8 minutes.

In consideration of the small differences in time above levels at schools between the East Terminal Alternative and the No Action 2030, there is not a substantial change in noise at schools and there is less than a significant impact.

Sleep Disturbance: **Figures 5.1-32 through 5.1-37** show the change in the number of nighttime aircraft operations above 80 SEL with the East Terminal Alternative, as compared to existing CNEL values and future conditions under the No Project Alternative. **Figures 5.1-38 through 5.1-43** provide a similar comparison, except for noise levels above 90 SEL.

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<sup>14</sup> See [http://www.san.org/authority/environmental\\_affairs/airport\\_noise/airport\\_use\\_regulations.asp](http://www.san.org/authority/environmental_affairs/airport_noise/airport_use_regulations.asp)

As can be seen in [Figures 5.1-32, 5.1-34, 5.1-36, 5.1-38, and 5.1-42](#), the change in the number of nighttime events at 80 or 90 SEL is most pronounced when comparing the East Terminal Alternative with the Baseline Conditions 2005. This is a result of the natural growth in aircraft operations that is forecast to occur at SDIA (without change to the current departure curfew discussed in Section 5.1.2.4 *Supplemental Analysis of Noise, Environmental Setting*). By comparison, the difference in the number of nighttime events above 80 or 90 SEL with the East Terminal Alternative versus the future conditions under the No Project Alternative (see [Figures 5.1-33, 5.1-35, 5.1-37, 5.1-39, 5.1-41, and 5.1-43](#)) shows that residential areas would typically experience small variations in the number of nighttime flights (between a reduction of up to 5 flights and an increase of up to 5 flights). Because the forecasted future year flight schedules for the alternatives are similar and have the same number of operations through the year 2020, and as the existing nighttime departure curfew would remain in effect,<sup>15</sup> this result is logical and reflects the fact that small variations in nighttime activity would occur due to the effects of delay throughout the day. Accordingly, there is not a substantial change in noise affecting sleep and there is a less than significant impact.

### **No Project Alternative**

Schools: [Table B-4012](#) in [Appendix B](#) provides a comparison of time above exterior noise levels for schools with the No Project Alternative, as compared to Baseline Conditions 2005.

The largest increase for TA65 between the Baseline 2005 and No Project 2030 was 40.6 minutes; the largest increase for TA75 between the Baseline 2005 and No Project 2030 was 13.9 minutes; and the largest increase for TA80 between Baseline 2005 and No Project 2030 was 8.8 minutes.

Accordingly, there is not a substantial change in noise at schools and there is a less than significant impact.

Sleep Disturbance: [Figures 5.1-44 through 5.1-46](#) show the NA80 contours for the No Project Alternative in 2010 and 2015, respectively. [Figures 5.1-47 through 5.1-49](#) provide a similar evaluation for the NA90 contours.

[Figures 5.1-50 through 5.1-52](#) show the change in the number of nighttime aircraft operations above 80 SEL with the No Project Alternative, as compared to existing CNEL values and future conditions under the No Project Alternative. [Figures 5.1-53 through 5.1-55](#) provide a similar comparison, except for noise levels above 90 SEL. The figures show a pronounced change in the number of nighttime events at both NA80 and NA90 levels. This is a result of the natural growth in aircraft operations that is forecast to occur at SDIA.

Most of this growth in operations is occurring during the times shortly after the beginning of the nighttime period at 10 p.m. and just before its end at 7 a.m. Because the existing curfew on departure operations would remain in effect from 11:30 p.m. to 6:30 a.m. (and Stage 2 departures from 10:00 p.m. to 7:00 a.m.), residents near SDIA would remain protected from nighttime departure noise (which are typically louder than arrivals) during times when most people are sleeping. Accordingly, there is not a substantial change in noise affecting sleep and there is a less than significant impact.

## **5.1.3 Surface Transportation Noise**

The following sections provide the analysis specific to vehicular traffic.

### **5.1.3.1 General Methodology and Approach**

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program

<sup>15</sup> See [http://www.san.org/authority/environmental\\_affairs/airport\\_noise/airport\\_use\\_regulations.asp](http://www.san.org/authority/environmental_affairs/airport_noise/airport_use_regulations.asp) City of San Diego, General Plan and Progress Guide. 1989.

level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center. For surface traffic the noise analysis is affected by the Proposed Airport Land Use Plan and traffic assumed for the improvements associated with the Proposed Airport Land Use Plan are analyzed within the Proposed Project and the East Terminal Alternative.

To assist in determining existing noise levels and potential noise impacts, a noise monitoring survey was conducted along the project site. Short-term noise measurement sites were selected to represent frequent use areas, acoustical equivalence areas, or to calibrate the noise model (i.e., the sites were clear of major obstructions between the source and receiver as well as reflecting building/wall surfaces).

Noise measurements were conducted using a Larson-Davis Laboratories Model 700 (S.N. 2132) integrating sound level meter equipped with a Type 2551 1/2-inch pre-polarized condenser microphone with pre-amplifier. When equipped with this microphone, the sound level meter meets the current American National Standards Institute Standard for a Type 1 sound level meter. The sound level meter was calibrated before and after each measurement and the measurements were conducted with the microphones positioned five feet above the ground.

The results of the noise monitoring survey were used as input for the FHWA TNM 2.5 traffic noise prediction model (FHWA 204). The model was used to determine existing and future peak hour LEQ and CNEL noise levels. The TNM noise model accepts as input the number and types of vehicles on the roadway, vehicle speeds, and physical characteristics of the road and topography; as well as receiver and noise barrier heights and locations. To verify the input used in the noise model, the same traffic volume and vehicle composition ratios counted during the noise measurements were used with vehicle speeds ranging from 25 to 45 mph along the various City of San Diego roads and the posted speed limit of 65 mph on the freeways. With these speeds the modeled noise levels are within two dBA of the measured noise levels at most of the noise measurement sites, which generally confirm the input, used for the noise model. However, at two sites the measured noise levels were six dBA higher, and at one site 12 dBA higher than the modeled noise levels. This was due to either aircraft or train noise that significantly contributed to the measured noise levels at these sites.

To determine the peak hour noise levels and the CNEL, the traffic volumes, vehicle travel speeds and classifications for various roads used in the noise model were obtained from the project's traffic study (HNTB 2006a) and communications with the traffic engineer (HNTB 2006b). A relationship between the peak hour levels and the CNEL was used to develop a factor for determining future daily levels. The estimated LEQ for road traffic was estimated by assuming that nine percent of the average daily traffic occurred during the peak hour. The typical range of occurrence during the peak hour falls between approximately 8 percent and 11 percent.

### **5.1.3.2 Regulatory Framework**

This analysis of surface transportation-related noise addresses the City of San Diego's regulatory framework because SDCRAA does not have an adopted framework for evaluating off-Airport surface transportation noise impacts and because the affected streets and intersections are within the City of San Diego.

Noise levels in this report are evaluated in terms of the noise peak hour average sound level. The City evaluates noise levels in terms of the CNEL; therefore, noise levels in this section also are evaluated in terms of the CNEL.

The City of San Diego has established exterior noise guidelines in the Transportation Element of its

adopted General Plan.<sup>16</sup> These guidelines identify compatible exterior noise levels for various land use types, and are further explained in the Significance Criteria section.

### **5.1.3.3 Significance Criteria**

Noise levels in this report are evaluated in terms of the noise peak hour average sound level. The hourly average sound level ( $L_{EQ(h)}$ ) is the noise descriptor typically used by the Federal Highway Administration (FHWA) and California Department of Transportation (Caltrans) when evaluating traffic noise. The City of San Diego evaluates noise levels in terms of the CNEL. Therefore, noise levels are also evaluated in terms of the CNEL.

#### **City of San Diego Noise Criteria**

The City of San Diego has established exterior noise guidelines in the Transportation Element of the City's adopted General Plan (City of San Diego 1989). These guidelines identify compatible exterior noise levels for various land use types. Exterior noise levels at outdoor usable areas should not exceed a CNEL of 65 dBA for residential, hotel and school land uses. Outdoor usable areas do not include residential front yards or balconies, unless the areas such as balconies are part of required usable open space calculation for multi-family units. Exterior noise levels for office uses should not exceed 70 dBA CNEL and retail uses should not exceed a CNEL of 75 dB. The City's land use compatibility chart for various land uses and noise levels is depicted in [Table 5-1.8](#).

If the ambient noise level is currently at or exceeds the thresholds for traffic noise described above and project noise levels would result in a less than three dBA increase, then the impact is not considered significant (City of San Diego 2004).

#### **FHWA Noise Criteria**

In accordance with FHWA regulations, a highway traffic noise impact occurs when either one of the following conditions is met: (1) the predicted traffic noise levels associated with a project alternative would approach or exceed the FHWA established noise abatement criteria; or (2) the predicted traffic noise levels would substantially exceed the existing noise levels. These criteria are discussed in greater detail below.

The FHWA considers a highway traffic noise impact to occur when the project results in a substantial noise increase or when the predicted noise levels approach or exceed Noise Abatement Criteria (NAC) specified in the regulation. Title 23, Part 772 of the Code of Federal Regulations does not specifically define what constitutes a substantial increase or the term approach; rather, it leaves interpretation of these terms to the states. Caltrans considers the noise increase is substantial when the predicted future noise level exceeds the existing noisiest hourly average level by 12 dBA or more. Caltrans considers "approach" to mean one dBA lower than the NAC. FHWA and Caltrans define an impact for highway projects by comparison to the existing noise levels and to the noise abatement criteria discussed below—not by comparison to the No Build Alternative.

FHWA NAC categorizes different activities and land uses for the purposes of assessing noise impacts, as shown in [Table 5-1.9](#). These criteria are based on the peak hour (noisiest)  $L_{EQ}$  which regularly occurs during a 24-hour period. The peak hour  $L_{EQ}$  (defined in this study as the traffic characteristics which yield the worst hourly traffic noise impact on a regular basis) varies at representative receivers adjacent to the project site. This peak hour condition generally corresponds to the highest traffic volume which the road can sustain at Level of Service (LOS) C. LOS C is considered an acceptable quality of service, and also has the noisiest mix of high traffic volumes and high speeds. Vehicles make less noise at lower speeds. Therefore, when deteriorating traffic flow conditions are substantial, there would be a worsening of LOS, consequently resulting in a reduction in the associated road traffic noise levels due to slower vehicle speeds. The federal noise abatement criteria for outdoor noise exposure are typically applied where frequent human use occurs at facilities such as swimming pools and common use areas at multi-family residences, and the backyards of single-family homes.

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<sup>16</sup> City of San Diego, Draft Significance Determination Thresholds. November 2004.

Table 5-1.8  
**City of San Diego Noise Land Use Compatibility Chart**

Land Use	Annual Community Noise Equivalent Level (dBA)					
	50	55	60	65	70	75
Outdoor amphitheaters						
Schools, libraries						
Nature preserves, wildlife preserves						
Residential single-family, multi-family, mobile homes, transient housing						
Retirement homes, intermediate care facilities, convalescent homes						
Hospitals						
Parks, playgrounds						
Office buildings, business and professional						
Auditoriums, concert halls, indoor arenas, churches						
Riding stables, water recreation facilities						
Outdoor spectator sports, golf courses						
livestock farming, animal breeding						
Commercial-retail, shopping centers, restaurants, movie theaters						
Commercial-wholesale, industrial manufacturing, utilities						
Agriculture (except livestock), extractive industry, farming						
Cemeteries						

Source: City of San Diego Progress Guide and General Plan (Transportation Element), 1989.

Table 5-1.9  
**FHWA Noise Abatement Criteria**

Activity Category	Hourly A-Weighted Sound Level dBA, L <sub>EQ</sub> (h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

**Thresholds of Significance**

Noise impacts will be considered significant if any of the following occur as a result of the proposed project:

1. If, as a direct result of the project, noise levels for any existing development will exceed the noise levels considered compatible for that use as previously identified at noise sensitive areas.
2. If, as a direct result of the project, noise levels which are currently at or already exceed the levels considered compatible for that use are increased by three dBA CNEL or more at noise sensitive areas.
3. If, as a direct result of the project, the peak hour L<sub>EQ</sub> noise level noise level would substantially exceed the existing noise level (i.e., increase by 12 dBA L<sub>EQ</sub>, or more) at noise sensitive areas.

**5.1.3.4 Existing Conditions**

The primary existing sources of noise in the project area are aircraft from SDIA, vehicular traffic on various roads, train noise, as well as noise associated with nearby industrial and commercial uses.

**Ambient Noise Monitoring**

Eight noise measurements were conducted to assist in determining the existing noise level along various roads near the site. The locations were selected to obtain existing noise levels adjacent to access roads and existing residential areas most likely to be impacted by increase in traffic due to project implementation.

The noise measurement locations are identified as Sites 1 through 8 in [Figure 5.1-56](#) (Noise Measurement Locations). The contribution of the aircraft noise at each receptor is highly dependent on its location relative to the flight paths for arriving and departing aircraft and the noise level of the road traffic. At Sites 1, 3, 4, 7, and 8 the primary noise source during the noise measurements was the adjacent road traffic. At Site 2 the primary noise sources were both traffic noise and train noise. At Site 5 the primary noise source was mostly aircraft noise. At Site 6 the primary noise sources were traffic noise and aircraft noise. The measured hourly average noise levels range from 68 to 74 dBA at the noise measurement sites. The results of the noise measurements are depicted in [Table 5-1.10](#).



Table 5-1.10  
**Measured Average Noise Levels and Concurrent Traffic Volumes**

Site	Description	Date/Time	L <sub>EQ</sub> <sup>1</sup> (dBA)	Cars	MT <sup>2</sup>	HT <sup>3</sup>
1	Harbor Dr., 70' to center line	3/8/06 11:55 a.m. to 12:15 p.m.	69	710	31	3
2	Washington Ave., 40' to center line	3/8/06 12:35 p.m. to 12:55 p.m.	73	336	13	10
3	Kettner Blvd., 30' to center line	3/8/06 10:15 a.m. to 10:35 a.m.	74	447	10	4
4	Pacific Highway, 60' to center line	3/8/06 7:40 a.m. to 8:00 a.m.	71	363	21	12
5	Palm Ave., 30' to center line	3/8/06 10:55 a.m. to 11:15 a.m.	72	51	14	1
6	Kettner Blvd., 35' to center line	3/8/06 8:10 a.m. to 8:30 a.m.	76	346	6	1
7	Hawthorn St., 40' to center line	3/8/06 9:10 a.m. to 9:30 a.m.	69	587	8	2
8	Grape Street, 35' to center line	3/8/06 8:40 a.m. to 9:00 a.m.	68	318	9	0

Notes: <sup>1</sup>Equivalent continuous A-weighted sound pressure level; <sup>2</sup>Medium trucks; <sup>3</sup>Heavy trucks

Source: Helix Environmental Planning, Inc.

### 5.1.3.5 Future Conditions

This section discusses the affected baseline environment regarding road traffic noise, includes tables that show the baseline data at receptors sensitive to this noise, and provides modeled road traffic noise impact data for each of the alternatives at those receptors. Traffic noise impacts were modeled for the existing conditions (2005) with the five alternatives for the years 2010 through the year 2030.

The prediction of future traffic noise levels and the significance of potential noise impacts at noise sensitive land uses adjacent to the project site were assessed by comparing existing and future predicted noise levels along various road segments and at noise sensitive uses using the TNM 2.5 noise model (see [Figure 5.1-57](#)). Noise sensitive receptors in the area include residential and hotel uses. Some of these uses are located near roadways in the study area used by airport-related vehicles.

Residential land uses are located along Kettner Boulevard between Laurel Street and Grape Street, Laurel Street between Kettner Boulevard and India Street, Hawthorn Street between Pacific Highway and I-5, Grape Street between Columbia Street and I-5, and in the area of India Street along the north side of I-5. The locations of these receptor sites were previously shown in [Figure 5.1-56](#).

Road traffic noise was assessed by comparing the existing noise levels to those of the various future alternatives, in terms of the peak hour L<sub>EQ</sub> (see [Tables 5-1.11](#) and [5-1.12](#)) and the CNEL (see [Tables 5-1.13](#) and [5-1.14](#)). All comparisons to Existing Conditions are provided for informational purpose, the determination of impact is based on the comparison for the future conditions with and without the Proposed Project. The data input sheets used to calculate the noise levels are included in [Appendix B](#).

#### No Project Alternative

The No Project Alternative assumes that no Airport Land Use Plan would be developed and only projects currently included in the Airport's Capital Improvement Program Project list would be constructed. Aircraft operations would be handled by the existing airfield system, but with no new terminal facilities.

The road traffic noise levels shown in [Table 5-1.10](#) indicate that the peak hour noise level would increase by up to 3.2 dBA L<sub>EQ</sub> under the No Project Alternative. This information is provided for informational purposes only. This 3.2-dBA increase would occur in 2025 at Pacific Highway between Laurel and Hawthorn, a street segment bordered by commercial (including hotel) and industrial uses. For the other

Table 5-1.11

## Peak Hour Road Traffic Noise Level Increase by Alternative Compared to Existing (2005) Condition

Roadways	2005 L <sub>EQ</sub> in dBA at 50 Feet to Center Line of Road	Increase in dBA L <sub>EQ</sub> Compared to Existing (2005) Conditions (at 50 Feet to Center Line of Road)														
		No Project			Proposed Project Implementation Plan with Structure			Proposed Project Implementation Plan without Structure			East Terminal Alternative Implementation Plan with Structure			East Terminal Alternative Implementation Plan without Structure		
		2010	2015	2030	2010	2015	2030	2010	2015	2030	2010	2015	2030	2010	2015	2030
<b>North Harbor Drive</b>																
West of NTC	70.8	0.4	1	2.5	0.4	1	2.6	0.4	1	2.6	0.4	1	2.6	0.4	1	2.6
NTC - Spanish Landing	71.7	0.6	1	2.4	0	0.4	1.9	0.1	0.5	1.9	0.6	1.1	2.6	0.6	1.1	2.6
Spanish Landing - T2 Access	70.7	0.9	1.3	2.4	1	1.4	2.5	1	1.3	2.3	1	1.4	2.6	1	1.4	2.6
T2 Access - Harbor Island	73.1	0.2	0.7	1.5	0.4	1	2	0.4	0.9	1.8	0.2	0.8	1.7	0.2	0.8	1.7
Harbor Island - T1 Access	73.4	0.1	0.4	0.9	0.5	0.9	1.6	0.5	0.8	1.4	0.5	0.8	1.5	0.5	0.8	1.5
T1 Access - Winship	74.2	0.4	0.8	1.3	0.6	1	1.7	0.6	0.9	1.5	-0.2	0.2	1	-0.2	0.2	1
Winship - Rental Car Rd	74.3	0.4	0.8	1.3	0.5	0.9	1.6	0.5	0.9	1.5	-0.1	0.3	1	-0.1	0.3	0.9
Rental Car Rd - Laurel	77.7	0.2	0.7	1.1	0.2	0.7	1.3	0.2	0.7	1.3	0.2	0.7	1.3	0.2	0.7	1.3
Laurel - Hawthorn	74.1	0.2	0.6	1.3	0.1	0.6	1.5	0.1	0.6	1.4	0.1	0.6	1.4	0.1	0.6	1.4
Hawthorn - Grape	73.6	0.1	0.5	1.1	0.1	0.5	1.2	0.1	0.5	1.2	0.1	0.5	1.2	0.1	0.5	1.2
<b>Grape Street</b>																
Harbor - Pacific	66.7	0.2	0.8	1.7	0.2	0.7	1.8	0.2	0.7	1.7	0.2	0.7	1.8	0.2	0.7	1.8
Pacific - Kettner	67.7	0.9	1.3	1.9	0.9	1.3	2	0.9	1.2	2	0.9	1.3	2	0.9	1.3	2
Kettner - I-5	70.3	0.8	1	1.4	0.7	1	1.5	0.8	1	1.5	0.7	1	1.5	0.7	1	1.5
<b>Hawthorne Street</b>																
Harbor - Pacific	66.9	0.2	0.8	1.7	0.2	0.8	1.8	0.2	0.7	1.8	0.2	0.7	1.8	0.2	0.7	1.8
Pacific - Kettner	66.9	0.2	0.7	1.6	0.1	0.6	1.7	0.1	0.6	1.7	0.1	0.6	1.7	0.1	0.6	1.7
Kettner - I-5	70.9	0.3	0.8	1.7	0.3	0.8	1.8	0.3	0.8	1.8	0.3	0.8	1.8	0.3	0.8	1.8
<b>India Street</b>																
Laurel - Palm	74.4	0.2	0.9	1.4	0.2	0.9	1.4	0.2	0.9	1.4	0.2	0.9	1.4	0.2	0.9	1.4
Palm - Sassafras	74.6	0	0.7	0.8	0	0.7	0.9	0	0.7	0.9	0	0.7	0.9	0	0.7	0.9
Sassafras - Washington	71.7	0.3	0.8	1.9	0.3	0.8	1.9	0.3	0.8	1.9	0.3	0.8	1.9	0.3	0.8	1.9
<b>Kettner Blvd</b>																
Sassafras - Palm	75.9	0.3	0.8	1.2	0.3	0.8	1.4	0.3	0.8	1.3	0.3	0.8	1.4	0.3	0.8	1.4
Palm - Laurel	71.2	0.2	0.7	1.3	0.1	0.7	1.4	0.1	0.7	1.4	0.1	0.7	1.4	0.1	0.6	1.4
Laurel - Hawthorn	68.1	-0.5	0	1.6	-0.5	-0.1	1.6	-0.5	-0.1	1.6	-0.5	-0.1	1.6	-0.5	-0.1	1.6
Hawthorn - Grape	68.8	0.6	1.1	2.3	0.6	1.1	2.2	0.6	1.1	2.3	0.6	1.1	2.2	0.6	1.1	2.2
<b>Laurel Street</b>																
Harbor - Pacific	68.6	0.4	0.9	0.7	0.3	0.9	0.9	0.3	0.9	0.9	0.3	0.9	0.9	0.3	0.9	0.9
Pacific - Kettner	69.7	0.4	1	1.6	0.3	0.9	1.7	0.3	0.9	1.7	0.3	0.9	1.7	0.3	0.9	1.7
Kettner - I-5	72.1	0.4	1.1	1.9	0.3	1	1.9	0.3	1	1.9	0.3	1	1.9	0.3	1	1.9
<b>Nimitz</b>																
Harbor - Rosecrans	64.9	0.1	0.4	2	0	0.3	2.1	0	0.3	2.1	0	0.3	2.1	0	0.3	2
<b>Pacific Highway</b>																
Sassafras - Palm	71.6	1.1	1.9	1.3	1.3	2	1.3	1.3	2	1.3	1.3	2	1.3	1.3	2	1.3
Palm - Laurel	72.1	1.1	1.8	1	0.4	1.2	1.5	0.4	1.2	1.5	0.4	1.2	1.5	0.4	1.2	1.5
Laurel - Hawthorn	70.5	1.5	2.3	2.5	2.2	2.9	3.2	2.2	2.9	3.2	2.2	2.9	3.2	2.2	2.9	3.2
<b>Palm Street</b>																
Pacific - Kettner	70.7	0	0	-0.2	0	0	-0.2	0	0	-0.2	0	0	-0.2	0	0	-0.2
<b>Rosecrans</b>																
Barnett - Sport Arena	72.1	-0.2	0.1	-0.3	-0.2	0.1	-0.3	-0.2	0.1	-0.3	-0.2	0.1	-0.3	-0.2	0.1	-0.3
Nimitz - Barnett	71.6	-0.1	0	-0.3	-0.1	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.2
<b>Sassafras Street</b>																
Pacific - Kettner	70.1	1.4	2.1	1.4	1.7	2.4	1.8	1.6	2.4	1.8	1.7	2.4	1.8	1.8	2.4	1.8
<b>Washington Street</b>																
Pacific - Kettner	70.6	0.4	2	1.7	0.4	1	0.1	0.4	1	0.1	0.4	1	0.1	0.4	1	0.1
<b>I-8 Freeway</b>																
Westbound 50 feet from Frontage Road Centerline	71.4	-0.2	-0.2	-0.4	-0.2	-0.2	-0.4	-0.2	-0.2	-0.4	-0.2	-0.2	-0.4	-0.2	-0.2	-0.4
Eastbound: 50 feet from Frontage Road Centerline	72.1	0.1	0.3	0	0.1	0.3	0	0.1	0.3	0	0.1	0.3	0	0.1	0.3	0

Source: Helix Environmental Planning, Inc.

Table 5-1.12

**Peak Hour Road Traffic Noise Level Increase by Alternative Compared to No Project**

Roadways	Increase in dBA L <sub>EQ</sub> Compared No Project (at 50 Feet to Center Line of Road)											
	Proposed Project Implementation Plan with Structure			Proposed Project Implementation Plan without Structure			East Terminal Alternative Implementation Plan with Structure			East Terminal Alternative Implementation Plan without Structure		
	2010	2015	2030	2010	2015	2030	2010	2015	2030	2010	2015	2030
<b>North Harbor Drive</b>												
West of NTC	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
NTC - Spanish Landing	-0.6	-0.6	-0.5	-0.5	-0.6	-0.5	0	0	0.1	0	0	0.1
Spanish Landing - T2 Access	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.3	0.1	0.2	0.3
T2 Access - Harbor Island	0.2	0.3	0.5	0.2	0.2	0.3	0	0.1	0.2	0.1	0.1	0.2
Harbor Island - T1 Access	0.3	0.4	0.7	0.3	0.3	0.5	0.4	0.4	0.6	0.4	0.4	0.6
T1 Access - Winship	0.1	0.2	0.3	0.1	0.1	0.2	-0.6	-0.6	-0.4	-0.6	-0.6	-0.4
Winship - Rental Car Rd	0.1	0.1	0.3	0.1	0	0.2	-0.5	-0.5	-0.4	-0.5	-0.5	-0.4
Rental Car Rd - Laurel	0	0	0.2	0	0	0.1	0	0	0.1	-0.1	0	0.1
Laurel - Hawthorn	0	0	0.2	0	0	0.1	0	0	0.1	-0.1	0	0.1
Hawthorn - Grape	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
<b>Grape Street</b>												
Harbor - Pacific	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Pacific - Kettner	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Kettner - I-5	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
<b>Hawthorne Street</b>												
Harbor - Pacific	0	0	0.1	0	0	0.1	-0.1	-0.1	0.1	-0.1	-0.1	0.1
Pacific - Kettner	0	0	0.1	0	0	0.1	0	0	0.1	-0.1	0	0.1
Kettner - I-5	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
<b>India Street</b>												
Laurel - Palm	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Palm - Sassafras	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Sassafras - Washington	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
<b>Kettner Blvd</b>												
Sassafras - Palm	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Palm - Laurel	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Laurel - Hawthorn	0	0	0	0	0	0	0	0	0	0	0	0
Hawthorn - Grape	0	0	0	0	0	0	0	0	0	0	0	0
<b>Laurel Street</b>												
Harbor - Pacific	0	0	0.2	0	0	0.1	0	0	0.1	-0.1	0	0.1
Pacific - Kettner	0	0	0.1	0	0	0.1	-0.1	0	0.1	-0.1	-0.1	0.1
Kettner - I-5	-0.1	-0.1	0	-0.1	-0.1	0.1	-0.1	-0.1	0	-0.1	-0.1	0.1
<b>Nimitz</b>												
Harbor - Rosecrans	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
<b>Pacific Highway</b>												
Sassafras - Palm	0.2	0.2	0	0.1	0.2	0	0.2	0.2	0	0.2	0.2	0
Palm - Laurel	-0.7	-0.7	0.4	-0.7	-0.6	0.4	-0.6	-0.6	0.4	-0.6	-0.6	0.4
Laurel - Hawthorn	0.7	0.6	0.7	0.7	0.6	0.7	0.6	0.6	0.7	0.7	0.6	0.7
<b>Palm Street</b>												
Pacific - Kettner	0	0	0	0	0	0	0	0	0	0	0	0
<b>Rosecrans</b>												
Barnett - Sport Arena	0	0	0.1	0	0	0	0	0	0	0	0	0
Nimitz - Barnett	0	0	0.1	0	0	0	0	0	0	0	0	0
<b>Sassafras Street</b>												
Pacific - Kettner	0.2	0.2	0.4	0.2	0.2	0.4	0.3	0.2	0.4	0.3	0.3	0.4
<b>Washington Street</b>												
Pacific - Kettner	0	-1.1	-1.6	0	-1.1	-1.6	0	-1.1	-1.6	0	-1.1	-1.6
<b>I-8 Freeway</b>												
Westbound 50 feet from Frontage Road Centerline	0	0	0	0	0	0	0	0	0	0	0	0
Eastbound: 50 feet from Frontage Road Centerline	0	0	0	0	0	0	0	0	0	0	0	0

Source: Helix Environmental Planning, Inc.

Table 5-1.13

## Daily Road Traffic CNEL Increase by Alternative Compared to Existing (2005) Condition

Roadway	2005 L <sub>Eq</sub> in dBA at 50 Feet to Center Line of Road	Increase in CNEL Compared to Existing (2005) Conditions (at 50 Feet to Center Line of Road)														
		No Project			Proposed Project Implementation Plan with Structure			Proposed Project Implementation Plan without Structure			East Terminal Alternative Implementation Plan with Structure			East Terminal Alternative Implementation Plan without Structure		
		2010	2015	2030	2010	2015	2030	2010	2015	2030	2010	2015	2030	2010	2015	2030
<b>North Harbor Drive</b>																
West of NTC	71.3	0.4	1	2.5	0.4	1	2.6	0.4	1	2.6	0.4	1	2.6	0.4	1	2.6
NTC - Spanish Landing	72.2	0.6	1	2.4	0	0.4	1.9	0.1	0.5	1.9	0.6	1.1	2.6	0.6	1.1	2.6
Spanish Landing - T2 Access	71.2	0.9	1.3	2.4	1	1.4	2.5	1	1.3	2.3	1	1.4	2.6	1	1.4	2.6
T2 Access - Harbor Island	73.6	0.2	0.7	1.5	0.4	1	2	0.4	0.9	1.8	0.2	0.8	1.7	0.2	0.8	1.7
Harbor Island - T1 Access	73.9	0.1	0.4	0.9	0.5	0.9	1.6	0.5	0.8	1.4	0.5	0.8	1.5	0.5	0.8	1.5
T1 Access - Winship	74.7	0.4	0.8	1.3	0.6	1	1.7	0.6	0.9	1.5	-0.2	0.2	1	-0.2	0.2	1
Winship - Rental Car Rd	74.8	0.4	0.8	1.3	0.5	0.9	1.6	0.5	0.9	1.5	-0.1	0.3	1	-0.1	0.3	0.9
Rental Car Rd - Laurel	78.2	0.2	0.7	1.1	0.2	0.7	1.3	0.2	0.7	1.3	0.2	0.7	1.3	0.2	0.7	1.3
Laurel - Hawthorn	74.6	0.2	0.6	1.3	0.1	0.6	1.5	0.1	0.6	1.4	0.1	0.6	1.4	0.1	0.6	1.4
Hawthorn - Grape	74.1	0.1	0.5	1.1	0.1	0.5	1.2	0.1	0.5	1.2	0.1	0.5	1.2	0.1	0.5	1.2
<b>Grape Street</b>																
Harbor - Pacific	67.2	0.2	0.8	1.7	0.2	0.7	1.8	0.2	0.7	1.7	0.2	0.7	1.8	0.2	0.7	1.8
Pacific - Kettner	68.2	0.9	1.3	1.9	0.9	1.3	2	0.9	1.2	2	0.9	1.3	2	0.9	1.3	2
Kettner - I-5	70.8	0.8	1	1.4	0.7	1	1.5	0.8	1	1.5	0.7	1	1.5	0.7	1	1.5
<b>Hawthorne Street</b>																
Harbor - Pacific	67.4	0.2	0.8	1.7	0.2	0.8	1.8	0.2	0.7	1.8	0.2	0.7	1.8	0.2	0.7	1.8
Pacific - Kettner	67.4	0.2	0.7	1.6	0.1	0.6	1.7	0.1	0.6	1.7	0.1	0.6	1.7	0.1	0.6	1.7
Kettner - I-5	71.4	0.3	0.8	1.7	0.3	0.8	1.8	0.3	0.8	1.8	0.3	0.8	1.8	0.3	0.8	1.8
<b>India Street</b>																
Laurel - Palm	74.9	0.2	0.9	1.4	0.2	0.9	1.4	0.2	0.9	1.4	0.2	0.9	1.4	0.2	0.9	1.4
Palm - Sassafras	75.1	0	0.7	0.8	0	0.7	0.9	0	0.7	0.9	0	0.7	0.9	0	0.7	0.9
Sassafras - Washington	72.2	0.3	0.8	1.9	0.3	0.8	1.9	0.3	0.8	1.9	0.3	0.8	1.9	0.3	0.8	1.9
<b>Kettner Blvd</b>																
Sassafras - Palm	76.4	0.3	0.8	1.2	0.3	0.8	1.4	0.3	0.8	1.3	0.3	0.8	1.4	0.3	0.8	1.4
Palm - Laurel	71.7	0.2	0.7	1.3	0.1	0.7	1.4	0.1	0.7	1.4	0.1	0.7	1.4	0.1	0.6	1.4
Laurel - Hawthorn	68.6	-0.5	0	1.6	-0.5	-0.1	1.6	-0.5	-0.1	1.6	-0.5	-0.1	1.6	-0.5	-0.1	1.6
Hawthorn - Grape	69.3	0.6	1.1	2.3	0.6	1.1	2.2	0.6	1.1	2.3	0.6	1.1	2.2	0.6	1.1	2.2
<b>Laurel Street</b>																
Harbor - Pacific	69.1	0.4	0.9	0.7	0.3	0.9	0.9	0.3	0.9	0.9	0.3	0.9	0.9	0.3	0.9	0.9
Pacific - Kettner	70.2	0.4	1	1.6	0.3	0.9	1.7	0.3	0.9	1.7	0.3	0.9	1.7	0.3	0.9	1.7
Kettner - I-5	72.6	0.4	1.1	1.9	0.3	1	1.9	0.3	1	1.9	0.3	1	1.9	0.3	1	1.9
<b>Nimitz</b>																
Harbor - Rosecrans	65.4	0.1	0.4	2	0	0.3	2.1	0	0.3	2.1	0	0.3	2.1	0	0.3	2
<b>Pacific Highway</b>																
Sassafras - Palm	72.1	1.1	1.9	1.3	1.3	2	1.3	1.3	2	1.3	1.3	2	1.3	1.3	2	1.3
Palm - Laurel	72.6	1.1	1.8	1	0.4	1.2	1.5	0.4	1.2	1.5	0.4	1.2	1.5	0.4	1.2	1.5
Laurel - Hawthorn	71	1.5	2.3	2.5	2.2	2.9	3.2	2.2	2.9	3.2	2.2	2.9	3.2	2.2	2.9	3.2
<b>Palm Street</b>																
Pacific - Kettner	71.2	0	0	-0.2	0	0	-0.2	0	0	-0.2	0	0	-0.2	0	0	-0.2
<b>Rosecrans</b>																
Barnett - Sport Arena	72.6	-0.2	0.1	-0.3	-0.2	0.1	-0.3	-0.2	0.1	-0.3	-0.2	0.1	-0.3	-0.2	0.1	-0.3
Nimitz - Barnett	72.1	-0.1	0	-0.3	-0.1	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	-0.1	-0.2
<b>Sassafras Street</b>																
Pacific - Kettner	70.6	1.4	2.1	1.4	1.7	2.4	1.8	1.6	2.4	1.8	1.7	2.4	1.8	1.8	2.4	1.8
<b>Washington Street</b>																
Pacific - Kettner	71.1	0.4	2	1.7	0.4	1	0.1	0.4	1	0.1	0.4	1	0.1	0.4	1	0.1
<b>I-8 Freeway</b>																
Westbound 50 feet from Frontage Road Centerline	71.9	-0.2	-0.2	-0.4	-0.2	-0.2	-0.4	-0.2	-0.2	-0.4	-0.2	-0.2	-0.4	-0.2	-0.2	-0.4
Eastbound: 50 feet from Frontage Road Centerline	72.6	0.1	-0.1	-0.4	-0.4	-0.1	-0.4	-0.4	-0.1	-0.4	-0.4	-0.1	-0.4	-0.4	-0.1	-0.4

Source: Helix Environmental Planning, Inc.

Table 5-1.14

Daily Road Traffic CNEL Increase by Alternative Compared to No Project

Roadways	Increase in CNEL Compared No Project (at 50 Feet to Center Line of Road)											
	Proposed Project Implementation Plan with Structure			Proposed Project Implementation Plan without Structure			East Terminal Alternative Implementation Plan with Structure			East Terminal Alternative Implementation Plan without Structure		
	2010	2015	2030	2010	2015	2030	2010	2015	2030	2010	2015	2030
North Harbor Drive												
West of NTC	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
NTC - Spanish Landing	-0.6	-0.6	-0.5	-0.5	-0.6	-0.5	0	0	0.1	0	0	0.1
Spanish Landing - T2 Access	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.3	0.1	0.2	0.3
T2 Access - Harbor Island	0.2	0.3	0.5	0.2	0.2	0.3	0	0.1	0.2	0.1	0.1	0.2
Harbor Island - T1 Access	0.3	0.4	0.7	0.3	0.3	0.5	0.4	0.4	0.6	0.4	0.4	0.6
T1 Access - Winship	0.1	0.2	0.3	0.1	0.1	0.2	-0.6	-0.6	-0.4	-0.6	-0.6	-0.4
Winship - Rental Car Rd	0.1	0.1	0.3	0.1	0	0.2	-0.5	-0.5	-0.4	-0.5	-0.5	-0.4
Rental Car Rd - Laurel	0	0	0.2	0	0	0.1	0	0	0.1	-0.1	0	0.1
Laurel - Hawthorn	0	0	0.2	0	0	0.1	0	0	0.1	-0.1	0	0.1
Hawthorn - Grape	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Grape Street												
Harbor - Pacific	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Pacific - Kettner	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Kettner - I-5	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Hawthorne Street												
Harbor - Pacific	0	0	0.1	0	0	0.1	-0.1	-0.1	0.1	-0.1	-0.1	0.1
Pacific - Kettner	0	0	0.1	0	0	0.1	0	0	0.1	-0.1	0	0.1
Kettner - I-5	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
India Street												
Laurel - Palm	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Palm - Sassafras	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Sassafras - Washington	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Kettner Blvd												
Sassafras - Palm	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Palm - Laurel	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Laurel - Hawthorn	0	0	0	0	0	0	0	0	0	0	0	0
Hawthorn - Grape	0	0	0	0	0	0	0	0	0	0	0	0
Laurel Street												
Harbor - Pacific	0	0	0.2	0	0	0.1	0	0	0.1	-0.1	0	0.1
Pacific - Kettner	0	0	0.1	0	0	0.1	-0.1	0	0.1	-0.1	-0.1	0.1
Kettner - I-5	-0.1	-0.1	0	-0.1	-0.1	0.1	-0.1	-0.1	0	-0.1	-0.1	0.1
Nimitz												
Harbor - Rosecrans	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0.1
Pacific Highway												
Sassafras - Palm	0.2	0.2	0	0.1	0.2	0	0.2	0.2	0	0.2	0.2	0
Palm - Laurel	-0.7	-0.7	0.4	-0.7	-0.6	0.4	-0.6	-0.6	0.4	-0.6	-0.6	0.4
Laurel - Hawthorn	0.7	0.6	0.7	0.7	0.6	0.7	0.6	0.6	0.7	0.7	0.6	0.7
Palm Street												
Pacific - Kettner	0	0	0	0	0	0	0	0	0	0	0	0
Rosecrans												
Barnett - Sport Arena	0	0	0.1	0	0	0	0	0	0	0	0	0
Nimitz - Barnett	0	0	0.1	0	0	0	0	0	0	0	0	0
Sassafras Street												
Pacific - Kettner	0.2	0.2	0.4	0.2	0.2	0.4	0.3	0.2	0.4	0.3	0.3	0.4
Washington Street												
Pacific - Kettner	0	-1.1	-1.6	0	-1.1	-1.6	0	-1.1	-1.6	0	-1.1	-1.6
I-8 Freeway												
Westbound 50 feet from Frontage Road Centerline	0	0	0	0	0	0	0	0	0	0	0	0
Eastbound: 50 feet from Frontage Road Centerline	-0.5	0	0	-0.5	0	0	-0.5	0	0	-0.5	0	0

Source: Helix Environmental Planning, Inc.

modeled years (i.e., 2010, 2015, 2020, and 2030), the modeled peak hour increase in noise levels at this location would be less than 3.0, and no other location (for any modeled year) would experience an increase equal to or greater than 3.0 dBA  $L_{EQ}$ . The pattern for daily CNEL increases is virtually identical to that of the peak hour LEQ. Specifically, there would be only one location and only one modeled year (a 3.2 CNEL increase at Pacific Highway between Laurel and Hawthorn in 2025) where the increase in CNEL would be in excess of 3.0 (see [Table 5-1.12](#)).

### **Proposed Project**

A comparison of peak hour  $L_{EQ}$  noise level increases for the Proposed Project (with and without the parking structure) with existing (2005) peak hour  $L_{EQ}$  noise levels is depicted in [Table 5-1.10](#). The maximum increase in noise level at any of the receptors under the Proposed Airport Implementation Plan, relative to existing conditions, would be 3.7 dBA (Pacific Highway between Laurel and Hawthorn in 2025). This represents an increase of only 0.5 dBA over the No Project Alternative; the maximum increase compared to the No Project Alternative would be 0.7 dBA. None of the Proposed Project-related increases would meet the Caltrans substantial noise impact threshold of 12 dBA.

With regard to CNEL, the largest daily CNEL increases under the Proposed Project also would occur at Pacific Highway between Laurel and Hawthorn in 2025. The modeled CNEL increases at this location would also exceed 3.0 in 2020 and 2030. At this location, the Proposed Project would result in an increase of up to 0.7 CNEL compared to the No Project condition.

At no other location would the increase in CNEL exceed 3.0, and at no location would the increase compared to the No Project Alternative exceed 0.7 CNEL.

The Proposed Project is assessed as having a less-than-significant noise impact because it would only incrementally increase daily noise (compared to No Project) by 0.7 CNEL. At only one location would the increase compared to the existing condition be in excess of 3.0, and this location is adjacent to an industrial facility (Solar Turbine) and commercial uses.

### **East Terminal Alternative**

The future noise level increases with the East Terminal Alternative (with and without the parking structure) would be similar to the Proposed Project (see [Tables 5-1.10](#), [5-1.11](#), [5-1.12](#), and [5-1.13](#)). Accordingly, the surface traffic noise impacts associated with the East Terminal Alternative would be less than significant for reasons similar to those described for the Proposed Project.

## **Conclusions**

The Proposed Project would not cause significant surface transportation noise, regardless of whether it is implemented with or without the parking structure. Similarly, the East Terminal Alternative would not cause significant surface transportation noise impacts, either with or without the parking structure. Because none of the alternatives would result in a significant noise impact, noise mitigation measures have not been evaluated.

## **5.1.4 Construction Noise**

Construction noise sources do not always correspond to 24-hour community noise standards because they occur only during selected times and the source strength varies with the type of equipment in use. As a result, the San Diego City municipal code regulates construction noise in terms of time of day and maximum noise levels. This analysis evaluates construction noise in this context.

### **5.1.4.1 General Methodology and Approach**

There are noise sensitive land uses in the vicinity of the areas where construction would occur with the Proposed Project (Preferred Alternative) and East Terminal Alternative. In the vicinity of the Terminal 2 West expansion and apron, there are homes within a minimum distance of approximately 2,200 to 4,000 feet from the potential construction zone. For the North Area projects that would occur in the vicinity of Interstate 5, there are homes on the opposite side of the highway at minimum distances of about 1,500 to 1,700 feet from the potential construction zone.

Based upon the loudest noise typically produced by construction equipment, the resulting noise levels at various distances from the construction zone were calculated in reference to spherical spreading, ground

attenuation, and atmospheric adsorption. The maximum noise levels for different equipment types were used in this analysis in order to provide a “worst-case” example. In fact, there are makes and models of construction equipment that are substantially quieter than the loudest types that are used in this analysis. **Table 5-1.15** shows the range in noise levels produced by various construction equipment types. For example, a concrete mixer is assumed to produce noise levels of 90 dB at 50 feet; however, there are models of concrete mixers that produce 72 dB at 50 feet.

Table 5-1.15

**Construction Noise Levels (dB) by Equipment Type and Distance at 50 feet**

Equipment	A-weighted Sound Level (dB) at 50 feet	
	Minimum	Maximum
Compacter/Roller	72	88
Front Loader	72	97
Backhoe	72	93
Scraper/Grader	76	96
Paver	82	92
Truck	70	97
Concrete Mixer	72	90
Concrete Pump	75	85
Crane (Movable)	76	96
Crane (Derrick)	85	88
Pump	70	80
Generator	70	83
Compressor	68	88
Jackhammer/Drill	76	99
Pile Drivers @ Peak	90	105

Source: Cyril Harris, Handbook of Noise Control, 1979.

Next, the effects of spherical spreading, ground attenuation, and atmospheric adsorption due to distance from the source (i.e., the location of the construction equipment) to receiver (e.g., homes) were calculated based upon typical conditions (e.g., temperature and humidity) in the area. Spherical spreading occurs as noise spreads out from the source, in a circular pattern. Ground attenuation is the reflection of sound waves on the surface; soft ground and vegetation absorbs some sound, versus hard surfaces such as highways and water reflect sound. Atmospheric adsorption occurs due to the interaction of sound waves with the air molecules. These effects reduce and absorb the noise energy, with decreased noise energy as distance from the source increases. Therefore, the quantitative effects of spherical spreading, ground attenuation, and atmospheric adsorption were subtracted from the noise level at the source in order to determine the resulting noise level at the receiver.

Variances in atmospheric conditions, ground condition (i.e., soft versus hard), and blocking from buildings do affect the resulting noise level that would be heard at homes. Because variances do occur, the loudest noise level from construction equipment was used in this analysis in order to provide a conservative analysis.

The changes to the Proposed Project and alternatives that are included in this ~~recirculated Draft~~ Final EIR do not affect the results of the construction noise analysis presented in the previously circulated Draft EIR. Specifically, the changes to the Proposed Project and alternatives do not include construction of any facilities that were not considered previously. Because all improvements are expected to be constructed by 2010, extending the horizon year to 2030 would not change the findings of the previously circulated analysis of impacts.

#### **5.1.4.2 Regulatory Framework**

Construction activities are treated separately in municipal noise ordinances because they do not represent a chronic, permanent noise source. To abate the potential nuisance from construction noise, especially in proximity to noise sensitive development, the San Diego City noise ordinance limits the hours of allowable construction activities and establishes performance standards for construction noise at a property in residential zones.<sup>17</sup>

The noise ordinance prohibits construction between 7:00 p.m. and 7:00 a.m. on weekdays and Saturdays, and all day on Sundays and selected holidays, unless the City has granted a permit. The prohibition against nocturnal construction can be waived in instances where a greater public good is achieved, such as roadwork at night.<sup>18</sup> The ordinance also limits construction noise in residential areas between 7:00 a.m. and 7:00 p.m. to a maximum of 75 dB and exempts emergency construction provided adequate notice is given after work commences.

#### **5.1.4.3 Significance Criteria**

Based upon the regulatory framework discussed in the preceding section, the Proposed Project (Preferred Alternative) and its alternatives would have a significant construction noise impact if:

- Construction noise levels exceed 75 dB in residential areas;<sup>19</sup> or
- Construction with the Proposed Project would result in excessive ground-borne vibration and/or changes in temporary or periodic ambient noise levels (based upon CEQA standards).<sup>20</sup>

#### **5.1.4.4 Environmental Setting**

Because construction is not a chronic, permanent noise source, the environmental setting in the vicinity of SDIA is not currently affected by construction-related noise on a regular basis.

#### **5.1.4.5 Impact Analysis**

**Table 5-1.16** shows the maximum noise level by the equipment types that would be used in construction of the Proposed Project (Preferred Alternative) and East Terminal Alternative, as well as the resulting noise at various distances from the construction zones. Among the various equipment types, the maximum noise levels would be produced by the pile drivers, with resulting noise levels in residential areas of 62.8 dB to 48.0 dB at distances of 1,500 to 4,000 from the sources, respectively.

Based upon this analysis, the construction noise would not exceed 75 dB in residential areas. The construction noise would be lower than the aircraft and highway noise that occurs in the residential areas near the construction zones. Due to the louder noise levels and more frequent events that occur with aircraft operations and surface vehicle traffic and in consideration of the logarithmic quantities of noise measured in decibels (see Section B.1.1 of [Appendix B, Noise and Health Effects of Noise](#)), aircraft and highway noise would continue to be the determinative sources in the noise environment. Thus, the ambient noise levels would not be expected to increase due to the construction activity. Additionally, the construction work would not be expected to result in excessive ground-borne vibration to home sites. Therefore, the construction work would cause less than significant impacts in regard to noise with either the Proposed Project (Preferred Alternative) or the East Terminal Alternative.

### **5.1.5 Cumulative Impacts**

Projects that could result in cumulative noise impacts for areas in and within the vicinity of the 60 CNEL would typically be new road projects that bring traffic noise to new areas, or airspace or airfield projects

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<sup>17</sup> San Diego Municipal Code. Chapter 5: Public Safety, Morals, and Welfare. Section 59.5.0404.

<sup>18</sup> San Diego, City of Environmental Services Department (ESD). Planning and Development Review Department. *CEQA Significance Determination Guidelines*. Revised May 1999.

<sup>19</sup> CEQA Guidelines, Appendix G, Environmental Review Checklist.

<sup>20</sup> San Diego Unified Port District (District). *San Diego Unified Port District, Port Master Plan*. Revised July 2005.



Table 5-1.16

**Construction Noise Levels by Equipment Type and Distance**

Equipment	Maximum Noise (dB) at 50ft	Noise (dB) at Receiver by Distance (feet)								
		1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Compacter/Roller	88	52.2	45.8	41.2	37.6	34.8	32.8	31.0	29.3	27.8
Front Loader	97	61.2	54.8	50.2	46.6	43.8	41.8	40.0	38.3	36.8
Backhoe	93	57.2	50.8	46.2	42.6	39.8	37.8	36.0	34.3	32.8
Scraper/ Grader	96	60.2	53.8	49.2	45.6	42.8	40.8	39.0	37.3	35.8
Paver	92	56.2	49.8	45.2	41.6	38.8	36.8	35.0	33.3	31.8
Truck	97	61.2	54.8	50.2	46.6	43.8	41.8	40.0	38.3	36.8
Concrete Mixer	90	54.2	47.8	43.2	39.6	36.8	34.8	33.0	31.3	29.8
Concrete Pump	85	49.2	42.8	38.2	34.6	31.8	29.8	28.0	26.3	24.8
Crane (Movable)	96	60.2	53.8	49.2	45.6	42.8	40.8	39.0	37.3	35.8
Crane (Derrick)	88	52.2	45.8	41.2	37.6	34.8	32.8	31.0	29.3	27.8
Pump	80	44.2	37.8	33.2	29.6	26.8	24.8	23.0	21.3	19.8
Generator	83	47.2	40.8	36.2	32.6	29.8	27.8	26.0	24.3	22.8
Compressor	88	52.2	45.8	41.2	37.6	34.8	32.8	31.0	29.3	27.8
Jackhammer/Drill	99	63.2	56.8	52.2	48.6	45.8	43.8	42.0	40.3	38.8
Pile Drivers	105	69.2	62.8	58.2	54.6	51.8	49.8	48.0	46.3	44.8

Note: Atmospheric adsorption calculated for 1,000 Hz. at 60.4-degrees F, 72.7% relative humidity, and 28.44-inches Hg atmospheric pressure.

Sources: HNTB analysis using:

Equipment noise levels: Handbook of Noise Control, Cyril Harris, 1979.

Ground Attenuation: Ground to Ground Lateral Attenuation, INM 6.0 Technical manual, page 55.

Atmospheric Adsorption: Absorption of Sound in Air versus Humidity and Temperature, Cyril Harris, 1966, and <http://www.csgnetwork.com/atmossndabsorbcalc.html>.

that would change flight patterns at other airports in the vicinity of SDIA, such as at North Island Naval Air Station. The SDCRAA is not currently aware of any proposed projects that would create cumulative noise impacts in combination with aircraft and highway noise exposure levels.

### **5.1.6 Mitigation Measures/Other Improvements**

With no significant cumulative and supplemental noise impacts identified for the Proposed Project (Preferred Alternative), the East Terminal Alternative, and the No Project Alternative, no project mitigation measures are necessary.

### **5.1.7 Level of Significance with Mitigation Measures**

Noise changes due to the Proposed Project are less than significant; therefore, mitigation measures would not be applied for this impact category. The level of significance specific to noise impacts remains less than significant.



## 5.2 Land Use Planning

This section describes the general approach and methodology, regulatory framework, significance criteria, and environmental setting. It also considers potential land use planning impacts associated with the Proposed Project and alternatives. Additionally, this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts. Comments in response to the NOP specific to potential land use impacts were received from the following agencies and individuals:

- Department of Transportation Division of Aeronautics – project consistency with Airport Land Use Compatibility Plan
- Unified Port of San Diego – land uses in which the SDIA and the Port District share a common boundary
- Naval Training Center – assumes no requirements to modify existing planning approvals at the Naval Training Center and no additional review requirements by the SDCRAA except as related to the Airport approach Overlay Zone and the Precise Plan/LCP Appendix “A” (Use Restrictions for the Runway Protection Zone)
- Oral comments during scoping meetings expressed concern compatible land use with expansion of the Airport

All written and oral comments during the NOP process are provided in [Appendix A](#). Comments received specific to land use impacts are addressed within this section of the EIR.

Comments received on the previous Draft EIR circulated in May 2006 included:

- Parcels leased to the Airport by MCRD should be noted in the EIR;
- Military planning guidelines and community plans should be referenced;
- Potential uses for the Teledyne Ryan facility are not analyzed;
- DEIR does not address land use to optimize operation of the Airport beyond 2015;
- Address the state law requiring Airport Land Use Compatibility Plans to address airport growth for the next 20 years; and
- Reconsider obtaining land from MCRD to extend Taxiway even though it is not listed for closure on the BRAC.

### 5.2.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

The purpose of this section is to determine if the Proposed Project (Preferred Alternative) and alternatives are consistent with relevant regulatory land use plans and policies. This analysis documents the existing onsite and offsite land uses and the surrounding area land use plans and policies. The offsite land uses consist of the adjacent military facility, near by communities, and visitor-serving recreation areas. The

relevant offsite land use plans consist of the City of San Diego General Plan, Community Plans, Land Development Code, and Port Master Plan. Additionally, the analysis is based on a site reconnaissance of the project area and the surrounding communities and aerial photographs. Section 5.2.4 provides the significance criteria used in assessing the impact of the Proposed Project (Preferred Alternative) and the alternatives related to land use. Each alternative is analyzed and impacts are disclosed in Section 5.2.6, with Section 5.2.7 defining the Cumulative Impacts and Section 5.2.8 describes mitigation measures for each alternative.

## **5.2.2 Regulatory Framework**

This section presents a summary of existing land use plans and policies that affect development of the project site and surrounding area. Land use plans that apply to the area surrounding the project site include City of San Diego Community and Redevelopment Plans, Navy Redevelopment/Reuse Plans, and the Port Master Plan.

### **5.2.2.1 Onsite Land Use Plans and Policies**

The proposed development is located within the boundaries of the land use plans described below.

#### **Airport Uses**

In January 2003, the San Diego Regional Airport Authority Act (SDCRAA Act) became effective. The SDCRAA Act grants to SDCRAA all land use planning authority and jurisdiction over lands within the original SDIA leasehold, along with any other lands that might be acquired adjacent to the existing airport property and necessary to operate the Airport. Although the airport property, including the more recently acquired General Dynamics and Teledyne Ryan parcels, is still depicted in the certified Port Master Plan (PMP), the PMP and its associated land use designations are no longer applicable to property now under the planning auspices of SDCRAA. When adopted, the proposed SDIA Land Use Plan will be the document that formally defines the allowable land uses in the project site. In any event, no land use or development decisions have been made for any portions of SDIA that are not consistent with the use of SDIA as an airport.

#### **California Tidelands Trust**

The State enabling legislation that created the San Diego Unified Port District also conveyed and granted in trust to the Port District the tidelands and submerged lands surrounding San Diego Bay. These lands comprise most of those lands upon which SDIA is situated. The exception is a thin strip of land along Pacific Highway that is not designated as "tidelands." The SDIA property and the Teledyne Ryan property, while under the control and jurisdiction of SDCRAA, remain in the public trust by the San Diego Unified Port District. Any proposed land uses by SDCRAA must be consistent with the proposed uses for those lands held in trust by the Port District.

The San Diego Unified Port District Act provides the official planning policies that are consistent with the Public Trust Doctrine for the physical development of the tidelands and submerged lands conveyed and granted in trust to the Port District.

The following is an overview of the section of the San Diego Unified Port District Act that's relevant to the Proposed Project.

Section 87: Purposes for Use of Tide and Submerged Lands Held In Trust by District.

(3) For the establishment, improvement, and conduct of airport and heliport or aviation facilities, including, but not limited to, approach, takeoff, and clear zones in connection with airport runway and for the construction, reconstruction, repair, maintenance, and operation of terminal buildings, runway, roadways, aprons, taxiways, parking areas, and all other works, buildings, facilities, utilities, structures, and appliances incidental, necessary, or convenient for the promotion and accommodation of air commerce and air navigation.

(4) For the construction, reconstruction, repair, and maintenance of highways, streets, roadways, bridges, belt line railroads, parking facilities, power, telephone, telegraph or cable lines or landings, water and gas pipelines, and all other transportation and utility facilities or betterments incidental,

necessary, or convenient for the promotion and accommodation of any of the uses set forth in this section.

## **California Coastal Act**

The California Coastal Act (“Coastal Act”) (Public Resources Code, Section 30000, et. seq.) was passed by the State legislature in 1976 and became effective January 1, 1977. Under the provisions of the Coastal Act, development projects located in the coastal zone must receive an additional level of review for potential impacts to coastal resources. As envisioned by the legislature, the initial period of review of development projects by the California Coastal Commission was to have been a relatively short time while local government entities prepared plans consistent with Coastal Act policies. Upon certification of these plans by the Commission, development review and permit issuance would become the responsibility of the local governments.

Under the Coastal Act, there are four types of coastal planning documents. Cities and counties are responsible for preparing Local Coastal Programs (LCPs). The LCP consists of a land use plan, zoning ordinances, zoning maps and other implementing actions that are in conformance with the policies of the Coastal Act. After certification of the LCP, the local governments receive the authority to issue coastal development permits for the majority of the developments within their jurisdiction. The Commission retains permit jurisdiction over developments located on wetlands, tidelands, submerged lands and lands subject to the public trust.

State colleges and universities may prepare Long Range Development Plans (LRDPs) for review and certification by the Commission. These function in a manner very similar to the LCP.

Other public agencies, including State agencies and special districts, have the ability to prepare a Public Works Plan (PWP), identifying in advance future development projects for approval by the Commission. After the Commission has determined that the PWP is consistent with Coastal Act policies, the Commission’s reviewing role becomes one of determining consistency of a proposed project with that approved in the PWP.

Ports are afforded a special status in the Coastal Act, both in the coastal planning framework and in the policies which govern development within a port. Ports may formulate and submit for certification a Port Master Plan (PMP), which governs land and water uses within a port’s jurisdiction. The standard of review for a PMP is Chapter 8 of the Coastal Act, which contains policies that more appropriate to the activities that occur within a port, rather than the policies of Chapter 3 of the Act. Pursuant to the provisions of the Coastal Act, the Port of San Diego prepared a PMP, which was submitted to and certified by the Coastal Commission in 1981.

Prior to the formation of SDCRAA, SDIA was governed by and considered part of the Port of San Diego and was included in the Port’s certified PMP. Since January 1, 2003, however, the Port’s PMP no longer serves as the coastal planning document for SDIA. Section 170060(c) of the SDCRAA Act states:

“The authority [SDCRAA] shall be responsible for making any necessary application to the California Coastal Commission pursuant to the California Coastal Act of 1976 [Division 20 (commencing with Section 3000) of the Public Resources Code) and to other agencies in accordance with other applicable laws in effect on the effective date of the Act that added this section for improvements upon coastal lands under the control of the authority [SDCRAA] through a lease.”

Since the SDCRAA inception, SDCRAA staff has initiated all coastal permitting directly with the Coastal Commission. Since SDIA is no longer part of the Port, the standard of review for all development projects is Chapter 3 of the Act. The policies of the PMP and Chapter 8 of the Act are no longer applicable. The planning goals of California Coastal Act in Chapter 3 relevant to the Proposed Airport Land Use Plan include:

Section 30212 Public Access: Development shall not interfere with the public’s right of access to the sea. Also, public access shall be provided to the shoreline except where adequate access is already provided.

Section 30220 Recreation: Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water area shall be protected for such use.

Section 30240 (b) Land Resources: Development in areas adjacent to environmentally sensitive habitats areas and parks and recreation areas shall be sited and designated to prevent impact which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Section 30250 Development: New industrial development shall be located within, contiguous with, or in close proximity to existing development areas with adequate public services and where it would not have significant adverse effects on coastal resources.

Section 30252 Development: The location and amount of new development should maintain and enhance public access to the coast by:

(4) Providing adequate parking facilities or providing substitute means of serving the development with public transportation.

(5) Assuring the potential for public transit for high intensity uses.

### **5.2.2.2 Surrounding Land Use Plans and Policies**

Most of the project area is within the jurisdiction of the City of San Diego and the United States Department of the Navy. The land use plans and policies that govern development within the surrounding area include the Port Master Plan, the Airport Land Use Compatibility Plan (ALUCP) for SDIA, City of San Diego Progress Guide and General Plan, City of San Diego Community and Redevelopment Plans, the Naval Training Center Redevelopment/Reuse Plans, the City of San Diego Airport Approach Overlay Zone and Airport Environs Overlay Zone.

#### **Airport Land Use Compatibility Plan**

The Comprehensive Land Use Plan (CLUP) for SDIA was originally adopted in 1992 by SANDAG, at that time the designated Airport Land Use Commission (ALUC) for the San Diego Region. As of January 1, 2002, SDCRAA is now the author for the Airport Land Use Compatibility Plan (renamed from CLUP) now serves as the County of San Diego's Airport Land Use Commission and is responsible for preparing creating and updating the Airport Land Use Compatibility Plan (ALUCP) (renamed from CLUP) for all 16 airports in the County. The ALUCP has since been amended with the latest amendment prepared and adopted in October of 2004.

The purpose of the ALUCP is to describe the actions necessary to ensure compatible land use development on and surrounding SDIA, however, the ALUC does not have jurisdiction for development on Airport property. The ALUCP includes information on noise contours, land use compatibility standards, runway protection zones (RPZs), and aviation easements. Building heights for the area surrounding Lindbergh Field are regulated by the City's Airport Approach Overlay Zone (AAOZ) provides supplemental regulations for the property surrounding the approach path for SDIA. The intent of the AAOZ is to help ensure that prohibits the construction or alteration of any structure surrounding SDIA that would encroach within 50 feet of FAA-established approach and departure slopes is reviewed by the FAA, the SDCRAA, and Caltrans. It should be noted that the ALUC will not approve a project that the FAA has determined to be a hazard.

As noted in the ALUCP, the FAA has no authority to limit land use and can only direct that changes be made in airport operations whenever a hazard or obstruction that would have a significant adverse impact is proposed.

The Airport Influence Area represents the boundary of the planning and review authority of the ALUC. The Airport Influence Area encompasses those areas adjacent to the Airport that are impacted by noise levels exceeding California State Noise Standards or areas where height restrictions would be needed to prevent obstructions to navigable airspace. Proposed development within the perimeter of the Airport Influence Area is subject to a determination of consistency with the ALUCP.

The ALUCP for SDIA is currently being updated and any future Airport Influence Areas will reflect the four compatibility factors of airspace protection, noise, overflight, and safety.

## **Port Master Plan / California Coastal Act**

The PMP is the land use document governing the land and water development within the Port District's jurisdiction. The PMP was originally adopted by the Board of Port Commissioners (BPC) in 1980 and was certified by the California Coastal Commission (CCC) on January 21, 1981. The PMP serves as the governing planning document pursuant to the California Coastal Act for the land and water area within Port District jurisdiction. The PMP was last amended in August 2004. The coastal jurisdiction of the District extends from the western edge of Pacific Highway coincident with the historic mean high tide line to several hundred feet into San Diego Bay. The PMP divides the tidelands under District jurisdiction into ten (10) Planning Districts, or precise plans. Each Planning District is further divided into Planning Subareas, which group together tideland properties into functional units, thereby facilitating planning efforts.<sup>21</sup> The Proposed Project site is located within Planning District 2 (Harbor Island/Lindbergh Field) of the PMP. However, as stated earlier, the policies of the PMP Chapter 8 of the California Coastal Act are no longer applicable to SDIA as of January 2003 pursuant to the SDCRAA Act.

The PMP does govern development within the areas surrounding SDIA as illustrated in **Figure 5.2-1**. The area located south of SDIA within District jurisdiction is located within Planning District 2 (Harbor Island/Lindbergh Field) and Planning District 3 Centre City Embarcadero of the PMP. Planning District 3 extends from Laurel Street on the north to the Tenth Avenue Marine Terminal on the south. Planning District 3 designates the area south of Laurel Street in the vicinity of the project site as aviation-related industrial uses and park/plaza. This area is scheduled for redevelopment under the approved North Embarcadero Alliance Visionary Plan, which is discussed in greater detail in 5.2.4, *Environmental Setting*. The City of San Diego Progress Guide and General Plan was originally adopted by the City Council on February 26, 1979. The Progress Guide and General Plan outlines the City's objectives and guidelines for all phases of future development within its incorporated area and sphere of influence. The General Plan is supplemented by community, specific, precise, and other types of long-range plans that focus and tailor General Plan goals and policies for particular geographic areas. The City of San Diego Progress Guide and General Plan divides San Diego into 44 Community Planning Areas (CPA). The project area is located within the boundaries of the Lindbergh Field/Harbor Island CPA. The Progress Guide and General Plan map (updated in 1996) designates the project site for "Civil Airport and Industrial" uses. Areas surrounding the project area to the north are military, office and specialized commercial and industrial; to the south are industrial, commercial recreation and mixed uses (downtown San Diego); to the east are office and specialized commercial uses; and to the west are military land uses. The City's Progress Guide and General Plan establishes noise compatibility standards that apply to all noise sources, including airport noise from SDIA. These noise compatibility standards have been incorporated into the ALUCP for SDIA.

The City of San Diego Progress Guide and General Plan Update also designates North Harbor Drive and Sports Arena Boulevard in the project area as scenic highways. In addition, the segment of I-5 from I-8 to State Route (SR)-94, and Rosecrans Street from I-8 to Point Loma are also identified as eligible for scenic highway designation in the Progress Guide and General Plan.

### **Strategic Framework Element**

The City of San Diego Planning Department is developing and updating the state-mandated General Plan for the City of San Diego, which includes the Strategic Framework Element. The latest General Plan update is currently being developed and is built on the Strategic Frameworks' primary concept called "The City of Villages." "The City of Villages" strategy is based on focusing growth in pedestrian friendly village centers of mixed-use character linked by high quality public transit. The General Plan is composed of nine major elements including Land Use, Mobility, Urban Design, and others. The Land Use component is the central organizing element for the plan as a whole and prescribes where and how new growth and development should occur. SDIA is bordered on three sides by land use areas governed by the City of San Diego's General Plan.

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<sup>21</sup> San Diego Unified Port District (District). *San Diego Unified Port District, Port Master Plan*. Revised July 2005.

Due to the size of the city, it relies on community and neighborhood planning areas for detailed and parcel specific land uses. The Land Use element of the citywide General Plan sets the goals and the policy direction upon which the community plans are developed. The Land Use Element also designates the general distribution and location of land-uses throughout the city using general land-use classifications. At this time the Strategic Framework Element has not been adopted and is in the process of review and approval.

The City's adopted land use plans (primarily community plans, specific plans and precise plans) contain the policies, recommendation and development standards along with the proposed location of uses within a community. Several community planning areas surrounding SDIA establish these land use policies and are identified in the section that follows.

### **City of San Diego Community Plans**

The City has divided land within its jurisdiction into various Community Planning Areas (CPA) to implement the City's Progress Guide and General Plan policies at the community level. The City's Community Plans outline various policies to improve neighborhood quality of life and to ensure compatible development within each community. Each community has an advisory planning group that reviews projects affecting the community and presents its recommendations to the City. The City CPAs in the vicinity of SDIA and the project site are listed in [Table 5-2.1](#).

Table 5-2.1  
SDIA Surrounding City Community Planning Areas

<b>Community Planning Area</b>	<b>Location</b>	<b>Community Plan Adopted</b>
Peninsula CPA	Contiguous	July 14, 1987
Uptown CPA	Airport Influence Area	February 2, 1988
Midway- Pacific Highway Corridor CPA	Contiguous	May 28, 1991
Downtown CPA	Airport Influence Area	February 28, 2006

Source: Individual community plans, stated dates, City of San Diego website.

### **Midway-Pacific Highway Corridor**

The Midway-Pacific Highway Corridor CPA is the closest community planning area to SDIA and the Proposed Project site. It establishes a vision for the future form of the community and provides specific recommendations for land uses designed to meet the existing and future needs of the community. The CPA consists of approximately 800 acres and is bounded on the north by I-8, on the east by I-5, on the south by Laurel Street, and on the west by district properties, the Marine Corps Recruitment Depot (MCRD) San Diego and former Naval Training Center (NTC) sites. A portion of the Midway-Pacific Highway Corridor CPA is located immediately north and east of the project site along Pacific Highway.

The Midway-Pacific Highway Corridor Community Plan designates the area immediately adjacent to SDIA and the project site for industrial and commercial uses. The area along the Pacific Highway corridor, which is closest to the Airport, is subject to the most intense noise impacts. The Midway-Pacific Highway Corridor Community Plan has specific recommendations for compatible land uses based on the noise equivalent levels. These significant noise levels exceed the threshold for residential use and limits new locations for residential use and potentially increase the intensities for residential development in other non-noise impact areas of the community. A portion of the community lies within the Coastal Zone and is located immediately adjacent to SDIA and is directly beneath the airport glide path.

The Midway-Pacific Highway Corridor Community Plan has specific land use policy recommendations related to SDIA that include the following:

- Commercial: Provide zoning and land use designation for airport-related commercial uses in areas which are most impacted by flight operations.
- Industrial: Design and locate industrial development so that negative impacts such as air, noise and visual pollution, traffic congestion, and circulation conflicts will be minimized.



- Residential: Limit the intensity of residential development in those areas subject to high community noise levels.

It should also be noted that the Midway-Pacific Highway Corridor CPA is currently in the planning process to amend the community plan. One of the amendment items is the removal of the Bay-to-Bay Link. Part of this CPA is included within the San Diego North Bay Redevelopment Plan and is discussed in a sub-section that follows.

### **Uptown Community Plan**

The Uptown CPA is located immediately east of the Proposed Project site and north of the Centre City area. It is bounded on the north by steep hillsides of Mission Valley, on the east by Park Boulevard and Balboa Park, and on the west by Old Town and I-5. The CPA comprises about 2,700 acres. The community plan was adopted in 1975 and was revised in 1988. The plan establishes a vision for the future development of the community, and provides specific recommendations for land uses designed to meet the existing and future needs of the community. Part of this CPA is also included within the City's North Bay Redevelopment Plan, which is discussed in a sub-section that follows.

The Uptown Community Plan designates most of the area in the vicinity of SDIA and the project site for residential uses (Mission Hills and Park West) with some commercial uses bordering I-5 (Middletown).

The Proposed Project site is located within the protected view zone described in the community plan. The Mission Hills section of the community plan specifically states in the objectives that views are to be preserved from the western slopes. Furthermore, the Mission Hills section recommends maximizing the design quality of future development in the community in order to retain public views.

The Park West section states the objectives of encouraging the Port District (now the SDCRAA) to reduce noise impact and airport-related pollution, which affects residents and workers. The Park West section also states that future development in the area would be compatible with airport operations. The recommendation section of Park West also states that the intensity of development in areas subject to airport noise and where structures may obstruct flight operations be limited.

### **Peninsula Community Plan**

The Peninsula CPA is located immediately west of SDIA and south of the Midway community. The Peninsula CPA is bounded on the north by the community of Ocean Beach and on the west and south by the Pacific Ocean and the east by the San Diego Bay. The Peninsula CPA occupies approximately 4,409 acres and the community plan was adopted in 1987. The plan establishes a vision for the future development of the community, and provides specific recommendations for land uses designed to meet the existing and future needs of the community. The community plan designates the core of the community as residential uses with commercial uses fronting San Diego Bay and military-related industrial uses bordering SDIA and the southern portion of the peninsula.

### **San Diego Downtown Community Plan**

San Diego Downtown Community Plan (SDDCP) functions as the land use element of the San Diego Progress Guide and General Plan for future development in downtown San Diego, which is often referred to as the "Centre City." The Community Plan was adopted in February of 2006. The SDDCP consists of approximately 1,500 acres within the metropolitan core of the City of San Diego. The SDDCP is roughly bounded; to the north by SR 163 and I-5; to the south and west by San Diego Bay; to the east by I-5 and the communities of Golden Hill, Sherman Heights, and Logan Heights. The Community Plan recognizes the importance of integrating waterfront amenities with the downtown commercial and residential districts. This portion of San Diego is also located within Centre City Redevelopment Project of the City of San Diego and is under the planning jurisdiction of the Centre City Development Corporation (CCDC). The northern end of the Centre City area extends to Laurel Street, immediately south of SDIA and the project area. Land uses within this area of Centre City comprise of small-scale commercial uses, including restaurants, motels, gas stations, car rentals, auto services, offices, and paved parking areas.

The SDDCP document defines the vision for the downtown planning area. The SDDCP recognize the importance of mixed land uses, land use edge conditions and the need to preserve short and long-range public views. In the SDCP the downtown planning area is made up of eight (8) distinctive neighborhoods and districts. The SDCP district sharing a common boundary with the Project Area is Little Italy. The

northern border of Little Italy and the southern border of SDIA are divided by Laurel Street. The goal of the SDCP for the Little Italy neighborhood is to “use airport-related development constraints as opportunities for unique land use and development patterns.” Also, the Little Italy neighborhood will continue to provide flexible land uses south of Laurel Street and between Pacific Highway and I-5.

### **North Bay Redevelopment Plan**

The City adopted the North Bay Redevelopment Plan on May 18, 1998, (Ordinance O-18516) to eliminate blight and prevent the recurrence of blight within the adopted redevelopment area. The redevelopment area consists of all or portions of the following community planning areas: Midway-Pacific Highway Corridor, Old San Diego, Peninsula, Clairemont Mesa, Uptown, Mission Valley and Linda Vista. Key redevelopment policies identified in the North Bay Redevelopment Plan include: redesignating land uses in certain areas to create a more orderly arrangement of compatible uses by removing dilapidated and deteriorating structures, upgrading infrastructure, and developing a "Bay-to-Bay" water link through the community that would connect the Navy Boating Channel with Mission Bay. The purpose of the Bay-to-Bay link is to provide an urban and recreational amenity that would improve the image of the community and attract new upscale development to the area. To provide the needed neighborhood density to support the Bay-to-Bay link, residential uses would be allowed in all commercial areas within the North Bay Redevelopment area. The North Bay Redevelopment Plan includes residential-designated land in the Uptown CPA, which is the area located north of I-5 in the vicinity of the Proposed Project site.

However, it should be noted that in April of 2004 the City Council issued a directive to the Planning Department to remove the Bay-to-Bay concept from the Community Plan and other related documents (i.e., North Bay Redevelopment Project). The City of San Diego and the North Bay Redevelopment Agency are currently preparing a Community Plan Amendment reflecting this directive.

### **Naval Training Center Redevelopment / Reuse Plan**

The City has prepared a redevelopment and reuse plan in 1998 for the former NTC property (known as Liberty Station). Under the approved plan, approximately 430-acres of the NTC site are to be disposed of by the Navy and transferred to the City for redevelopment under the federal Defense Base Realignment and Closure Act of 1990. The current redevelopment plan for the former NTC shows a mixture of aviation, commercial, residential, recreational, nature preserve, historic district, and civic uses. The NTC Re-use Plan was designed to integrate with the Bay-to-Bay water link identified in the North Bay Redevelopment Plan. As stated previously the Bay-to-Bay concept is proposed to be removed from the North Bay Redevelopment Plan and the Midway /Pacific Highway Corridor through a community plan amendment.

The NTC Reuse Plan is considered by the City to be an important piece in the effort to revitalize the area surrounding SDIA. The City, acting as the local redevelopment authority in cooperation with the Navy, has invested considerable time and money, as well as active community involvement, in developing the Reuse Plan. The type and location of land uses shown in the Reuse Plan were developed based on existing noise contours for SDIA. Due to existing aircraft noise levels, the only suitable location for residential and hotel uses is at the southerly end of the site. The NTC Reuse Plan has been replaced by the NTC Precise Plan (September 2001) and is described in the next section.

### **NTC Precise Plan and Local Coastal Program**

The NTC Precise Plan guides the future development (known as Liberty Station), establishes design programs, and defines the implementation methods for approximately 360 acres of the former military training center in San Diego's Point Loma neighborhood. NTC Precise Plan continues to plan for the area as a pedestrian-oriented, mixed-use neighborhood with a mix of residential, institutional/civic, educational, office, commercial and recreational uses.

## **City of San Diego Airport Approach Overlay Zone**

The City Land Development Code establishes AAOZ for the area surrounding SDIA within the City of San Diego<sup>22</sup> and does not fall under the jurisdiction of the SDCRAA. The City adopted the AAOZ in 1986 and was amended in 1992 to establish a 50-foot buffer between the height of new structures and the height of the airport contours established by the FAA for SDIA.<sup>23</sup> The AAOZ ordinance establishes a procedure by which a proposed structure is evaluated for compliance with the zone's height limitation prior to the issuance of a building permit for the structure. The purpose of the AAOZ is to provide supplemental regulations for property surrounding the approach path to SDIA. The City has adopted building height restrictions and noise compatibility guidelines to ensure that development in the vicinity of SDIA is consistent with the policies contained in the adopted SDIA ALUCP. ~~Although the AAOZ does not fall under SDCRAA jurisdiction, the AAOZ height limits are considered by the FAA in their review of potential airspace conflicts associated with new development.~~

## **City of San Diego Airport Environs Overlay Zone (AEOZ)**

The City Land Development Code establishes the AEOZ for the area surrounding SDIA within the City of San Diego. The City adopted the AEOZ in 1997 and was effective as of January 2000. The purpose of the AEOZ is to provide supplemental regulations for property surrounding SDIA. The AEOZ is to ensure that the land uses are compatible with the operation of the Airport. This is accomplished by implementing the Airport Land Use Commission (SDCRAA) Comprehensive Land Use Plan; now know as the ALUCP, requirements and restrictions when reviewing proposed development for projects in the overlay zone. It should be noted that the AEOZ for SDIA does not accurately reflect the Airport Influence Area.

Each community has an advisory planning group that reviews projects affecting the community and presents its recommendations to the City. The City CPAs in the vicinity of SDIA and the SDIA Project Area Project site are listed below in [Table 5-2.1](#).

### **5.2.3 Significance Criteria**

For the purposes of this analysis, potential significant land use compatibility impacts were evaluated based on the CEQA Environmental Checklist Appendix G of *CEQA State Guidelines* and in cooperation with SDCRAA. The Proposed Project would have a significant land use compatibility impact if it results in:

- *"Inconsistency or conflict with goals, objectives, policies, or implementation of, the California Coastal Act, or other relevant land use regulations;*
- *Inconsistency or conflict with an adopted land use designation or zoning intensity, where substantial indirect or secondary environmental impact would occur;*
- *Disruption or division of the physical arrangement of an established community;*
- *Substantial or extreme land use incompatibility with adjacent or nearby existing and proposed land uses, resulting in significant incompatibility or nuisance impacts;*
- *Substantial reduction in the amount of commercial, recreation, or park land uses on surrounding properties; or*
- *Exceeds the acceptable height limits identified by applicable FAA regulations."*

### **5.2.4 Environmental Setting**

This section presents a summary of existing land uses of the Proposed Project site and surrounding area. The current land use at the Proposed Project site is the existing SDIA airport operations. Additional properties included in the Proposed Project site, specifically the former General Dynamics and Teledyne

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<sup>22</sup> San Diego Municipal Code Chapter 13, Article 2, Division 2. Ordinance number O-18451. Section 132.0201.

<sup>23</sup> San Diego Municipal Code Chapter 13, Article 2, Division 2. Ordinance number O-18451. Section 132.0205.

Ryan properties, are currently unused. The primary land uses in the area surrounding the Proposed Project area are military, mixed-use, residential, commercial, aircraft- and port-related industrial, as well as commercial, recreational, and tourism-related.

#### **5.2.4.1 Onsite Land Uses**

This section describes the existing land uses of the Proposed Project site at SDIA.

It is situated on 661 acres on the north side of San Diego Bay on State Tidelands. SDIA is the major airport in San Diego County that is served directly by commercial air-carrier operations. SDIA includes the existing 9,400-foot runway with associated airfield taxiways and existing cargo and air support facilities, including the Air Traffic Control Tower, the Air Rescue/Fire Station, and general aviation services.

The location of the Proposed Project (Preferred Alternative) at SDIA takes access from North Harbor Drive. The Proposed Airport Land Use Plan area consists of the Airport as well as incorporating the former General Dynamics site, with access from Pacific Highway and the former Teledyne Ryan property on the south side of the SDIA Runway 9-27, east of the Commuter Terminal with access taken from North Harbor Drive.

The SDIA Project Area consists of the following existing facilities: existing airfield, terminals, ground transportation, circulation, parking, transit plazas, air cargo and general aviation facilities including:

- Runway 9-27 and Taxiway System.
- North Side: The north side of Runway 9-27, formerly known as the General Dynamics site, with the area used for long-term and short-term parking. However, there is a cargo-related business and Fixed Based Operator (FBO) of general aviation uses located at the southerly end of the site along Pacific Highway.
- South Side: The south side of Runway 9-27 consists of the existing terminals, gates and parking areas on SDIA. Additionally, the south side includes approximately 47-acres of the former Teledyne Ryan property. The improvements at the facility include multiple buildings (approximately 50) that have been built over the last 60 years. This Teledyne Ryan facility was in operation until 1999. The site and all of the buildings are vacant. Currently, long-term and short-term parking is operating along the area adjacent to North Harbor Drive.

#### **5.2.4.2 Surrounding Land Uses and Land Use Plans**

This section identifies the existing land uses on the lands contiguous to and in the Airport Influence Area of SDIA and the Proposed Project area.

The lands surrounding SDIA and the Proposed Project area support a very diverse set of uses, including military training and headquarters areas, mixed-use residential, commercial, and civic developments, port operations, parks, recreation and boating, single-family residential, commercial, and industrial areas. These uses are described in more detail and in relation to SDIA and the Project area below.

The primary land uses immediately surrounding the SDIA site are; the MCRD San Diego to the north; Liberty Station (formerly the Naval Training Center) and the Peninsula Community Planning Area to the west; commercial uses and the San Diego Unified Port District administration building to the east along Pacific Highway; the Midway-Pacific Highway Community Planning Area between SDIA and Interstate-5; the Uptown CPA to the east across Interstate-5; and aircraft-related industrial and commercial uses to the south in the North Embarcadero area. Further south, past SDIA and across North Harbor Drive, is a complex of hotels, restaurants, and marinas located on Harbor Island, the Spanish Landing Park, and the U.S. Coast Guard Office. Existing surrounding land uses and planning areas are depicted in [Figure 5.2-2](#). Some of these uses are described in more detail in the following sections.

#### **North/Northeast of Project Site**

##### **US Marine Corps Recruit Depot San Diego**

US Marine Corps Recruit Depot (MCRD) San Diego comprises 433 acres of land immediately north of and adjacent to the project site. MCRD San Diego has over 800 civilian employees and over 1,800

permanent military personnel. At any one time, approximately 4,000 recruits are housed at MCRD. Outdoor use areas adjacent to SDIA Project Area include an outdoor combat skills training area.

### **Midway-Pacific Highway Corridor Community Plan Area**

A portion of the Midway-Pacific Highway CPA extends along Pacific Highway immediately adjacent to the project site. Existing land uses in this area consist primarily of light industrial and commercial transportation related uses (e.g., warehousing and car rentals). There are also educational facilities in the community that are in close proximity to the project area including Dewey Elementary School and St. Charles Borromeo Academy, a private school, industrial uses and a main US Postal Service facility. Immediately adjacent to the SDIA Project Area and to US MCRD San Diego is a portion of the Midway-Pacific Highway CPA that extends along Pacific Highway immediately adjacent to the eastern edge of the project site. Existing land uses in this area consist primarily of light industrial and airport-related commercial uses such as long and short term parking and car rentals and the headquarter offices of the San Diego Unified Port District and the Middletown Palm Avenue Trolley Station.

### **Uptown Community Plan Area**

The Uptown CPA is located further east, across I-5, immediately north of the downtown Centre City area. The Uptown CPA is dominated by residential uses with some commercial business bordering I-5. Some of these residences and businesses are located on the western slopes of hills adjacent to I-5, overlooking SDIA and the project site.

### **South/Southeast of Project Site**

#### **San Diego Downtown Community Planning Area**

The San Diego Downtown Community Planning Area (CPA) is located on the southeast side of SDIA and comprises approximately 1,500 acres. The Downtown San Diego Community is intended to be the City of San Diego's center, comprised of a financial/commercial core surrounded by well-integrated mixed-uses areas, including residential neighborhoods, offices, open spaces, and commercial uses serving an urban downtown environment. The downtown area is divided into eight urban, high-density, mixed-use districts. The district that is most relevant to this project is the Little Italy District, which is immediately adjacent to southeast corner of Project Area.

#### **Little Italy District**

The Little Italy District is a medium-density residential and commercial neighborhood located between Laurel Street on the north side and Ash Street on the south, between Harbor Drive on the west and I-5 and Front Street on the east. The Little Italy District is a community of diverse uses, with industrial, mixed-use, residential, commercial and open space land uses. The District is also home to the County Administration Center on Harbor Drive. Additionally, the portion of the Little Italy District west of the railroad and trolley tracks, also known as the North Embarcadero Area, has been promoted for redevelopment under the North Embarcadero Visionary Plan.

#### **North Embarcadero**

The North Embarcadero area encompasses the downtown waterfront area bounded by Laurel Street on the north; Market Street on the south, San Diego Bay on the west, and the railroad and trolley tracks on the east. The northern end of the North Embarcadero area borders the southern property boundary of SDIA Project Area at Laurel Street.

Existing land uses in the area include: industrial and warehousing in the northern end, adjacent to the Proposed Project site; visitor-serving commercial recreational, hotel, small-scale retail, and office in the central area; and the U.S. Navy and residential uses at the southern end of the area.

More specific North Embarcadero area that is immediately adjacent to SDIA Project Area, there are existing land uses that include: airport-related industrial and commercial uses such as Solar Turbines and car rental agencies, other commercial businesses, and the County of San Diego County Administration Center. There are also several public recreation facilities in this area, including viewing and fishing piers along Harbor Drive, a waterfront promenade, and the Grape Street pier.

A redevelopment plan including major public improvements has been drafted for the North Embarcadero area, called the North Embarcadero Visionary Plan, which includes major public improvements for the northern end of the area. This redevelopment plan, the North Embarcadero Visionary Plan, is discussed in greater detail in the subsequent section.

## **Directly South of Project Site**

### **South Side of North Harbor Drive**

Immediately south of the SDIA Project Area runs North Harbor Drive. Along the south side of North Harbor Drive are the City of San Diego Metropolitan Sewer Pump Station #2, the US Coast Guard Station, a rental car return center, the Harbor Police Station, and the Spanish Landing Park. Further to the south is Harbor Island.

### **Spanish Landing Park**

Spanish Landing Park is an existing park located approximately 0.5-mile directly south of the SDIA Project Area, on the south side of North Harbor Drive. Spanish Landing Park extends along the north bank of the Harbor Island West Basin, occupying 11.2 acres of land, as shown in [Figure 5.2-2](#), and includes a bicycle and pedestrian path along the shore of San Diego Bay. More specifically, there are 1.3 acres are designated as a promenade in the form of a bicycle and pedestrian path. The park is developed with picnic tables, restrooms, parking, and extensive landscaping. Approximately one-mile of public access to the shore is provided by this park.<sup>24</sup> The park has been designated as a California Historical Landmark as the site of the anchorage of the supply ships of the Portola-Serra expedition of 1769.

### **Harbor Island**

Located on Harbor Island, south of North Harbor Drive and near to the SDIA Project Area, are uses that include: hotels, restaurants, marinas, and Harbor Island Park.

## **West of Project Site**

### **Naval Training Center Redevelopment Area/Liberty Station**

The former NTC property, comprising approximately 541 acres, is located adjacent to SDIA Project Area on its west side across from the San Diego Bay Navy Boat Channel. The City has begun redevelopment at the site under the approved redevelopment plan for the property, now known as Liberty Station. Uses include residential, commercial, office, recreational, educational, and civic uses. Also, a portion of the former NTC property has been leased to SDCRAA for SDIA expansion uses.

### **Peninsula CPA**

The Peninsula CPA, located approximately 0.5-mile west of SDIA, comprises 4,407 acres of which over 90 percent is zoned for residential use. The community is divided into nine neighborhoods. Substantial landscaping, small winding concrete streets, old streetlights, and Spanish architecture characterize the area. The Point Loma High School, Loma Portal Elementary School, and the commercial district along Rosecrans and Voltaire Street are prominent features of the CPA. High Tech High School, another educational facility, is located in Liberty Station (former NTC). The area directly southwest of Liberty Station includes a small commercial district that includes retailers, restaurants, single-family and multifamily housing, hotels, office buildings, and a marina.

### **Navy Fleet Anti-Submarine Warfare Property**

The Navy Fleet Anti-Submarine Warfare property occupies 37.7 acres of land approximately 1 mile southwest of the project site. The Navy uses the facility for training personnel in the use of antisubmarine warfare equipment. A portion of the site is leased by the Navy from the Unified Port District of San Diego.

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<sup>24</sup> P&D Technologies, April 1988.

## **5.2.5 Impact Analysis**

This section identifies the potential land use planning impacts associated with the Proposed Project (Preferred Alternative) and its alternatives. Each alternative is discussed and the potential land use impacts are identified in relation to each of the on-site and surrounding land use plans described in the previous Land Use Planning sections.

### **5.2.5.1 Proposed Project (Preferred Alternative)**

This section compares the Proposed Project (Preferred Alternative) to the onsite and offsite land use plans and policies for potential land use impacts. The Proposed Project (Preferred Alternative), as proposed in the Airport Master Plan, includes two components: a Proposed Airport Land Use Plan and a Proposed Airport Implementation Plan. These components will be discussed individually.

#### **Proposed Airport Land Use Plan**

##### **Onsite Land Use Plans and Policies**

This section discusses the compatibility of the Proposed Airport Land Use Plan with the Land Use Plans and Policies that govern the Proposed Project site.

##### **Adoption of Airport Land Use Plan**

In January 2003, the San Diego County Regional Airport Authority Act (SDCRAA Act) became effective and the SDCRAA was created. The SDCRAA Act grants to SDCRAA all land use planning authority and jurisdiction over lands within the original SDIA leasehold, along with any other lands that might be acquired adjacent to the existing airport property and necessary to operate the Airport. As of the creation of the SDCRAA, the San Diego Unified Port District is no longer responsible for the planning and operations of SDIA.

As stated in Chapter 4 *Alternatives*, the State enabling legislation which created the San Diego Unified Port District also conveyed and granted in trust to the Port District the tidelands and submerged lands surrounding San Diego Bay, including most of those lands upon which SDIA is situated. The Airport property (with the exception of a thin strip of land along Pacific Highway that is not designated as “tidelands”) and the Teledyne Ryan property, while under the control and jurisdiction of SDCRAA, remain in the public trust and any proposed land uses must be consistent with California Tidelands Trust requirements.

Although the Airport property, including the General Dynamics and Teledyne Ryan parcels more recently acquired by SDIA, is depicted in the certified Port Master Plan (PMP) Planning District 2 map, the PMP and its associated land use designations are no longer applicable to property now under the planning jurisdiction of SDCRAA. When adopted, the Proposed Airport Land Use Plan will be the document that formally defines the allowable land uses in the project site and guides future development for airport uses.

There are only three types of land uses that were originally designated by the Port District for the airport leasehold: Airport, Airport-related commercial and Aviation-related industrial. Because the Airport property and the Teledyne Ryan site are State tidelands, they must be used to serve statewide public purposes. Therefore, SDCRAA cannot designate land within the Airport property for any use other than for airport use. In the Proposed Airport Land Use Plan all lands under SDCRAA jurisdiction will be designated as airport land use and described as one of four types of airport uses: Airfield, Terminal, Ground Transportation, or Airport Support.

Since the Proposed Airport Land Use Plan replaces the land use plans and policies for the PMP within Planning District 2 and since the uses of the Airport land continues to be constrained by their designation as tidelands and the associated development policies of the Coastal Commission, the Proposed Airport Land Use Plan would be considered consistent with existing land use plans and impacts would be considered less than significant.

##### **California Tidelands Trust**

In the San Diego Unified Port District Act, which addresses the tidelands and submerged lands surrounding the San Diego Bay, there are two subsections that are relevant to the Proposed Airport Land Use Plan, Section 87 Subsections (3) and (4):

## Section 87: Purpose for Use of Tide and Submerged Lands Held In Trust by District

Section 87 (3): This section specifically allows for the establishment and improvement of airport or aviation facilities. This section identifies the type of facilities and uses typically needed for the operation and accommodation of air commerce and air navigation. The Proposed Airport Land Use Plan that includes Airfield, Terminal and Airport Support uses would be consistent with this purpose.

Section 87 (4): This section allows for the construction and reconstruction of streets, roadways and parking facilities to accommodate any of the uses that are permitted. The Purposed Airport Land Use Plan provides for Ground Transportation uses, which would be consistent with this purpose.

Since the Proposed Airport Land Use Plan does not conflict with the policies or goals of Section 87 of the San Diego Unified Port District Act, the Proposed Airport Land Use Plan would be consistent and project-related impacts would be considered less than significant.

### California Coastal Act

Under the California Coastal Act, the Coastal Commission retains development permit jurisdiction and authority over State coastal tidelands even after Commission approval of a development plan. Since the inception of SDCRAA, all coastal development permitting has been initiated by SDCRAA staff directly with the Coastal Commission.

Development of the SDIA tidelands under Port District control was governed by Chapter 8 of the California Coastal Act. Since SDIA is no longer part of the Port, the standard of review for all development projects is now Chapter 3 of the Act. The sections of California Coastal Act Chapter 3 relevant to the Proposed Airport Land Use Plan are cited below and are followed by a description of the section's goals and the Proposed Project's impact.

- Section 30212(a) New development projects: The Proposed Airport Land Use Plan will not interfere with the public's right of access to the waterfront. The Proposed Project (Preferred Alternative) is not on the shoreline or the bay front and when the project is implemented the same level of access would continue. Also, public access is currently provided to the shoreline or bay front at many locations within Spanish Landing Park and on the linear parkway on the south side of Harbor Island.
- Section 30220 Protection of certain water-oriented activities: The Proposed Airport Land Use Plan will not conflict with the requirement that "*development not interfere with water-oriented recreational uses provided in the bay.*" The Proposed Project (Preferred Alternative) will be developed on an existing aviation-related site to the north of San Diego Bay. The Proposed Project (Preferred Alternative) would not inhibit the water-oriented recreational uses that occur on the bay.
- Section 30240(b) Environmentally-sensitive habitat areas; adjacent developments: The Proposed Project (Preferred Alternative) would be developed on previously developed areas within the SDIA leasehold that have been designated for airport operations. SDIA currently includes terminals and gates, the existing 9,400-foot runway with associated airfield taxiways and existing cargo and air support facilities, including the Air Traffic Control Tower, the Air Rescue/Fire Station, and general aviation services. The Proposed Project (Preferred Alternative) would expand on those facilities but would not encroach into the nearby park and recreational areas. The siting of these new facilities outlined in the Proposed Project (Preferred Alternative) would be consistent with the existing facilities at SDIA and would not degrade these existing recreational areas associated with the bay front.
- Section 30250 Location; existing developed area: The Proposed Project (Preferred Alternative) would be developed on previously developed or disturbed areas within the SDIA leasehold. There are adequate public facilities to support the Proposed Project, which are further discussed in sections 5.11 Utilities and Service Systems and 5.17 Public Services. The Proposed Project (Preferred Alternative) would not have a significant adverse effect on coastal resources when implemented.



- Section 30252 Maintenance and enhancement of public access: The Proposed Airport Land Use Plan would not conflict with or impact public access to the existing coastal resources. Access to these coastal resources would continue from North Harbor Drive and other secondary circulation routes such as Harbor Island Drive. The Proposed Project (Preferred Alternative) would provide for additional parking to satisfy the needs of the expanded facility, which is further discussed in section 5.3 Traffic and Circulation. By satisfying its own parking requirements, there would be no impacts on existing parking facilities serving nearby parks or recreational areas at the bay front. Additionally, the Proposed Project (Preferred Alternative) is currently served by public transit and would continue to be served by Airport Flyer Route 992 and MTS Bus Routes 923 and 922 that run on North Harbor Drive. Additionally there is a proposed pedestrian bridge to connect the Middletown Palm Trolley Station to the proposed terminals at the north east side of the SDIA Project Area. An on-site tram would connect these patrons to the terminals on the south side of the SDIA Project Area.

Since the Proposed Airport Land Use Plan would not conflict with any of the above policies or goals of the California Coastal Act Section 3, the Proposed Airport Land Use Plan would be considered consistent. As such, the project related impacts would be considered less than significant.

### **Surrounding Land Use Plans and Policies**

This section discusses the compatibility of the Proposed Airport Land Use Plan with the land use plans and policies that govern the area surrounding the Proposed Project area.

#### **Airport Land Use Compatibility Plan**

The ALUCP, for SDIA aims to protect public health and safety from noise and other hazards related to the operation of SDIA indicates that the Proposed Airport Land Use Plan would be compatible with the goal of the ALUCP.

Implementation of the Proposed Airport Land Use Plan would not significantly change noise exposure within the Airport Influence Area (see Section 5.1 *Noise*). The noise impact of the Proposed Airport Land Use Plan would be less than or equal to the impact assumed in the ALUCP, note that the ALUCP is being revised with the 2030 noise contours generated in the EIR. A project that results in impacts less than or equal to the impacts assumed in the ALUCP would be consistent with the ALUCP; Therefore, the Proposed Land Use Plan would be consistent with the ALUCP. Consequently, an amendment to the ALUCP would not be required, and the impact of the Proposed Project would be considered less than significant.

#### **Port Master Plan (PMP)/California Coastal Act**

The Port Master Plan is the land use document that governs the land use plans and policies for the Port District lands, including those immediately surrounding SDIA. These surrounding lands fall into the Port Planning Districts: Planning District 1, Shelter Island/La Playa; Planning District 2, Harbor Island/Lindbergh Field; and Planning District 3, Centre City Embarcadero.

In Planning District 1 there are several land uses designated including: Commercial and Public Recreation. In Planning Districts 2 and 3 the designated land uses include: Commercial, Industrial, Visitor-serving, and Public Recreation. The proposed land uses outlined in the Proposed Airport Land Use Plan (Airfield, Terminal, Ground Transportation and Air Support) are similar to and compatible with the surrounding Port District land uses.

The Proposed Airport Land Use Plan would implement the PMP goal of guiding the reuse of land for more appropriate purposes by clearance and redevelopment of the obsolete. The Proposed Land Use Plan would accomplish this goal by redeveloping currently underutilized, essentially vacant sites with airside and landside improvements to improve operations at SDIA and to help meet future air travel demands at SDIA.

As discussed in Section 5.18 *Recreation*, the project site and the immediate surrounding area, except for US MCRD San Diego, are developed with aviation-related, commercial, transportation, and recreational uses. There would be no direct appropriation of planned or existing parkland with the implementation of the Proposed Airport Land Use Plan.

Additionally, the Proposed Airport Land Use Plan would not conflict with the PMP goal to provide “windows to the water” at frequent and convenient locations around the periphery of the Bay as it would not impact any designated vista location identified in the PMP or any street-level views to the Bay (see Section 5.13, *Aesthetics*).

Also, the Proposed Airport Land Use Plan site is not located within a community planning area; therefore, the Proposed Airport Land Use Plan would not physically divide any established community. The affect on noise exposure caused by the Proposed Project is discussed in Section 5.1 *Noise*. As shown previously, the Proposed Airport Land Use Plan would not conflict or be incompatible with the the land use portion of the PMP and land use impacts to the Port District lands would be considered less than significant.

### City of San Diego Land Use Plans and Policies

This section discusses the compatibility of the Proposed Airport Land Use Plan with the City of San Diego Land Use Plans and Policies.

#### *City of San Diego General Plan*

The Proposed Airport Land Use Plan would be located within SDIA Project Area on land contiguous with the Airport, including the former NTC San Diego property recently transferred to the District, the former General Dynamics site, and the former Teledyne Ryan facility. Current and historic uses of this land include airport, aviation-related industrial, and military training. Use of this land for the Proposed Airport Land Use Plan would be generally consistent with the highly disturbed current and past uses of the land.

#### *City of San Diego Community and Precise Plans*

This section discusses the compatibility of the Proposed Airport Land Use Plan with the City of San Diego Community and Precise Plans including the Midway-Pacific Highway Corridor, Uptown and Peninsula Community Plans as well as the NTC Precise Plan.

The Proposed Airport Land Use Plan is located within the protected view zone described in several community plans. Section 5.13 *Aesthetics* presents an evaluation of the potential impacts to key views, neighborhood character, and aesthetics, including the nearby CPAs. The identified views would not be significantly impacted, with residents located at a higher elevation than the project, being able to view scenic resources over possible project improvements. Public views towards the SDIA Project Area or towards scenic view resources would not be significantly impacted due to the design of proposed projects that are similar to existing structures and due to existing conditions that currently block views.

As discussed in Section 5.12, *Light Emissions*, lighting and glare impacts would be less than significant, with some additional perceived light but insignificant additional glare at nighttime. Therefore, the Proposed Airport Land Use Plan would not significantly impact public views from surrounding neighborhoods to the downtown skyline, the San Diego Bay, or other scenic resources.

#### *Midway-Pacific Highway Corridor Community Plan*

The proposed Airport Land Use Plan includes land uses that are the same as existing land uses and generally would not impact the Midway-Pacific Highway Corridor Community Plan Area. This section generally addresses possible traffic and noise impacts from expanded land uses for this CPA. See the Section 5.1, *Noise*, and 5.3, *Traffic and Circulation*.

The Proposed Airport Land Use Plan development would not extend into surrounding communities. Improvements to surrounding roadways to mitigate traffic impacts (see Section 5.3, *Traffic and Circulation*) would be the only activities that would occur outside the immediate area of the Airport. Neither the Proposed Airport Land Use Plan nor these traffic mitigation measures would physically ~~would~~ or divide existing communities, but rather would improve connections by improving the surrounding roadways. Considering the proposed Airport Land Use Plan, there would be no significant disruption or division of the established communities in regards to traffic.

The Midway-Pacific Highway Corridor Community Plan defines a Policy regarding noise and traffic impacts particular to the industrial uses along Pacific Highway to, “*Design and locate industrial development so that negative impacts such as air, noise and visual pollution, traffic congestion and circulation conflicts shall be minimized.*” In regards to residential uses, the plan’s policy is: “*Limit the*

*intensity of residential development in those areas subject to high community noise levels.” In regards to schools, the plans’s policy states: “Acoustical installation should be installed at Dewey Elementary school building. Noise levels within the building should be reduced to 65 decibels or lower per the recommendations of the General Plan.”*

Considering the proposed Airport Land Use Plan, there would be no significant impacts to the established communities in regards to noise.

#### *Uptown Community Plan*

The proposed Airport Land Use Plan includes land uses that are the same as existing land uses and generally would not impact the Uptown Community Plan Area. This section generally addresses possible traffic and noise impacts from expanded land uses for this CPA. See the Section 5.1 and 5.3 for Traffic and Noise Analysis.

The Proposed Airport Land Use Plan development would not extend into surrounding communities. Improvements to surrounding roadways to mitigate traffic impacts (see Section 5.3, *Traffic*) would be the only activities that would occur outside the immediate area of the Airport. Neither the Proposed Airport Land Use Plan nor these traffic mitigation measures would physically divide existing communities but rather would improve connections by improving the surrounding roadways. There would be no significant disruption or division of the established communities.

The Uptown Community Plan states that noise from the Airport should be controlled so as not to negatively affect residential areas. There is no significant change in the noise contours to the Uptown Community based on the Proposed Project (Preferred Alternative). As a result, there is no significant impacts to this community-related to noise. See Section 5.1, *Noise*, for a full discussion of the noise issues associated with the Proposed Project (Preferred Alternative) and its alternatives.

#### *Peninsula Community Plan*

The proposed Airport Land Use Plan includes land uses that are the same as existing land uses and generally would not impact the Peninsula Community Plan Area. This section generally addresses possible traffic and noise impacts from expanded land uses for this CPA. See Section 5.1, *Noise*, and 5.3, *Traffic and Circulation*.

The Peninsula Community Plan states that noise from the Airport should be controlled so as not to negatively affect residential areas. There is no significant change in the noise contours to the Peninsula Community based on the Proposed Project. As a result there is no significant impact to this community related to noise. See Section 5.1, *Noise*, for a full discussion of the noise issues associated with the Proposed Project and its alternatives.

The Proposed Airport Land Use Plan development would not extend into surrounding communities. Improvements to surrounding roadways to mitigate traffic impacts (see Section 5.3, *Traffic and Circulation*) would be the only activities that would occur outside the immediate area of the Airport. Neither the Proposed Airport Land Use Plan nor these traffic mitigation measures would physically divide existing communities but rather would improve connections by improving the surrounding roadways. There would be no significant disruption or division of the established communities.

#### *San Diego Downtown Community Plan*

The proposed Airport Land Use Plan includes land uses that are the same as existing land uses and generally would not impact the San Diego Downtown Community Plan Area. This section generally addresses possible traffic and noise impacts from expanded land uses for this CPA. See the Section 5.1, *Noise*, and 5.3, *Traffic and Circulation*.

The Proposed Airport Land Use Plan development would not extend into surrounding communities. Improvements to surrounding roadways to mitigate traffic impacts (see Section 5.3, *Traffic*) would be the only activities that would occur outside the immediate area of the Airport. Neither the Proposed Airport Land Use Plan nor these traffic mitigation measures would physically divide existing communities but rather would improve connections by improving the surrounding roadways. There would be no significant disruption or division of the established communities.

In regards to possible noise impacts, general policies regarding noise are not included but there is a policy specific to the Little Italy District that states: “*Use Airport related development constraints as opportunities for unique land use and development patterns.*”

#### *NTC Precise Plan*

Due to the similar nature of the Proposed Airport Land Use Plan with the Proposed Airport Implementation Plan, the NTC Precise Plan consistency discussion for the Proposed Airport Implementation Plan also applies to the Proposed Airport Land Use Plan. As such, impact to the NTC Precise Plan would also be considered less than significant.

#### *City of San Diego Redevelopment Plans*

This section discusses the compatibility of the Proposed Airport Land Use Plan with the City of San Diego Land Redevelopment Plans and Policies.

#### *North Bay Redevelopment Plan*

Due to the similar nature of the Proposed Airport Land Use Plan with the Proposed Airport Implementation Plan, the North Bay Redevelopment Plan consistency discussion for the Proposed Airport Implementation Plan also applies to the Proposed Airport Land Use Plan. As such, land use impacts to the North Bay Redevelopment Plan would also be considered less than significant.

#### *Naval Training Center Redevelopment /Reuse Plan*

Due to the similar nature of the Proposed Airport Land Use Plan with the Proposed Airport Implementation Plan, the NTC Redevelopment/Reuse Plan consistency discussion for the Proposed Airport Implementation Plan also applies to Proposed Airport Land Use Plan. As such, land use impacts to the NTC Redevelopment /Reuse Plan would also be considered less than significant.

#### *Centre City Redevelopment Plan*

Due to the similar nature of the Proposed Airport Land Use Plan with the Proposed Airport Implementation Plan, the Centre City Redevelopment Plan consistency discussion for the Proposed Airport Implementation Plan also applies to Proposed Airport Land Use Plan. As such, land use impacts to the Centre City Redevelopment Plan would also be considered less than significant.

#### *City of San Diego Airport Plans and Policies*

This section discusses the compatibility of the Proposed Airport Land Use Plan with the City of San Diego Airport Plans and Policies.

#### *City of San Diego Airport Approach Overlay Zone*

It is anticipated that the proposed uses associated with the Proposed Airport Land Use Plan would not exceed height limits identified by FAA regulations. Although the City of San Diego AAOZ does not apply to land under SDCRAA jurisdiction, the AAOZ height limits are considered by the FAA in their review of potential airspace conflicts associated with new development. Ultimately, the FAA would review all proposed building plans to ensure the proposed improvements do not obstruct navigable airspace or affect safety of aircraft and passengers. Impacts would be less than significant.

#### *City of San Diego Airport Environs Overlay Zone*

Review of the City of San Diego AEOZ, which aims to protect public from noise or hazards associated with airport operations at SDIA, indicates that the Proposed Airport Land Use Plan would be consistent with the stated purpose of the AEOZ. The implementation of the Proposed Airport Land Use Plan would not significantly change noise exposure within the Airport Influence Area (see Section 5.1 *Noise*) note that the ALUCP is being revised with the 2030 noise contours generated in the EIR. The noise impact of the Proposed Airport Land Use Plan would be less than or equal to the impact assumed in the adopted ALUCP, which is the standard of review under the AEOZ for projects submitted to the City of San Diego. As such, impact would be less than significant.

Existing land uses in the immediate area surrounding SDIA include military and industrial facilities. Beyond these immediate uses, the greater area outside SDIA is densely developed with urban commercial, residential, transportation, and industrial uses. The Proposed Airport Land Use Plan would

not cause any substantial adverse proximity issues (i.e., 5.1 *Noise*, 5.12 *Light Emissions*, or 5.13 *Aesthetics*) that would significantly affect land uses adjacent to or near the Proposed Airport Land Use Plan.

Once the Proposed Airport Land Use Plan has been adopted it would become the governing plan and policy document defining the allowable airport uses and governed by the SDCRAA. Therefore, the Proposed Airport Land Use Plan would not have any significant land use compatibility impacts.

### **Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure)**

This section discusses the compatibility of the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) with the Land Use Plans and Policies that govern the Proposed Project site.

#### **Onsite Land Use Plan and Policies**

This section discusses the compatibility of the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) with the land use plans and policies that govern the Proposed Project area. More specifically, it reviews the Airport Land Use Plan, the California Tidelands Trust, and the California Coastal Act.

#### **Consistency with Proposed Airport Land Use Plan**

The Proposed Airport Implementation Plan was developed concurrently with the Proposed Airport Land Use Plan and is consistent with the Airport uses including Airfield, Terminal, Ground Transportation, and Airport Support. When adopted, the Proposed Airport Land Use Plan will be the document that formally defines the allowable land uses in the project site.

As such, the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) is consistent with the Proposed Airport Land Use Plan and no significant impacts to land use would occur.

#### **Consistency with California Tidelands Trust**

Due to the similar nature of the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) with the Proposed Airport Land Use Plan, the California Tidelands Trust consistency discussion for the Proposed Airport Land Use Plan also applies to the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure). As such, the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) impacts would also be considered less than significant.

#### **Consistency with California Coastal Act**

Due to the similar nature of the Proposed Airport Implementation Plan with the Proposed Airport Land Use Plan, the California Coastal Act consistency discussion for the Proposed Airport Land Use Plan also applies to the Proposed Airport Implementation Plan. As such, the Proposed Airport Implementation Plan impacts would also be considered less than significant.

### **Surrounding Land Use Plan and Policies**

This section discusses the compatibility of the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) with the land use plans and policies that govern the areas surrounding the Proposed Project Area. More specifically it reviews the Airport Land Use Compatibility Plan, the Port Master Plan/California Coastal Act, and the City of San Diego Community and Redevelopment plans.

#### **Airport Land Use Compatibility Plan**

The ALUCP for SDIA, which aims to protect public health and safety from noise and other hazards related to the operation of SDIA, indicates that the Proposed Project (Preferred Alternative) would be compatible with the goals of the ALUCP. Development of the Proposed Project (Preferred Alternative) would not significantly change noise exposure within the Airport Influence Area. The impact of the Proposed Airport Implementation Plan would be less than or equal to the impact assumed in ALUCP (note that the ALUCP is being revised with the 2030 noise contours generated in the EIR), so the Proposed Project (Preferred Alternative with Parking Structure) would be consistent with ALUCP. Therefore, an amendment to the

ALUCP would not be required, and the impact of the Proposed Airport Implementation Plan would be considered less than significant.

### Port Master Plan/California Coastal Act

The Port Master Plan (PMP) of the Unified Port District of San Diego serves as the equivalent of Local Coastal Program for the lands under the jurisdiction of the Port District per the California Coastal Act. Any actions within the Port District must comply with the PMP and, since the PMP must comply with and be approved by the Coastal Commission, would also be in compliance with the California Coastal Act. The Port Master Plan no longer governs SDIA, but does govern a significant portion of the area surrounding SDIA. Because of this, the plans and policies of the PMP are reviewed here in relation to the Proposed Airport Implementation Plan. The planning goals of the PMP relevant to Coastal Act compliance and the project, followed by the project consistency analysis for each, include the following:

- *Provide for the present use and enjoyment of the bay and tidelands in such a way as to maintain options and opportunities for future use and enjoyment.*

The project site is currently being used for airport-related uses (terminals, parking, and air cargo facilities). Development of the Proposed Airport Implementation Plan would not preclude alteration of area use in the future. The project site is currently being used for airport-related uses (terminals, parking, and air cargo facilities), so the development of an expanded terminal, new parking, taxi-lane, aprons, and air cargo facilities would not alter the existing use of the project site. As such, the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would not conflict with the PMP goal to provide for the present use and enjoyment of the Bay and tidelands area adjacent to and surrounding the SDIA Proposed Project area in such a way as to maintain options and opportunities for future use and enjoyment.

- *The District, as trustee for the people of the State of California, will administer the tidelands to provide the greatest economic, social, and aesthetic benefits to current and future generations.*

The Proposed Airport Implementation Plan would result in significant economic gains to the entire San Diego region.<sup>25</sup> The project would not result in significant adverse aesthetic impacts to surrounding regions (Section 5.13, *Aesthetics*). By creating economic advantages for the region and avoiding negative aesthetic impacts, the Proposed Airport Implementation Plan would be consistent with the PMP goal to administer the tidelands area adjacent to and surrounding the SDIA Proposed Project area to provide the greatest economic, social, and aesthetic benefits to present and future generations.

- *District will integrate the tidelands into a functional regional transportation network.*

The Proposed Airport Implementation Plan would provide an important transportation improvement to the area surrounding the Proposed Project area and to the greater San Diego region. By improving area transportation, with such elements as the addition of an intermodal center that is connected with a pedestrian bridge to a transit station that is apart of the regional mass transit system, the Proposed Airport Implementation Plan would be consistent with the PMP goal to integrate the tidelands area adjacent to and surrounding the SDIA Proposed Project area into a functional regional transportation network.

- *The District will enhance and maintain the Bay and tidelands as an attractive physical and biological entity.*

The Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would be the development of an architecturally attractive airport terminal on a previously developed area. The Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would result in no significant adverse biological impacts. By planning a visually appealing project that would not result in significant adverse biological impacts, the Proposed Project (Preferred

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<sup>25</sup> San Diego Association of Governments. Airport Economic Analysis. Fall 2000.

Alternative) would be consistent with the PMP goal to enhance and maintain the Bay and tidelands area adjacent to and surrounding the SDIA Proposed Project area as an attractive physical and biological entity.

- *The District will ensure physical access to the Bay except as necessary to provide for the safety and security, or to avoid interference with waterfront activities.*

The Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would be constructed on a previously developed area that is not used as a Bay access point. Therefore, the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would be consistent with the PMP goal to ensure physical access to the Bay except as necessary to provide for the safety and security or to avoid interference with waterfront activities.

- *The quality of water in San Diego Bay will be maintained at such a level as will permit human water contact activities.*

The Proposed Airport Implementation Plan would not result in significant water quality impacts (see Section 5.6 *Hydrology and Water Quality*). Therefore, the Proposed Airport Implementation Plan (Preferred Plan with Parking Structure) would be consistent with the PMP goal to maintain San Diego Bay water quality at such a level as will permit human water-contact activities.

- *The District will protect, preserve, and enhance natural resources, including natural plant and animal life in the Bay, as a desirable amenity, an ecological necessity, and a valuable and usable resource.*

The Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would be located on a previously developed area and would not significantly impact any biological resources. Therefore, the Proposed Airport Implementation Plan (Preferred Plan with Parking Structure) would be consistent with the PMP goal to protect, preserve, and enhance natural resources, including natural plant and animal life in the Bay as a desirable amenity, an ecological necessity, and a valuable and usable resource.

Although the proposed improvements of the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) located outside of the PMP jurisdiction, the above review demonstrates the consistencies of the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) with many of the PMP goals and policies. As such, the impacts of the Proposed Project related to the goals and policy of the PMP would be considered less than significant.

### City of San Diego Land Use Plans and Policies

This section discusses the compatibility of the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) with the City of San Diego Land Use Plans and Policies. More specifically the City's General Plans, Community and Precise Plans and Redevelopment Plans are reviewed.

#### *City of San Diego General Plan*

The Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would be located on land contiguous to, and included within the existing airport, including a parcel of land from the former NTC property that is now part of SDIA. The Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would involve improvements on the former General Dynamics facility. These improvements include additions to airfield, air support, and ground transportation facilities. Current and historic land uses of the land in the Proposed Project area of the Proposed Airport Implementation Plan (Preferred Plan with Parking Structure) would continue to be on those areas noted for airport related uses. Use of this land for the Proposed Airport Implementation Plan would be generally consistent with the highly disturbed current and past uses of the land.

The development outlined in the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would not extend into surrounding communities. Improvements to surrounding roadways to mitigate traffic impacts (see Section 5.3, *Traffic and Circulation*) would be the only activities that would occur outside the immediate area of the Airport. Neither the Proposed Airport Implementation Plan (Preferred Plan with Parking Structure) nor these traffic mitigation measures would physically divide

existing communities. There would be no significant disruption or division of the established communities. Therefore, neither the Proposed Project (Preferred Alternative) nor its mitigation measures would cause significant offsite disruption impacts to the City of San Diego or its communities.

There is no significant change in the noise contours to the surrounding communities of the general plan based on the Proposed Project. As a result there are no significant impacts to these communities related to noise. See Section 5.1, *Noise*, for a full discussion of the noise issues associated with the Proposed Project.

#### *City of San Diego Community and Precise Plans*

The compatibility of the Proposed Airport Implementation Plan (Preferred Plan with Parking Structure) with the City of San Diego's Community and Precise Plans for communities adjacent to and surrounding SDIA and the Proposed Project area are discussed in this section.

#### *Midway-Pacific Highway Corridor Community Plan*

~~The policies in the Midway-Pacific Highway Corridor Community Plan regarding commercial, industrial, or residential land uses would be compatible with Proposed Airport Implementation Plan. If future land use decisions in by the City of San Diego should follow the guidelines outlined in the ALUCP and the impact of the Proposed Airport Implementation Plan would be less than significant. The Midway-Pacific Highway Corridor Community Plan is not consistent with the adopted ALUCP. However the Proposed Project does not cause the inconsistency with the ALUCP.~~

#### *Uptown Community Plan*

~~The policies in the Uptown Community Plan recommending the protection of views on the western slopes are addressed in the Section 5.13, *Aesthetics*. The land use policies recommending that areas subject to airport noises be limited and compatible with airport operation are consistent with the ALUCP guidelines if future land use decisions by the City of San Diego follow the guidelines outlined in the ALUCP. The impact of the Airport Implementation Plan (Preferred Plan with Parking Structure) would be less than significant. The Uptown Community Plan is not consistent with the adopted ALUCP. However, the Proposed Project does not cause the inconsistency with the ALUCP.~~

#### *Peninsula Community Plan*

The Peninsula Community Plan defines the major views of the area to be those to “*the San Diego Bay, the downtown, Coronado, Mission Bay and Pacific Beach.*” Section 5.13, *Aesthetics*, presents an evaluation of the potential impacts to key views, neighborhood character, and aesthetics in the nearby CPAs. Peninsula CPA views would not be significantly impacted by the improvements visible to a viewer in the Peninsula area.

As discussed in Section 5.12, *Light Emissions*, lighting and glare would be similar to existing airport lighting and would exist along with the lighting of the highly urbanized area. Therefore, the light emissions would not significantly impact the surrounding neighborhood views to San Diego Bay, downtown, Coronado, Mission Bay, or Pacific Beach.

~~The land use designations in the community plan would be compatible with airport operations and are consistent with the ALUCP guidelines. If future land use decisions by City of San Diego follow the guidelines outlined in the ALUCP, the impact of the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) in relation to the Peninsula Community Plan policies would be less than significant. The Peninsula Community Plan is not consistent with the adopted ALUCP. However the Proposed Project does not cause the inconsistency with the ALUCP.~~

#### *San Diego Downtown Community Plan*

~~The San Diego Downtown Community Plan has been determined to be conditionally consistent with the existing SDIA ALUCP. The land use designations in the community plan would be compatible with airport operation and is consistent with the ALUCP guidelines. If future land use decisions by the City of San Diego outlined in the ALUCP the impact of The Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) in relation to the San Diego Downtown Community Plan would be less than significant. The Proposed Project would be consistent with the ALUCP.~~



### NTC Precise Plan

Some of the proposed improvements associated with the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would be located on former NTC land recently acquired by SDIA. On June 12, 2001, the Port District incorporated the former NTC land designated for "Airport Expansion" (approximately 52-acres), which was transferred from the City of San Diego. ~~The land uses identified in the NTC Precise Plan were prepared to be consistent with the CLUP (now ALUCP).~~ The development proposed in the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would not have a significant land use impact on this parcel.

### City of San Diego Redevelopment Plans

This section discusses the compatibility of the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) with the City of San Diego Redevelopment Plans and Policies.

#### *North Bay Redevelopment Plan*

~~The land use and planned development guidelines for the North Bay Redevelopment Area are compatible with airport operations and are consistent with the ALUCP guidelines. If future land use decisions by the redevelopment agency follow the guidelines outlined in the ALUCP the impact of the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would be less than significant. The North Bay Redevelopment Plan is not consistent with the adopted ALUCP. However the Proposed Project does not cause the inconsistency with the ALUCP.~~

#### *Naval Training Center (NTC) Redevelopment /Re-use Plan*

Some of the proposed improvements associated with the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would be located on former Naval Training Center land recently acquired by SDIA. On June 12, 2001, the Port District incorporated the former NTC land designated for "Airport Expansion" (approximately 52-acres), which was transferred from the City of San Diego. The development of the Proposed Project (Preferred Alternative with Parking Structure) would not have a significant land use impact under the NTC Redevelopment Plan as the NTC Precise Plan has replaced it as the planning document for the transferred parcel.

### City of San Diego Airport Plans and Policies

This section discusses the compatibility of the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) with the City of San Diego Airport Plans and Policies.

#### *City of San Diego Airport Approach Overlay Zone*

~~The proposed expansion of the terminal buildings and the proposed parking structure (five levels) in the Proposed Airport Implementation Plan would not exceed height limits identified by FAA regulations. Although the City of San Diego AAOZ does not apply to lands under SDCRAA jurisdiction, the AAOZ height limits are considered by the FAA in their review of potential airspace conflicts associated with new development. Ultimately, the FAA would review building plans to ensure the terminal does not obstruct navigable airspace or affect safety of aircraft and passengers. As such, the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would not have a significant land use impact.~~

#### *City of San Diego Airport Environs Overlay Zone*

Review of the City of San Diego AEOZ, which aims to protect the public from noise or hazards associated with airport operations at SDIA, indicates that the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would be consistent with the stated purpose of the AEOZ. The implementation of the Proposed Airport Implementation Plan would not significantly change noise exposure within the Airport Influence Area (see Section 5.1 Noise). The noise impact of the Proposed Project would be less than or equal to the impact assumed in the adopted ALUCP, which is the standard of review under the AEOZ for projects submitted to the City of San Diego for. As such, impact would be less than significant.

Existing land uses in the area immediately adjacent to the Proposed Airport Implementation Plan site include Liberty Station (the former NTC), MCRD, and airport-related facilities. The greater area outside

the Proposed Airport Implementation Plan (Preferred Plan with Parking Structure) site is developed with residential, urban commercial, recreational open space, and military industrial uses.

Immediately west of Liberty Station (the former NTC), approximately 1.5 miles from Terminal 2 West, is the residential core of the Peninsula Community Planning Area. Urban commercial uses are located approximately 1 to 1.5 miles southwest of Terminal 2 West along the San Diego Bay waterfront. Military industrial uses comprise the southernmost portion of the Point Loma peninsula, approximately 2.5 miles south of the proposed terminal improvements.

The development proposed in the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure) would occur in areas identified in the Proposed Airport Land Use Plan with land use designations for airport or airport related land uses. The Proposed Project (Preferred Alternative with Parking Structure) would be compatible with the existing terminal buildings, ground transportation and air support facilities already on the project site. Therefore, the Proposed Project would not have any significant land use compatibility impacts.

### **Proposed Airport Implementation Plan (without Parking Structure)**

The Proposed Airport Implementation Plan (Preferred Alternative without Parking Structure) proposes that excess parking demand would be served by off-property parking facilities and alternate modes of transportation, and as such the Proposed Project would not have any significant land use compatibility impacts. Due to substantial conformance of this project with the Airport Land Use Plan and the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure), the section above describing the analysis applies to the Proposed Airport Implementation Plan (Preferred Alternative without Parking Structure).

#### **5.2.5.2 East Terminal Alternative**

The East Terminal Alternative also includes two components, an Airport Land Use Plan and an Airport Implementation Plan Alternative. This section compares the East Terminal Alternatives to the onsite and offsite land use plan and policies for potential land use impacts.

### **Proposed Airport Land Use Plan**

There are only three types of land uses that were originally designated by the San Diego Unified Port District for airport use: Airport, Airport-related commercial, and Aviation-related industrial. As stated in Chapter 4, *Alternatives*, the State enabling legislation which created the San Diego Unified Port District also conveyed and granted in trust to the Port District the tidelands and submerged lands surrounding San Diego Bay, including most of those lands upon which SDIA is situated. The Airport property (with the exception of a thin strip of land along Pacific Highway that is not designated as “tidelands”) and the Teledyne Ryan property, while under the control and jurisdiction of SDCRAA, remain in the public trust and any proposed land uses must be consistent with California Tidelands Trust requirements. Because the Airport property and the Teledyne Ryan site are tidelands, they must be used to serve statewide public purposes and therefore the SDCRAA can not designate land use within the Airport property other than for airport use. With the Proposed Airport Land Use Plan all lands under the SDCRAA’s jurisdiction will be designated as an airport land use, and described as one of four types of airport uses: Airfield, Terminal, Ground Transportation, or Airport Support.

In consideration of these airport and airport-related land uses, the SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the Proposed Airport Land Use Plan. All potential impacts associated with the Airport Land Use Plan component of the Proposed Project (Preferred Alternative) are potential impacts for the East Terminal Alternative.

Since the Proposed Airport Land Use Plan replaces the land use plans and policies for the PMP within Planning District 2, and since the land uses of the Airport land continue to be constrained by their designation as tidelands and the associated development policies of the Coastal Commission, the Proposed Airport Land Use Plan would be considered consistent with these existing land use plans and impacts would be considered less than significant.

## **Airport Implementation Plan Alternative (with Parking Structure)**

### **Onsite and Surrounding Area's Land Use Plan and Policies**

This section discusses the consistency of the East Terminal Airport Alternative Implementation Plan, Component #2 (with Parking Structure) with the land use plans and policies of the Proposed Project site and the surrounding areas.

Due to the similar nature of the East Terminal Alternative, Component #2 - Airport Implementation Plan (with Parking Structure) with the Proposed Airport Implementation Plan (Preferred Alternative with Parking Structure), the analysis for it also applies to this alternative regarding On-site and Surrounding Area's Land Use Plans and Policies. As such, the East Terminal Alternative Component #2 - Airport Implementation Plan (with Parking Structure) impacts would also be considered less than significant.

## **Airport Implementation Plan Alternative (without Parking Structure)**

### **Onsite and Surrounding Area's Land Use Plan and Policies**

This section discusses the consistency of the East Terminal Airport Alternative Implementation Plan, Component #2 (without Parking Structure) with the land use plans and policies of the Proposed Project site and the surrounding areas.

Due to the similar nature of the East Terminal Alternative, Component #2 - Airport Implementation Plan (without Parking Structure) with the Proposed Airport Implementation Plan (Preferred Alternative without Parking Structure), the analysis for it also applies to this alternative regarding On-site and Surrounding Area's Land Use Plans and Policies. As such, the East Terminal Alternative Component #2 - Airport Implementation Plan (without Parking Structure) impacts would also be considered less than significant.

### **5.2.5.3 No Project Alternative**

This section evaluates the potential effects of maintaining the existing condition of the SDIA Project Area at SDIA. Under this No Project Alternative, there would be no changes to the existing terminals, airside facilities, cargo facilities, or landside access facilities.

The No Project Alternative would not develop a terminal or related airside or landside facilities that would improve or increase airport operations. The No Project Alternative would not result in any changes that would be inconsistent with existing land use plans; therefore, this alternative would not have any significant land use impacts.

## **5.2.6 Construction**

This section discusses the potential temporary land use impacts from construction of the Proposed Project (Preferred Alternative with Parking Structure), Proposed Project (Preferred Alternative without Parking Structure), the East Terminal Plan Alternative (with Parking Structure) and the East Terminal Plan Alternative (without Parking Structure).

No significant land use impacts from construction would result from the Proposed Airport Implementation Plan or from the East Terminal Alternative.

## **5.2.7 Cumulative Impacts**

This section discusses the cumulative impacts of the Proposed Project (Preferred Alternative with Parking Structure), Proposed Project (Preferred Alternative without Parking Structure), the East Terminal Plan Alternative (with Parking Structure) and the East Terminal Plan Alternative (without Parking Structure).

Cumulative land use impacts would occur when the incremental effect of a project or projects combine to produce a significant effect. Cumulative developments envisioned would be consistent with the land uses defined in the Land Use Plans and Policies for the SDIA Project Area and the Surrounding Areas. Consequently, these future developments when combined with the Proposed Project would not result in any significant land use impacts.

## **5.2.8 Mitigation Measures/Other Improvements**

This section discusses the potential mitigation measures for the Proposed Project (Preferred Alternative

with Parking Structure), Proposed Project (Preferred Alternative without Parking Structure), the East Terminal Plan Alternative (with Parking Structure) and the East Terminal Plan Alternative (without Parking Structure).

With no significant land use impacts identified for these Projects, no project mitigation measures are necessary. However, to assure that no future land use mitigation measures are necessary for adjacent development, future land uses surrounding the Proposed Project site shall follow the allowable land uses and policies as defined in the approved ALUCP for SDIA.

### **5.2.9 Level of Significance with Mitigation Measures**

Land use changes due to the Proposed Project (Preferred Alternative) and its alternatives are less than significant; therefore, mitigation is not required.

## 5.3 Traffic and Circulation

This section describes the general approach and methodology, regulatory framework, significance criteria, environmental setting, considers traffic and circulation impacts associated with the Proposed Project and alternatives to the Proposed Project (Preferred Alternative). Additionally, this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts. A detailed report of the traffic impact analysis performed for each of the alternatives as a part of this ~~Draft~~ Final EIR is provided in [Appendix D, Traffic and Circulation](#). Comments in response to the NOP specific to potential traffic and circulation impacts were received from the following agencies and individuals:

- Department of Transportation, District 11 – project effect on State Highway system, cumulative traffic impacts, ensure adequate operations at critical street segments serving Interstate 5, and ensure adequate operations at critical street segments having at-grade rail crossings
- State of California Public Utilities Commission – recommend projects planned adjacent to or near the BNSF Railway Company right-of-way be planned considering rail corridor safety
- City of San Diego Planning Department – address potential traffic and circulation impacts to regional and local serving transportation facilities and on and off-site parking demand and supply
- Peninsula Community Planning Board – concerned about greater number of vehicles departing to the west side of Harbor Drive
- Oral comments during scoping meetings expressed concern about merging traffic on Harbor Boulevard

All written and oral comments during the NOP process are provided in [Appendix A](#). Comments received specific to traffic and circulation impacts are addressed within this section of the EIR.

Comments received on the previously circulated Draft EIR included:

- San Diego Association of Governments (SANDAG):
  - Propose transit service to account for reduction in airport trip generation, as mitigation for growth in airport generated traffic and diminished level of service at several locations
  - Level of service comparisons should be made between the Proposed Project and existing conditions in addition to the No Project alternative and mitigation proposed for significant impacts resulting from a change from existing conditions
  - Project impacts to 2030
  - Request the Authority implement mitigation on roadways and intersections operating below the level of significance including alternative mitigation such as transit measures
  - Set a goal of increasing transit mode share from 2 to 6-8 percent
  - Include a comprehensive set of alternative mitigation and improvements identified in the Regional Transportation Plan (RTP)
- Department of Transportation, District 11
  - Trip generation should be different between the Proposed Project and No Project Alternatives to account for shifts in passenger terminal usage and parking facilities
  - Explain basis for existing airport traffic pattern used in the analysis
  - Extend analysis to 2030
  - Maximum ramp meter rates are higher than maximum ramp metering rates at several ramps
  - Explain the rationale for removing rental car traffic from Rental Car Road
  - Figures show local street segment traffic volumes but not freeway volumes

- SDCRAA should work with Caltrans and SANDAG to examine alternatives and funding solutions to mitigate transportation impacts
- SDCRAA should incorporate recommendations from the Airport Transit/Roadway Committee into the Airport Master Plan
- SDCRAA should examine alternative modes of travel to and from SDIA
- Mitigation should be consistent with SANDAG's Congestion Management Program (CMP) and Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D
- Cumulative impacts of a project must be considered
- Caltrans supports "fair share" contributions for future improvement projects and/or mitigation measures
- Authority should integrate Central I-5 Corridor Study concepts into the Airport Master Plan
- Work with the City of San Diego to maximize utility of the existing local roadway network system serving SDIA
- City of San Diego Development Services:
  - Propose transit service improvements to account for reduction in airport trip generation
  - Expand the study area to include (1) all street and freeway segments that carry 50 peak hour project trips in one direction of travel, (2) intersection of Nimitz Boulevard and North Harbor Drive, and (3) the I-5 Freeway.
  - Analyze street segments with existing functional classification and do not alter the City of San Diego's street classification and capacity
- Fox & Sohagi, LLP on behalf of the San Diego Unified Port District:
  - Extend traffic analysis to 2025
  - Assess traffic impacts associated with the increased airport activity served by the Implementation Plan as an impact associated with the project
  - Airport improvements and level of service improvements will influence passengers to use SDIA and increase traffic and associate traffic should be assigned to a project or analyzed as a cumulative impact
  - Evaluate net potential benefits of the project on trip generation
  - Traffic associated with reuse of existing rental car facilities in the Airport Land Use Plan should be included in analysis
  - Should assume increased traffic from change in air cargo activities under the Airport Land Use Plan
  - Recommend revising significance thresholds on freeway ramps to state that freeway ramps are significantly impacted if the project causes existing ramp meter rate to be exceeded or if it will cause existing delays to increase by two minutes or more
  - Inconsistency in significance criteria table regarding acceptable LOS.
  - Are road closures anticipated during the course of construction, and if so include a detailed analysis related to road or lane closures.
- North County Transit District:
  - Include a transit alternative that could reduce parking needs at the Airport and support the downward trend in the ratio of average daily trips to daily O&D passengers
- Metropolitan Transit System:

- Expand the horizon year past 2015
- Recommends that SDCRAA develop specific transit improvements in consultation with MTS, NCTD and SANDAG for inclusion in the EIR
- Supports revisions to the Terminal 2 roadway design agreed to by the Airport Master Plan Program staff regarding (1) curbside access and inclusion of a bus layover location and (2) the McCain Road as a direct ingress and egress path from North Harbor Drive and Terminal 2
- San Diego County Taxpayer's Association:
  - Believe that mitigation would be required due to the magnitude of the project and encourages SDCRAA to work with SANDAG to plan, fund and implement solutions to improve traffic and circulation impacts
- Peninsula Community Planning Board:
  - Concerned that traffic congestion will shift traffic exiting the Airport to the West
- Park & Ride, Airport Parking:
  - Concern that the SAN Park Pacific Highway facility will have a negative financial impact on Park & Ride's parking structure located at Sassafras Street and Kettner Boulevard
  - Clarify the use of proposed Terminal Two parking structure
  - Clarify how SDCRAA plans to implement any mitigation at Pacific Highway and Sassafras where they have no jurisdiction
- San Diego Off-Airport Parking Association:
  - What are the uses for additional parking capacity and does SDCRAA plan to expand it's long term parking business utilizing spaces at Terminal Two
  - Utilizing limited airport acreage for parking is not the best use of SDIA property
  - Use of private sector off-airport parking lots has traditionally captured long term parking demand
- Cloud 9 Shuttle:
  - Conflict between increasing transit opportunities and increasing parking
  - SDCRAA is pursuing economic opportunities that directly compete with private sector business that serve SDIA

Comments received on the previous Draft EIR are addressed in this section and [Appendix D](#).

### **5.3.1 General Approach and Methodology**

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGRAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

The overall approach used to identify the traffic impacts of a proposed project is based on a comparison of traffic conditions under each project alternative with the No Project Alternative for each analysis year. The traffic impact analysis followed applicable guidelines from the following professional transportation organizations and state and local agencies:

- San Diego Traffic Engineers Council (SANTEC) and Institute of Transportation Engineers (ITE) – California Border Section<sup>26</sup>
- San Diego Association of Governments (SANDAG)<sup>27</sup>
- California Department of Transportation (Caltrans)<sup>28</sup>
- City of San Diego<sup>29 and 30</sup>

The traffic analysis for the ~~DEIR~~ Final EIR assessed traffic conditions and associated traffic impacts resulting from the project alternatives for the existing (2005), near-term (2010 and 2015) and mid-/long-term or horizon year (2020, 2025, and 2030) conditions. The traffic analysis was conducted for regular AM and PM commute peak hours which overlap with the airport AM and PM peak passenger arrival and departure hours and represent annual average day traffic conditions. This section presents existing, 2010, 2015 and 2030 analysis and a detailed report including analysis for interim years 2020 and 2025 is included in [Appendix D](#).

Coordination meetings with representatives from the City of San Diego, SANDAG, Caltrans, and the SDCRAA were held during preparation of the initial traffic study prepared for the 2006 Draft EIR to coordinate assumptions and analysis. The first meeting was held June 6, 2005 and information was presented concerning the study area, alternatives to be assessed, modeling requirements and methodology, and traffic assumptions. A second meeting was held September 29, 2005 to present trip generation and regional traffic distribution assumptions. Follow-up meetings were held in July and August 2007 to review initial 2006 Draft EIR comments received from the agencies and to receive additional input on study criteria.

For each future analysis year, traffic conditions were determined for the Proposed Project and its alternatives including the No Project Alternative based on an estimate of the regional background traffic (excluding airport and project-related traffic) and traffic related to the airport. SANDAG provided traffic forecasts generated by the SANDAG [San Diego] regional transportation model<sup>31</sup> for each analysis year. These forecasts include both regional background traffic and estimates of airport-related traffic. However, as discussed in Chapter 2, SDIA completed a new aviation activity forecast in 2004, which is more recent than airport passenger forecasts used in the SANDAG traffic model and reflects recent aviation activity and updated passenger trends at SDIA.

To account for the difference in airport-related traffic included in the SANDAG regional transportation model and airport traffic calculated from the 2004 SDIA passenger forecasts, airport traffic in the SANDAG forecasts were first subtracted out of the total traffic based on daily and peak-hour airport traffic volumes provided by SANDAG for each roadway and freeway segment. This resulted in estimates of regional background traffic. This “background” traffic was added to airport traffic volumes developed based on the 2004 SDIA passenger forecasts, calculated airport passenger and project trip generation rates, airport entrance/exit traffic counts, field surveys and intersection traffic counts, airport passenger mode share and vehicle occupancy data, and other data described in this section.

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<sup>26</sup> San Diego Traffic Engineers Council and Institute for Transportation Engineers – California Border Section, SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region – Final Draft, March 2, 2000.

<sup>27</sup> San Diego Association of Governments, Traffic Impact Studies Guidelines, in 2002 SANDAG Congestion Management Program, January 2003.

<sup>28</sup> California Department of Transportation, Guide for the Preparation of Traffic Impact Studies, December 2002.

<sup>29</sup> City of San Diego, Traffic Impact Study Manual and Trip Generation Manual, revised May 2003.

<sup>30</sup> City of San Diego – Development Services Department, California Environmental Quality Act (CEQA), Significance Determination Thresholds, January 2007.

<sup>31</sup> SANDAG Model Runs dated 10/24/04.



This section presents the traffic analysis study area; a list of traffic counts and other data collected for the analysis; a description of the traffic model, background and airport traffic; and a summary of passenger trip generation calculations.

### **5.3.1.1 Study Area**

The traffic analysis study area was chosen by determining the limit of where the Proposed Project or its alternatives would alter the traffic patterns of arriving and departing vehicles. The study area presented in the 2006 Draft EIR was defined as the area immediately surrounding SDIA including North Harbor Drive south of the Terminals and streets to the east providing access to the airport. This area is bound by I-5, North Harbor Drive, Grape Street, Washington Street and the San Diego Bay Channel.

The study area was expanded under this ~~Draft~~ Final EIR to include Nimitz Boulevard and Rosecrans Street west of SDIA, India/San Diego Street east of I-5, and additional mainline freeway segments along I-5 and I-8. These streets and associated intersections were added to the study area due to an increase in airport traffic on these streets under the Proposed Project in later study years. The study area is shown in [Figure 5.3-1](#).

### **5.3.1.2 Traffic Counts and Other Data**

The primary source of traffic data used in the traffic analysis was the Update of Traffic Data for San Diego International Airport prepared for SDCRAA in 2004.<sup>32</sup> Additional data were collected in 2006 as part of the SDIA NTC Landfill Remediation Traffic Impact Study, and in 2007 as part of this analysis. Specific traffic count locations are shown in [Appendix D](#).

The data collection efforts conducted as part of the 2004 Update of Traffic Data for San Diego International Airport included:

- Average daily traffic (ADT) counts at all entrances and exits to SDIA
- Peak-hour turning volume counts at adjacent SDIA intersections and peak-hour turning volume counts at other selected intersections
- Vehicle occupancy counts at SDIA parking facilities and terminal curbsides
- Vehicle classification surveys at terminal curbsides
- Vehicle dwell time surveys at terminal curbsides
- Rental car company survey of rented and returned vehicles
- Bus passenger boarding and alighting counts at each terminal
- Person counts entering and exiting each terminal
- On-Airport public parking facilities occupancy and entrance/exit counts
- Airport employee parking facilities occupancy and entrance/exit counts
- Off-Airport public parking facilities occupancy and entrance/exit counts

Additional information on this data collection effort is included in Section 3.4 *Ground Transportation Facilities of the Airport Master Plan (AMP)*.

The SDCRAA also provided data and statistics related to airport and ground transportation operations, including:

- Parking transactions (both public parking and employee parking)
- Ground transportation Automatic Vehicle Identification (AVI) system operations
- Rental car operations

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<sup>32</sup> Parsons, Update of Traffic Data for San Diego International Airport, prepared for SDCRAA, July 30, 2004.

- Air cargo operations

Traffic counts obtained in 2004 were projected to 2005 based on the following assumptions:

- Regional background (non-airport) traffic was assumed to increase in proportion to the 2005 to 2010 annual growth rate interpolated from the SANDAG traffic forecasts for 2005 and 2010.
- Airport-related traffic was assumed to grow in proportion to the SDIA air passenger forecasts presented in Chapter 2.

Additional traffic counts were collected at intersections added to the study area under this ~~Draft~~ Final EIR which were not part of the 2006 Draft EIR include:

- 2006 SDIA NTC Landfill Remediation Traffic Impact Study traffic counts
- August 2007 supplemental traffic counts conducted under this ~~Draft~~ Final EIR

The 2006 and 2007 traffic counts covered new intersections along with some control intersections that were counted in the 2004 Update of Traffic Data for San Diego International Airport. These control counts were used to compare 2004/2005 traffic volumes to 2006/2007 and adjust the new intersection counts to represent 2004 traffic volumes. The estimated 2004 volumes were adjusted as described previously to reflect 2005 volumes, representing existing conditions for the ~~Draft~~ Final EIR traffic analysis.

### 5.3.1.3 Traffic Modeling Process

Future roadway traffic volumes were forecast using the Series 10 [San Diego] Regional Transportation Model, which is maintained and run by SANDAG. The traffic model incorporates forecasted airport growth, immediate surrounding growth and regional growth as reflected in the Series 10 socio-economic input data. SANDAG provided model runs for 2005, 2010, 2015, 2020, 2025, and 2030 (traffic analysis for 2020 and 2025 is included in [Appendix D](#)). For each analysis year, SANDAG provided the 24-hour average daily traffic (ADT) volumes by link as well as AM and PM peak hour link volumes by direction. In addition, SANDAG provided 24-hour select zone runs for traffic analysis zones (TAZs) representing the airport. These select zone runs showed the volume of airport-related traffic on each link in the network.

The SANDAG model runs were post-processed as part of the traffic study to account for two major factors:

- The airport-related trip generation assumed in the Series 10 input data was based on the 2000 Airport Master Plan air passenger forecasts. The current Airport Master Plan uses the FAA approved 2004 SDIA passenger forecasts.
- The distribution of airport-related traffic included in the SANDAG regional transportation model indicates that approximately 70% of traffic entering/exiting the airport terminals is arriving and departing to the east toward Pacific Highway and 30% is arriving and departing to the west toward Nimitz Boulevard (70/30 split). The SANDAG Series 10 model (based on the 2020 RTP) assumed implementation of I-8 widening between I-5 and SR-163. As a result, the model shows that more airport traffic would use I-8 to access the airport via Rosecrans Street and Nimitz Boulevard. However, the 2030 RTP no longer assumes the I-8 widening between I-5 and SR-163. In addition, traffic counts conducted for the Update of Traffic Data for the San Diego International Airport report as well as data provided by the City of San Diego indicate that the airport trip distribution is approximately 85% east of SDIA and 15% west of SDIA (85/15 split). The 85/15 split is assumed in analysis for this study through 2025.

The 2030 RTP assumes implementation of I-5 / I-8 interchange improvements in 2030 that facilitates freeway-to-freeway movements. As a result, more airport traffic would use I-8 to access the airport via Rosecrans Street and Nimitz Boulevard. Therefore, in the analysis for 2030 a 70/30 split of airport traffic east and west of the terminals was assumed, as discussed in Section 5.3.1.6, *Trip Distribution*.

The modeling effort was run for a non-holiday weekday and accounted for the effects of the surrounding at-grade railroad crossings and assumed no direct connectors between I-5 and SDIA.

During preparation of ~~this~~ the 2007 Draft EIR, SANDAG released Series 11 socio-economic data. However, the modeling procedures required to generate Series 11 traffic forecasts and isolate traffic in the airport TAZs was not available at the same time; and as it requires several months to complete the

traffic analysis in addition to the time required by SANDAG to run the sub-area routines required to generate traffic model forecasts specific to the airport, the Series 11 data was not available in time to complete the traffic analysis for ~~this~~ the 2007 Draft EIR. However, based on SANDAG's description of the regional traffic included in the Series 10 and Series 11 models it was determined that using Series 10 traffic estimates would provide a conservative base for regional background traffic, generally higher than the Series 11 traffic estimates. The higher base number corresponds to an increased number of roadways and intersections that currently do or in the future will operate at or near unacceptable levels of service. In turn the higher the background traffic the less additional airport traffic required to cause a roadway to erode to unacceptable levels or exceed significance criteria. Main differences between the Series 10 and 11 models, as described by SANDAG include:

- Series 10 uses year ~~1995~~ 2000 while Series 11 uses year ~~2000~~ 2004 as the base year for population / employment inputs.
- ~~Series 10 overestimated year 2000 population/employment. Series 11 corrects this by using 2000 as base year and lower population/employment growth rates.~~
- ~~Series 11 reflects higher housing and employment in the Central area but lower in outer areas than Series 10.~~
- Series 11 reflects more freeway HOV and toll lanes and fewer GP lanes than the Series 10 model network, representing the 2007 RTP and 2003 RTP, respectively.
- Series 11 was calibrated to year ~~2000~~ 2004 traffic volumes, while Series 10 model was calibrated to ~~1995~~ 2000 volumes.

As Series 11 data was not available, Series 10 forecasts were used for analysis in this ~~Draft~~ Final EIR.

#### **5.3.1.4 Regional Background Traffic Forecasts**

Regional background traffic for each analysis year was obtained from SANDAG regional transportation model runs for each year (provided by SANDAG). The traffic output for each year includes regional traffic from all traffic analysis zones (TAZs). TAZs represent an area with a homogeneous land use or a combination of related land uses including traffic from proposed development in the area. The regional transportation model divides the entire region (as well as the areas beyond the region) into individual Traffic Analysis Zones (TAZs) including a "zone" for SDIA. Traffic related to the "airport zone" was subtracted based on "select zone" model runs provided by SANDAG. A "select zone" run for the airport TAZ identified airport generated traffic on each roadway and freeway segment in the vicinity of the airport. The resulting traffic represents the non-airport or regional "background" traffic on the roadway network. The forecasts of background traffic for future years include traffic associated with plans and projects accepted by the San Diego City Council and included in SANDAG's Series 10 forecasts. These projects include, but are not limited to the following:

- Naval Training Center/Liberty Station Precise Plan/EIR (January 2000/September 2001)
- North Embarcadero Visionary Plan Final EIR (April 2000)

The Series 10 forecast does not include the following project EIRs, which had not been accepted by the San Diego City Council at the time of the model runs. However, the Series 10 forecasts assumed development at these locations based on General Plan Zoning that is assumed to be similar or more intense than land uses assumed in the EIRs.

- Old Police Headquarters and Park Project Draft EIR (July 2005) or Final EIR (February 2006)
- Centre City Development Corporation (CCDC) Master Plan Draft EIR (July 2005) or Final EIR (January 2006)
- Woodfin Suites Hotel and Port Master Plan Amendment Project Draft EIR (March 2006)

Background traffic continues to grow in the vicinity of SDIA due to increased development of hotels and other visitor serving development. For example under the NTC/Liberty Station EIR a 650 room Nickelodeon (recreation) hotel and 350 room business hotel are being developed immediately west of SDIA (the EIR reflected a 350 room recreational and 650 room business hotel).

### 5.3.1.5 Airport Trip Generation

Airport trip generation as used in this analysis represents the total *vehicular* traffic associated with the airport under each alternative. Unless otherwise indicated, trip generation includes both inbound and outbound traffic. For analysis purposes, trip generation is typically estimated for daily (24-hour) and peak hour (AM and PM) conditions. SDIA trip generation rates were estimated by relating traffic counts conducted at the airport entrances and exits to existing air passenger activity levels. Trip generation rates of other land uses that are not driven by passenger demand were based on SANDAG<sup>33</sup> and City of San Diego<sup>34</sup> trip generation rates and are presented in the associated alternative description Section 5.3.

Although air passenger forecasts through 2020 are the same for all alternatives, the airport trip generation differs among the alternatives because of landside constraints associated with the No Project Alternative (limited terminal parking and curb frontage, among others). Under the No Project Alternative, parking constraints are expected to force passengers to either use off-site parking facilities or switch to alternate modes, including curbside drop-off, taxis, shared ride vans and transit. Passengers diverted to off-site parking facilities are still considered to contribute to and do not reduce the total airport trip generation. Additional shuttles would be required to accommodate these passengers. Diversion of passengers to curbside drop-off or taxis would add to curbside congestion and increase terminal area trips while the diversion of passengers to modes with higher occupancies (e.g., transit and shared ride vans) would result in reduction in total airport trips.

Beyond 2020, trip generation differs for each alternative due to the divergence of air passenger forecasts, as discussed previously.

Trip generation rates were developed for various airport activity centers (terminal curbside, terminal and remote parking, employee parking, rental car facilities, etc.). The different alternatives would result in different shuttle route configurations. Therefore, shuttle trips were accounted for separately from private vehicle and other unscheduled ground transportation modes. Trip rates were estimated for private vehicle and other modes. For these modes of transportation, the same trip rates were used in the future. Future shuttle trips were assumed to operate with the same headways/schedule as existing shuttles and accommodate passenger growth through increased passenger loading, until a need for additional shuttle trips is warranted.

**Table 5-3.1** shows the estimated trip generation for the alternative project scenarios.

The Proposed Airport Land Use Plan was assumed to represent a full build-out of proposed Airport Land Uses in 2015. The Proposed Airport Land Use Plan would accommodate the same passengers as the Proposed Airport Implementation Plan with additional traffic generating land uses proposed along North Harbor Drive and Pacific Highway. Total trip generation for the Land Use Plan is shown in **Table 5-3.2** and specific project related trip generation is shown in the Land Use Plan discussion in Section 5.3.5.2 *Proposed Project*.

The distribution of passengers (and traffic) among terminals would differ among the alternatives, as shown in **Table 5-3.3**. The change in passenger distribution between terminals would result in redistribution of traffic at the terminal access driveways along North Harbor Drive. However, the change in passenger distribution would not affect the regional traffic pattern outside of the airport which is assumed to be the same for all alternatives.

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<sup>33</sup> SANDAG, (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002.

<sup>34</sup> City of San Diego, Trip Generation Manual, revised May 2003.

Table 5-3.1  
**Airport Trip Generation**

**No Project Alternative (includes existing)**

<b>Airport Trip Generation (1)</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2030</b>
Daily	85,100	94,500	109,350	128,750
In	42,600	47,300	54,750	64,400
Out	42,500	47,200	54,600	64,350
AM Peak Hour	3,180	3,530	4,090	4,850
In	1,760	1,955	2,260	2,665
Out	1,420	1,575	1,830	2,185
PM Peak Hour	3,245	3,610	4,185	4,965
In	1,500	1,670	1,940	2,310
Out	1,745	1,940	2,245	2,655

**Proposed Airport Implementation Plan (with Parking Structure)**

<b>Airport Trip Generation (1)</b>		<b>2010</b>	<b>2015</b>	<b>2030</b>
Daily		94,600	109,500	135,000
In		47,350	54,800	67,550
Out		47,250	54,700	67,450
AM Peak Hour		3,530	4,095	5,070
In		1,955	2,265	2,790
Out		1,575	1,830	2,280
PM Peak Hour		3,620	4,190	5,205
In		1,675	1,940	2,415
Out		1,945	2,250	2,790

**Proposed Airport Implementation Plan (without Parking Structure)**

<b>Airport Trip Generation (1)</b>		<b>2010</b>	<b>2015</b>	<b>2030</b>
Daily		94,600	109,500	134,600
In		47,350	54,800	67,350
Out		47,250	54,700	67,250
AM Peak Hour		3,530	4,095	5,065
In		1,955	2,265	2,785
Out		1,575	1,830	2,280
PM Peak Hour		3,620	4,190	5,185
In		1,675	1,940	2,410
Out		1,945	2,250	2,775

Table 5-3.1, cont'd  
**Airport Trip Generation**

**Airport Implementation Plan Alternative (with Parking Structure)**

<b>Airport Trip Generation (1)</b>	<b>2010</b>	<b>2015</b>	<b>2030</b>
Daily	94,600	109,500	134,850
In	47,350	54,800	67,500
Out	47,250	54,700	67,400
AM Peak Hour	3,530	4,095	5,070
In	1,955	2,265	2,790
Out	1,575	1,830	2,280
PM Peak Hour	3,620	4,190	5,195
In	1,675	1,940	2,415
Out	1,945	2,250	2,780

**Airport Implementation Plan Alternative (without Parking Structure)**

<b>Airport Trip Generation (1)</b>	<b>2010</b>	<b>2015</b>	<b>2030</b>
Daily	94,600	109,500	134,700
In	47,350	54,800	67,400
Out	47,250	54,700	67,300
AM Peak Hour	3,530	4,095	5,065
In	1,955	2,265	2,785
Out	1,575	1,830	2,280
PM Peak Hour	3,620	4,190	5,185
In	1,675	1,940	2,410
Out	1,945	2,250	2,775

Source: HNTB, 2007.

Notes:

(1) Includes terminals and associated facilities, SAN Park lots, rental car facilities on Rental Car Road, Employee Lot 6 on Harbor Island Drive, and north area. Does not include private vehicle trips to private off-airport parking and rental car facilities, but includes shuttle trips between these facilities and the terminals.

Table 5-3.2  
**Airport Trip Generation - Land Use Plan**

<b>Airport Trip Generation (1)</b>	<b>2015</b>	<b>2030</b>
Daily	122,600	148,450
In	61,450	74,400
Out	61,150	74,050
AM Peak Hour	4,690	5,700
In	2,725	3,315
Out	1,965	2,385
PM Peak Hour	4,850	5,810
In	2,350	2,810
Out	2,500	3,000

Source: HNTB, 2007.

Numbers may not add due to rounding.

Notes:

(1) Includes terminals and associated facilities, SAN Park lots, rental car facilities on Rental Car Road, Employee Lot 6 on Harbor Island Drive, and north area. Does not include private vehicle trips to private off-airport parking and rental car facilities, but includes shuttle trips between these facilities and the terminals.

Table 5-3.3  
**Terminal Passenger Distribution**

<b>Scenario/Year</b>	<b>Terminal 1</b>	<b>Terminal 1 East *</b>	<b>Terminal 2 East</b>	<b>Terminal 2 West</b>	<b>Commuter Terminal</b>	<b>Total</b>
Existing						
2005	54%	0%	15%	26%	5%	100%
No Project Alternative						
2010	52%	0%	25%	19%	5%	100%
2015	51%	0%	27%	18%	4%	100%
2030	53%	0%	24%	21%	3%	100%
Proposed Airport Implementation Plan						
2010	45%	0%	20%	31%	4%	100%
2015	43%	0%	20%	33%	3%	100%
2030	41%	0%	19%	37%	3%	100%
Airport Implementation Plan Alternative						
2010	20%	36%	25%	18%	0%	100%
2015	20%	36%	25%	20%	0%	100%
2030	24%	32%	23%	20%	0%	100%

Source: HNTB, 2007.

\* New unit terminal under Airport Implementation Project Alternative.

### 5.3.1.6 Regional Trip Distribution

The SANDAG regional traffic model was used to determine how airport traffic distributes over the regional roadway network. The SANDAG regional traffic model was calibrated using the following transportation surveys conducted throughout the San Diego County in between 1991 and 2000.

- 1991 San Diego Visitor Survey
- 1995 Travel Behavior Survey
- 1995 San Diego Regional Transit Survey
- External Trip Surveys
- Traffic Generation Studies
- 2000 Census Transportation Planning Package

SANDAG also used additional data sources such as traffic counts from Caltrans and local jurisdictions, transit passenger counts from SANDAG's Transit Passenger Counting Program, and SANDAG's Vehicle Occupancy and Classification Study to verify model estimates against independent data.

**Table 5-3.4** shows the distribution of airport traffic among various cities/planning areas in San Diego County and beyond.<sup>35</sup> **Figure 5.3-2** shows the pattern of airport-related traffic at SDIA.<sup>36</sup> As shown, approximately 66% of the total airport traffic currently uses the I-5 and I-8 freeways, the remaining 34% uses local streets. Of the freeway users, 34% are oriented towards I-5 south, 17% towards I-5 north, and the remaining 15% towards I-8 east.

As discussed in **Section 5.3.1.3, Traffic Modeling**, based on traffic counts at terminal driveways and traffic counts provided by the City of San Diego along North Harbor Drive, approximately 85% of SDIA terminal traffic is oriented to the east, and the remaining 15% is oriented to the west of SDIA (85/15 split). Traffic counts conducted in 2006 and 2007 for this traffic analysis validate the 85/15 assumption and similar traffic volumes at intersections along North Harbor Drive are witnessed in both actual traffic counts and the 2005 traffic analysis calculations based on the SANDAG transportation model background traffic with airport trip generation estimates. For example the following intersections show more traffic east and less traffic west of SDIA in current traffic counts matching traffic analysis using updated SDIA passenger forecasts and the 85/15 split.

#### North Harbor Drive west of McCain Road (west of SDIA):

- DEIR traffic analysis for 2005: 26,400 ADT
- SANDAG model with Airport TAZ and 70/30 split for 2005: 41,700 ADT
- NTC Landfill DEIR 2006 traffic counts: 26,900 ADT

#### North Harbor Drive between Harbor Island and the Terminal One entrance (east of SDIA):

- DEIR traffic analysis for 2005: 36,600 ADT
- SANDAG model with Airport TAZ and 70/30 split: 31,700 ADT
- NTC Landfill DEIR 2006 traffic counts: 35,200 ADT

This pattern was assumed to remain constant through 2025. It is further assumed that this pattern would remain the same among all alternatives analyzed.

In 2030, the SANDAG model assumed implementation of I-5 / I-8 interchange improvements that facilitates the freeway-to-freeway movement. As a result, the model shows that more airport traffic would

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<sup>35</sup> SANDAG regional transportation model.

<sup>36</sup> This pattern was derived from a select zone run of the SANDAG regional transportation model. The select zone run specifically identified the Traffic Analysis Zones (TAZs) representing the airport, and determines the volume of traffic on the roadway network associated with the airport TAZs.



Table 5-3.4

## Distribution of SDIA Traffic by Location

Location	Percent	Location	Percent
32nd Street Naval Station	0.1%	Mission Beach	0.4%
Balboa Park	0.0%	Mission Valley	4.1%
Barrio Logan	0.1%	NATIONAL CITY	1.1%
Black Mountain Ranch	0.6%	Navajo	1.2%
CARLSBAD	5.8%	NCFUA Subarea 2	0.0%
Carmel Mountain Ranch	0.5%	Ocean Beach	0.3%
Carmel Valley	0.8%	OCEANSIDE	4.1%
Centre City	8.8%	Old San Diego	0.1%
CHULA VISTA	4.6%	Otay Mesa	1.0%
Clairemont Mesa	1.6%	Otay Mesa-Nestor	0.8%
College Area	0.6%	OUTSIDE SD COUNTY	3.6%
CORONADO	1.1%	Pacific Beach	1.0%
DEL MAR	0.3%	Pacific Highlands Ranch	0.2%
Del Mar Mesa	0.2%	Peninsula	2.2%
East Elliott	0.0%	POWAY	1.3%
EL CAJON	2.4%	Rancho Bernardo	1.4%
ENCINITAS	1.6%	Rancho Encantada	0.0%
ESCONDIDO	2.9%	Rancho Penasquitos	0.8%
Fairbanks Country Club	0.0%	Sabre Springs	0.2%
Flower Hill	0.0%	SAN MARCOS	1.8%
Greater Golden Hill	0.3%	San Pasqual	0.0%
Greater North Park	1.0%	San Ysidro	0.6%
Harbor	0.0%	SANTEE	1.2%
IMPERIAL BEACH	0.4%	Scripps Miramar Ranch	0.5%
Kearny Mesa	1.9%	Serra Mesa	0.4%
La Jolla	1.0%	Skyline-Paradise Hills	0.8%
LA MESA	1.3%	SOLANA BEACH	0.5%
LEMON GROVE	0.5%	Southeastern:Encanto Neighborhoods	0.6%
Linda Vista	0.5%	Southeastern:Southeastern San Diego	0.7%
Lindbergh Field	1.2%	Tierrasanta	0.5%
Mid-City:City Heights	1.0%	Tijuana River Valley	0.0%
Mid-City:Eastern Area	0.7%	Torrey Highlands	0.1%
Mid-City:Kensington-Talmadge	0.3%	Torrey Hills	0.1%
Mid-City:Normal Heights	0.3%	Torrey Pines	0.4%
Midway-Pacific Highway	0.5%	UNINCORPORATED	13.2%
Mira Mesa	3.1%	University	3.0%
Miramar Air Station	0.1%	Uptown	1.2%
Miramar Ranch North	0.4%	Via De La Valle	0.0%
Mission Bay Park	1.5%	VISTA	2.1%
		<b>TOTAL AIRPORT TRIPS</b>	<b>100.0%</b>

Source: SANDAG

use I-8 to access the airport via Rosecrans Street and Nimitz Boulevard. Therefore, for 2030, a 70/30 split was assumed for the airport traffic pattern, as shown in [Figure 5.3-3](#).

### **5.3.1.7 Street Segment Operations**

The ability of the transportation infrastructure surrounding the airport to carry future regional and airport traffic was measured using analytical tools that quantify operations of various types of transportation facilities. The ability of the transportation infrastructure to carry traffic was quantified using a Level-of-Service (LOS) designation, as set forth in the *Highway Capacity Manual*.<sup>37</sup> This designation is utilized in the transportation profession to quantify the performance of a facility. Levels of service vary from LOS A (free flow, little delay) to LOS F (heavily congested, breakdowns in vehicular flow) as described below.

- LOS A describes primarily free-flow operations. Average operating speeds at the free-flow speed generally prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.
- LOS B also represents reasonably free flow, and free-flow speeds are generally maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.
- LOS C provides for flow with speeds still at or near the free-flow speed of the roadway. Freedom to maneuver within the traffic stream is noticeably restricted at LOS C, and lane changes require more vigilance on the part of the driver. The driver now experiences a noticeable increase in tension because of the additional vigilance required for safe operation.
- LOS D is the level at which speeds begin to decline slightly with increasing flows. In this range, density begins to deteriorate somewhat more quickly with increasing flows. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.
- LOS E describes operation at capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream. At capacity, the traffic stream has no ability to dissipate even the most minor disruptions, and any incident can be expected to produce a serious breakdown with extensive queuing.
- LOS F describes breakdowns in vehicular flow. Such conditions generally exist within queues forming behind breakdown points such as traffic incidents and recurring points of congestion. Whenever LOS F conditions exist, there is a potential for them to extend upstream for significant distances.

The ability of the roadway segments to carry traffic was measured using City of San Diego roadway capacity standards as shown in [Table 5-3.5](#).

Roadway segments were assessed by comparing daily roadway volumes to a theoretical daily capacity of the roadway based on City standards. The established City standards were modified, with collaboration and concurrence from City staff, for portions of North Harbor Drive to reflect non-standard (7- to 8-lane) roadway cross sections.

### **5.3.1.8 Intersection Operations**

The analysis of key intersections is based on Highway Capacity Manual (HCM) methodologies.<sup>38</sup> HCM uses control delay (expressed in terms of seconds of delay per vehicle, sec/veh) as the measure of effectiveness for both signalized and unsignalized intersections. Intersection level of service is defined based on the criteria shown in [Table 5-3.6](#). The intersection analysis uses the TRAFFIX traffic analysis program for most of the signalized intersections analyzed and the SYNCHRO program for 5-leg intersections. Both programs implement the HCM intersection analysis methodologies. Delay resulting from railroad crossings at intersections along Washington, Sassafras, Laurel, Palm and Hawthorn and Grape was incorporated into the LOS analysis.

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<sup>37</sup> Transportation Research Board, *Highway Capacity Manual*, 2000.

<sup>38</sup> Transportation Research Board, *Highway Capacity Manual*, 2000.

Table 5-3.5  
**Street Segment Level of Service Criteria**

Classification	Roadway Capacity (vehicles per day)				
	LOS A	LOS B	LOS C	LOS D	LOS E
8-Lane Prime Arterial (North Harbor Drive) <sup>1</sup>	30,000	40,000	60,000	65,000	70,000
7-Lane Prime Arterial (North Harbor Drive) <sup>1</sup>	27,500	37,500	55,000	60,000	65,000
6-Lane Prime Arterial (North Harbor Drive)	25,000	35,000	50,000	55,000	60,000
6-Lane Major Arterial (Pacific Highway)	20,000	28,000	40,000	45,000	50,000
4-Lane Major Arterial (Laurel Street)	15,000	21,000	30,000	35,000	40,000
3-Lane Major Arterial 1-Way (Grape/Hawthorn/Kettner)	10,000	14,000	20,000	22,500	25,000
4-Lane Collector (Laurel/Washington)	10,000	14,000	20,000	25,000	30,000
3-Lane Collector (Sassafras Street)	3,800	5,300	7,500	9,800	12,000
2-Lane Collector (Palm Street)	2,500	3,500	5,000	6,500	8,000

Source: SANTEC / ITE, *Guidelines for Traffic Impact Studies in the San Diego Region*, March 2, 2000.

Prepared by: HNTB Corporation, 2007.

LOS = level of service

Note:

<sup>1</sup> Roadway capacities for 8- and 7-lane Prime Arterials prorated from 6-lane Prime Arterial capacity based on discussions with the City of San Diego, July 18, 2007.

Future intersection volumes were not generated by the forecast model, but through the following steps:

- Using the existing peak hour airport trip generation and trip distribution pattern, existing airport-related turning volumes were estimated.
- Existing airport-related peak hour turning volumes were subtracted from existing intersection counts to obtain the non-airport background turning volumes.
- The background turning volumes were factored up to future analysis years based on traffic growth rates indicated by the SANDAG model runs.
- Future airport-related turning volumes were estimated using future airport trip generation and assumed trip distribution pattern.
- Future intersection volumes were determined by adding the future airport-related turning volumes to the future background traffic.

Table 5-3.6  
**Intersection Level of Service Criteria**

Level of Service (LOS)	Signalized Intersection Control Delay (sec/veh)	Unsignalized Intersection Control Delay (sec/veh)
A	0 - 10	0 - 10
B	> 10 - 20	> 10 - 15
C	> 20 - 35	> 15 - 25
D	> 35 - 55	> 25 - 35
E	> 55 - 80	> 35 - 50
F	> 80	> 50

Source: HCM 2000.

### 5.3.1.9 Freeway Segment Operations

Freeway operations were analyzed based on methods used by Caltrans, as set forth in the Caltrans Guide for the Preparation of Traffic Impact Studies.<sup>39</sup> Caltrans prescribes the use of HCM<sup>40</sup> operational analysis methodology for freeway segments, which was utilized for this analysis. The HCM uses density to measure freeway segment level of service. Density represents the number of passenger cars (equivalent) per mile per lane (pc/mi/ln). The higher the density, the more vehicles are found on a given stretch of freeway, and the more congested the traffic conditions are. Freeway segment level of service is defined according to [Table 5-3.7](#).

The Caltrans TIS Guide states that "Caltrans endeavors to maintain a target LOS C at the transition between LOS C and LOS D on State highway facilities; however, Caltrans acknowledges that this may not always be feasible. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE [measure of effectiveness] should be maintained."<sup>41</sup> All freeway segments within the study area are currently operating at LOS D or less, with the exception of North Bound I-5 between the Pacific Highway viaducts and Washington Street and South Bound I-5 between SR 163 and SR 94. City of San Diego significance criteria interpreted from CEQA guidelines was used to estimate impacts to freeways as discussed in Section 5.3.

Table 5-3.7  
**Freeway Segment Level of Service Criteria**

Level of Service (LOS)	Maximum Density (pc/mi/ln)	Minimum Speed (mph)	Maximum v/c	Maximum Service Flow Rate (pc/hr/ln)
A	11	65.0	0.30	710
B	18	65.0	0.50	1,170
C	26	64.6	0.71	1,680
D	35	59.7	0.89	2,090
E	45	52.2	1.00	2,350
F	> 45	< 52.2	> 1.00	NA

Source: HCM 2000.

### 5.3.1.10 Freeway Ramp Operations

Freeway on-ramp ramp operations were analyzed based on methods set forth in the SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region.<sup>42</sup> Freeway on-ramp operations were quantified by determining if the maximum ramp meter rates (defined as the maximum number of vehicles processed each hour) were over or under the forecasted ramp volumes and calculating the minutes of delay if ramp volumes exceeded meter rates. Minutes of delay were calculated by dividing excess vehicle demand (peak hour traffic volume minus the meter rate) by the set meter rate and multiplying by 60 minutes/hour. Queue lengths were estimated by multiplying excess vehicle demand by 29 feet divided by the number of lanes on the ramp, as indicated in Attachment B of the SANTEC/ITE Guidelines.

Ramp meter rates were obtained from Caltrans and the specific on-ramps analyzed within the study area were coordinated with Caltrans staff.

### 5.3.1.11 Railroad Crossing Operations

Railroad crossing delays were analyzed in terms of daily vehicle hours of delay (VHD). VHD was calculated based on (1) existing and forecast Trolley, Coaster, and Amtrak schedules, (2) average gate down time for each type of train at each crossing, estimated at 50 seconds for Trolley and Coaster and

<sup>39</sup> Caltrans, *Guide for the Preparation of Traffic Impact Studies*, December 2002.

<sup>40</sup> Transportation Research Board, *Highway Capacity Manual*, 2000.

<sup>41</sup> Caltrans, *Guide for the Preparation of Traffic Impact Studies*, December 2002.

<sup>42</sup> SANTEC and ITE, SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region, March 2000.

Amtrak trains and 4 minutes for freight trains, (3) a 40% increase in gate down time (average 70 seconds) for Trolley crossings at Washington Street to account for the proximity of the station, and (4) proportion of crossings occurring during the AM, midday and PM peak hours and late evening/early morning hours.

VHD values were compared to a set of thresholds (Section ~~5.3.3.2~~ 5.3.3.5) to determine whether grade separation is warranted.

### **5.3.1.12 Transit Operations**

Existing and future transit routes within the study area were identified. These routes were compared to the alternatives to determine the impact, if any, of the alternative. SDCRAA is also leading a multiple transit agency committee to assess transit demand and to improve public transit access to SDIA.

In addition, the Proposed Airport Land Use Plan designates a ground transportation use along the Pacific Highway corridor and a dedicated transit corridor is proposed to connect the north and south Airport areas.

### **5.3.1.13 Parking Operations**

The alternatives examined included scenarios with and without parking structure.

As air passenger activity grows in the future, existing terminal parking supply becomes inadequate to accommodate parking demand. If new terminal parking facilities were not constructed as in the No Project Alternative, parking supply constraints would force some air passengers to either park at remote parking facilities or switch to alternate modes of transportation.

To analyze the potential traffic redistribution associated with constrained parking supply (under the No Project Alternative) or new terminal parking facilities (under the Implementation Plan and Implementation Plan Alternative), parking demand was estimated and “excess” parking demand was reallocated as follows:

- Parking demand at each terminal was estimated based on the methodology presented in the Airport Master Plan. That methodology estimates short-term, long-term and economy parking demand based on air passenger forecasts and demand ratios derived from existing operations and represents unconstrained demand.
- Parking demand at each terminal was allocated to available parking areas. Short-term parking demand at each terminal was first allocated to the associated terminal’s parking facility. Long-term parking demand was then allocated to the remaining terminal parking spaces. When space was not available at the designated terminal, excess long-term demand was allocated to available spaces in an adjacent terminal parking facility. If no space remained in the terminal parking facilities, excess long-term demand was allocated to nearby Airport-operated remote parking facilities (SAN Park), privately-operated remote parking facilities or alternative modes (e.g. curbside drop-off/pick-up, taxis, shared-ride vans, transit)
- Economy parking demand, representing price sensitive parkers, was allocated to the nearest Airport-operated SAN Park facility. Excess economy parkers were allocated to privately-operated remote facilities.

Parking demand (prior to reallocation as described above) and supply available under each alternative were compared to determine if the alternative would result in a parking surplus or deficit.

### **5.3.1.14 Terminal Curbside Operations**

Curb frontage provided by the project/alternative was compared to curb requirements estimated in the AMP to determine if the project/alternative would result in curb frontage surplus or deficit.

### **5.3.1.15 On-Airport Traffic Circulation**

On-airport (terminal area) traffic circulation was analyzed by comparing peak hour roadway volumes to capacities. On-airport roadways (excluding curb roadways) were assumed to have a per-lane capacity of

900 vehicles per hour per lane.<sup>43</sup> The HCM does not provide LOS criteria for low speed roadways such as airport roadways, which can typically operate at speeds less than 25 mph. The HCM provides LOS criteria for roadways with design speeds of 25 mph or higher. The volume to capacity ratios used in this study for on-airport roadways were based on extrapolation of HCM criteria to airport roadway conditions. Corresponding on-airport roadway level of service criteria is presented [Table 5-3.8](#).

Table 5-3.8  
**On-Airport Roadway Level of Service Criteria**

<b>Level of Service (LOS)</b>	<b>Volume-to-Capacity Ratio (V/C)</b>
A	0.26
B	0.44
C	0.64
D	0.82
E	1
F	> 1.00

Source: HCM 2000 and HNTB analysis.

### 5.3.2 Regulatory Framework

The City of San Diego, Caltrans, North County Transit District (NCTD), the San Diego Metropolitan Transit System (MTS) and SDCRAA have overall authority for the ground transportation systems surrounding SDIA. SANDAG is the metropolitan planning organization responsible for programming transportation improvements and for obtaining Federal and State funding for projects of regional significance. Each of these authorities, in coordination with local, state and national professional transportation organizations has developed guidelines for the analysis of proposed projects, the determination of impacts and mitigation measures, and cost sharing. The TIS for this project followed applicable guidelines from the following documents:

- San Diego Traffic Engineers Council and Institute of Transportation Engineers (ITE – California Border Section), SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region – Final Draft, March 2, 2000.
- San Diego Association of Governments, Traffic Impact Studies Guidelines, in 2002 SANDAG Congestion Management Program, January 2003.
- California Department of Transportation, Guide for the Preparation of Traffic Impact Studies, December 2002.
- City of San Diego, Traffic Impact Study Manual and Trip Generation Manual, revised May 2003.
- City of San Diego – Development Services Department, California Environmental Quality Act (CEQA) Significance Determination Thresholds, January 2007.

CEQA Section 21002 declares that public agencies should not approve a project as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects. As such, this section considers and discusses significant impacts to traffic and circulation from the Proposed Project and proposes mitigation measures to minimize significant effects to the public and decision makers.

<sup>43</sup> FHWA and FAA, Intermodal Ground Access to Airports – A Planning Guide, Final Report, December 1996.

### **5.3.3 Traffic Impacts and Significance Criteria**

Traffic impacts of a project alternative were identified by comparing the traffic operations under the project alternative against the No Project Alternative. Any increase in traffic volumes under the project were then compared to the significance criteria presented in this section to determine if the increase results in a significant impact to the associated street, intersection, freeway, on-ramp, etc.

Significance criteria for freeway segments and metered on-ramps, street/roadway segments, intersection parking were derived from the City of San Diego Development Services Department's CEQA Significance Determination Thresholds guidelines dated January 2007. Based on these guidelines, a significant impact would occur under the following conditions.

- If a freeway, street/roadway segment, or intersection operates at LOS D or better without the project, and the project causes the LOS to deteriorate to LOS E or LOS F (regardless of the change in delay, speed or volume-to-capacity ratio), then the impact is considered significant.
- If a freeway, street/roadway segment, or intersection operates at LOS E or F without the project and the project causes an increase in delay or reduction in speed or volume-to-capacity ratio above the thresholds summarized in [Table 5-3.9](#) then the impact is considered significant. If the LOS remains at E or F and any increase in delay or reduction in speed, or volume-to-capacity ratio is within the allowable threshold summarized in [Table 5-3.9](#) then the impact is not significant.
- If a metered freeway ramps experiences delays less than 15 minutes without the project and the project causes delays to exceed 15 minutes the impact is considered significant.
- If a metered freeway ramp experiences delays greater than 15 minutes without the project and the project causes an increase in delay above the threshold summarized in [Table 5-3.9](#) or ramp storage capacities are exceeded then the impact would be considered significant.
- If the project is deficient by more than 10 percent of the required amount of parking the impact would be considered significant if one of the following occurs:
  - 1) Parking shortfall or displacement of existing parking would substantially affect the availability of parking in an adjacent residential area, including the availability of public parking, or
  - 2) Parking deficiency would severely impede the accessibility of a public parking facility, such as a park or beach.

In addition, significance criteria for railroad crossings were derived from the California Utilities Commission, and best practice management was used to determine significance criteria for transit, parking, terminal curbsides and on-airport roadways. Specific significance criteria for each analysis category are described in the following sections.

#### **5.3.3.1 Street Segment Significance Criteria**

As shown in [Table 5-3.9](#), an impact to street segment operations resulting from the project would be considered significant if:

- the street segment operates at an acceptable LOS, defined as LOS D or better, under the No Project Alternative and the project causes the street segment operations to deteriorate to LOS E or F
- the street segment operates at LOS E under the No Project Alternative and the project causes the volume to capacity ratio to increase by more than .02
- the street segment operates at LOS F under the No Project Alternative and the project causes the volume-to-capacity ratio to increase by more than .01

Table 5-3.9

**Traffic Impact Significance Thresholds**

Level of Service with Project*	Allowable Change Due to Project Impacts**					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
E (or ramp meter delays above 15 min. see note 1)	0.01	1.0	0.02	1.0	2.0	2.0
F (or ramp meter delays above 15 min. see note 2)	0.005	0.5	0.01	0.5	1.0	1.0

Note 1: The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway level of service (LOS) E is 2 minutes.

Note 2: The allowable increase in delay at a ramp meter with more than 15 minutes delay and freeway level of service (LOS) F is 1 minute.

\* All level of service (LOS) measurements are based upon Highway Capacity Manual (HCM) procedures for peak hour conditions. However, V/C ratios for roadway segments may be estimated on an ADT/24-hour traffic volume basis (using Table 2 of the City's Traffic Impact Study Manual. The acceptable LOS for freeways, roadways and intersections is generally "D" ("C" for undeveloped locations). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.

\*\* If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant. The project applicant shall then identify feasible improvements (within the Traffic Impact Study) that will restore/and maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see above \* note), or if the project adds a significant amount of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating the project's direct significant and/or cumulatively considerable traffic impacts.

**Key:**

V/C = Volume to Capacity ratio

Speed = Speed measured in miles per hour

Delay = Average control delay per vehicle measured in seconds for intersections, or minutes for ramp meters

LOS = Level of Service

Source: City of San Diego - Development Services Department, CEQA, Significance Determination Thresholds, January 2007.

**5.3.3.2 Intersection Segment Significance Criteria**

As shown in [Table 5-3.9](#), an impact to intersection operations resulting from the project would be considered significant if:

- The intersection operates at an acceptable LOS, defined as LOS D or better, under the No Project Alternative and the project causes the intersection operations to deteriorate to LOS E or F.
- The intersection operates at LOS E under the No Project Alternative and the project causes intersection delay to increase by more than 2.0 seconds.
- The intersection operates at LOS F under the No Project Alternative and the project causes intersection delay to increase by more than 1.0 second.

**5.3.3.3 Freeway Segment Significance Criteria**

As shown in [Table 5-3.9](#), an impact to freeway segment operations resulting from the project would be considered significant if:

- The freeway segment operates at an acceptable LOS, defined as LOS D or better, under the No Project Alternative and the project causes the intersection operations to deteriorate to LOS E or F.
- The freeway segment operates at LOS E under the No Project Alternative and the project causes the volume-to-capacity ratio to increase by more than 0.01 which is equivalent to a 1% increase in traffic density.
- The freeway segment operates at LOS F under the No Project Alternative and the project causes



the volume-to-capacity ratio to increase by more than 0.005 which is equivalent to a 0.5% increase in traffic density.

#### **5.3.3.4 Freeway Ramp Significance Criteria**

As shown in [Table 5-3.9](#), an impact to freeway ramp operations resulting from the project would be considered significant if:

- A metered freeway ramps experiences delays less than 15 minutes under the No Project Alternative and the project causes delays to exceed 15 minutes.
- If a metered freeway ramp experiences delays greater than 15 minutes and the associated freeway segment operates at LOS E under the No Project Alternative and the project causes the ramp delay to increase more than 2.0 minutes.
- If a metered freeway ramp experiences delays greater than 15 minutes and the associated freeway segment operates at LOS F under the No Project Alternative and the project causes the ramp delay to increase more than 1.0 minute.

#### **5.3.3.5 Railroad Crossings Significance Criteria**

The California Public Utilities Commission indicates that a significant impact would occur if the project results in total vehicle-hours of delay (VHD) per day that exceed the following thresholds. If these thresholds are exceeded without the project then no significant impact would occur. Grade separation is considered "warranted" if VHD exceeds:

- 75 VHD for roadways with an ADT of less than 15,000;
- 150 VHD for roadways with an ADT between 15,000 and 25,000; or
- 300 VHD for roadways with an ADT greater than 25,000.

#### **5.3.3.6 Transit Operations Significance Criteria**

A significant impact to transit operations would occur if the Project adversely affects any existing or planned transit routes, such as if construction of the Project would altered a transit route resulting in increased transit travel times.

#### **5.3.3.7 Parking Significance Criteria**

If the project is deficient by more than 10% of the required amount of parking the impact would be considered significant if one of the following occurs:

- 1) Parking shortfall or displacement of existing parking would substantially affect the availability of parking in an adjacent residential area, including the availability of public parking, or
- 2) Parking deficiency would severely impede the accessibility of a public parking facility, such as a park or beach.

In addition, a significant impact could occur if the project removes and does not replace parking lots that are designated for public use and are heavily utilized.

#### **5.3.3.8 Terminal Curbside Significance Criteria**

A significant impact to terminal curbsides would occur if curbside demand resulting from the project exceeds curbside area available under the project.

#### **5.3.3.9 On-Airport Roadway Significance Criteria**

A significant circulation impact would occur if the project:

- Does not provide adequate site ingress and egress such that it negatively affects public street operations that would not be affected without the project.
- Requires any substantial onsite access improvements that would not be required without the project to avoid peak congestion that would affect public street operations.

- Increases traffic hazards to motor vehicles, bicyclists or pedestrians due to proposed nonstandard design features (e.g., poor sight distance or proposed driveway onto an access-restricted roadway).

### 5.3.4 Existing Conditions

This Section presents existing conditions observed in the study area and traffic analysis based upon data collections identified in **Section 5.3.1.2, Traffic Counts and Other Data**, along with additional data/information obtained from SANDAG, Caltrans, City of San Diego, and SDCRAA.

#### 5.3.4.1 Existing Airport Trip Generation

**Table 5-3.10** shows the existing airport trip generation based on counts conducted at airport access roadways. Airport trip generation includes traffic from terminals and associated facilities, SAN Park lots, rental car facilities on Rental Car Road, Employee Lot 6 on Harbor Island Drive, and north area air cargo and general aviation facilities. It does not include private vehicle trips associated with privately-operated off-airport parking and rental car facilities that were not surveyed, but does include shuttle trips between these facilities and the terminals.

Scheduled shuttle and transit vehicle trips were identified separately from private vehicle and non-scheduled shuttle trips and the trip generation of these scheduled services was based on observed and published schedules. Trip rates were developed for airport activity centers (e.g., terminal curbside, terminal parking, SAN Park parking, employee parking, etc.) by relating the observed trip generations at each facility (after deducting scheduled shuttle / transit trips) to air passenger activity levels. These trip rates were assumed to remain constant in the future; however, as facilities become constrained vehicles were reallocated to other facilities.

Table 5-3.10

**2005 Airport Trip Generation – Existing Conditions**

Activity	Year
	2005
<b>Airport Passenger Activity Level</b>	
Million Annual Passengers (MAP)	17.4
Million Annual O&D Passengers	16.7
Daily O&D Passengers	45,830
<b>Airport Trip Generation (1)</b>	
Daily	85,100
In	42,600
Out	42,500
AM Peak Hour	3,180
In	1,760
Out	1,420
PM Peak Hour	3,245
In	1,500
Out	1,745
<b>Trip Rate</b>	
Daily	1.86

O&D = origin and destination

Numbers may not add due to rounding.

Note:

(1) Includes terminals and associated facilities, SAN Park lots, rental car facilities on Rental Car Road, Employee Lot 6 on Harbor Island Drive, and north area. Does not include private vehicle trips to private off-airport parking and rental car facilities, but includes shuttle trips between these facilities and the terminals.

Source: HNTB, 2007.

### **5.3.4.2 Existing Street Segment Operations**

Existing street segment volumes and operations are summarized on [Table 5-3.11](#) and the ADT for street segments in the study area are depicted on [Figure 5.3-4](#). All street segments in the study are within jurisdiction of the City of San Diego and several are classified as San Diego region Congestion Management Program (CMP) Arterials. The purpose of the CMP is to monitor the performance of the transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG is the designated Congestion Management Agency for the San Diego region CMP. CMP Arterials are part of the overall CMP system, which includes those roadways that serve the highest level of regional traffic, serve major regional facilities, and provide significant inter-community traffic service and freeway congestion relief. The following street segments in the study area are designated as CMP Arterials:

- North Harbor Drive
- Grape Street
- Hawthorn Street
- Pacific Highway

As shown in [Table 5-3.11](#), the following streets segments currently operate at LOS E or F:

#### **Existing Conditions - LOS E**

- Grape Street between Pacific Highway and Kettner Boulevard
- Washington Street between Kettner Boulevard and San Diego Avenue
- Rosecrans Street between Barnett Avenue and Sports Arena Boulevard

#### **Existing Conditions - LOS F**

- North Harbor Drive between Rental Car Road and Laurel Street
- Grape Street between Kettner Boulevard and I-5
- Hawthorn Street between Kettner Boulevard and I-5
- Sassafras Street between Kettner Boulevard and India Street
- India Street between Laurel Street and Palm Street
- India Street between Palm Street and Sassafras Street
- India Street between Sassafras Street and Washington Street
- Rosecrans Street between Nimitz Boulevard and Barnett Avenue

### **5.3.4.3 Existing Intersections**

[Figure 5.3-5](#) depicts existing intersection geometry for the analysis intersections included in the study area. Existing intersection peak hour turning volumes used for the analysis are shown on [Table 5-3.12](#) and depict total traffic at each intersection. Background and airport traffic are depicted separately in [Appendix D](#). The existing intersection operations are summarized in [Table 5-3.13](#). All analysis intersections currently operate at LOS D or better.

Table 5-3.11  
Existing 2005 Street Segment Operations

Roadway	Segment	Classification	Lanes	LOS E ADT Capacity 1000s	Year 2005				
					SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS
North Harbor Drive	West of NTC	6-Lane Prime	6D	60.0	10.7	15.7	26.4	0.44	B
	NTC - Spanish Landing	6-Lane Prime	6D	60.0	12.6	14.3	26.9	0.45	B
	Spanish Landing - T2 Access	6-Lane Prime	6D	60.0	6.6	14.3	20.9	0.35	A
	T2 Access - Harbor Island	6-Lane Prime	4+3	65.0	20.6	14.5	35.1	0.54	B
	Harbor Island - T1 Access	6-Lane Prime	3+4	65.0	19.2	17.4	36.6	0.56	B
	T1 Access - Winship	6-Lane Prime	5+3	70.0	30.8	17.3	48.1	0.69	C
	Winship - Flyover Merge (1)	6-Lane Prime	4+4	70.0	32.8	17.4	50.2	0.72	C
	Rental Car Rd - Laurel	6-Lane Prime	6D	60.0	60.1	19.8	79.9	1.33	F
	Laurel - Hawthorn	6-Lane Prime	6D	60.0	39.9	14.5	54.4	0.91	D
	Hawthorn - Grape	6-Lane Prime	6D	60.0	25.0	13.4	38.4	0.64	C
Grape Street	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	12.9	6.4	19.3	0.77	C
	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	12.1	11.5	23.6	0.95	E
Hawthorn Street	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	12.0	17.9	29.9	1.20	F
	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	15.0	4.6	19.6	0.78	C
	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	12.2	5.8	18.0	0.72	C
Kettner Blvd	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	12.2	15.8	28.0	1.12	F
	north of Washington	3-Lane Collector 1-Way	3U	25.0	0.1	7.7	7.8	0.31	A
	Washington - Sassafras	3-Lane Major 1-Way	3U	25.0	7.7	7.1	14.8	0.59	C
	Sassafras - Palm	3-Lane Major 1-Way	3U	25.0	7.8	10.9	18.6	0.74	C
	Palm - Laurel	3-Lane Major 1-Way	3U	25.0	7.4	8.3	15.7	0.63	C
Laurel Street	Laurel - Hawthorn	3-Lane Major 1-Way	3U	25.0	0.0	8.1	8.1	0.32	A
	Hawthorn - Grape	3-Lane Major 1-Way	3U	25.0	0.0	13.0	13.0	0.52	B
	Harbor - Pacific	4-Lane Major	4U	40.0	20.2	6.2	26.4	0.66	C
	Pacific - Kettner	4-Lane Collector	4D	30.0	16.3	7.0	23.3	0.78	D
	Kettner - I-5	4-Lane Collector	4D	30.0	8.9	8.6	17.5	0.58	C
Pacific Highway	Washington - Sassafras	6-Lane Prime	6D	50.0	3.7	18.5	22.2	0.44	B
	Sassafras - Palm	6-Lane Prime	6D	50.0	4.7	14.0	18.7	0.37	A
	Palm - Laurel	6-Lane Prime	6D	50.0	4.7	14.6	19.3	0.39	A
	Laurel - Hawthorn	6-Lane Major	6D	50.0	0.6	14.3	14.9	0.30	A
Palm Street	Hawthorn - Grape	6-Lane Major	6D	50.0	3.3	15.1	18.4	0.37	A
	Pacific - Kettner	2-Lane Collector	2U	8.0	0.0	0.9	0.9	0.11	A
	Sassafras Street	Pacific - Kettner	3-Lane Collector	3U	12.0	1.4	8.3	9.7	0.81
Washington Street	Kettner-India	2-Lane Collector	2U	8.0	0.7	8.7	9.4	1.17	F
	Pacific - Kettner	4-Lane Collector	4U	30.0	3.5	15.2	18.7	0.62	C
India Street	Kettner - San Diego	5-Lane Collector	5D	30.0	3.2	22.4	25.6	0.85	E
	Laurel - Palm	2-Lane Collector	2U	8.0	7.3	8.2	15.5	1.93	F
	Palm - Sassafras	3-Lane Collector	3U	12.0	7.3	13.3	20.6	1.72	F
Rosecrans	Sassafras - Washington	3-Lane Collector	3U	12.0	7.7	13.1	20.8	1.73	F
	Barnett - Sport Arena	6-lane Major	6D	50.0	5.0	42.5	47.5	0.95	E
Nimitz	Nimitz Quimby - Barnett	4-lane Major 5-lane Major	4U 5U	40.0 45.0	5.0	36.8	41.9	1.05-0.93	F E
	Nimitz - Quimby	4-lane Major	4U	40.0	5.0	36.8	41.9	1.05	F
Nimitz	Harbor - Rosecrans	4-lane Major	4U	40.0	9.2	8.8	18.0	0.45	B

Source: HNTB, 2007.

Note: Existing conditions analysis revised from 2006 DEIR using updated methodology/model.  
(1) Does not include traffic on flyover.

MAP = Million Annual Passengers  
ADT = Average Daily Traffic  
LOS = Level of Service  
V/C = volume-to-capacity ratio

Table 5-3.12

Existing 2005 Intersection Turning Volumes – Total Peak Hour Traffic

Intersection Number		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total traffic	
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	390	0	23	9	368	0	6	522	245	1,563
		PM	0	0	0	424	0	57	31	478	0	13	516	559	2,078
2	North Harbor Drive / McCain St	AM	0	0	0	0	0	9	0	867	0	0	923	219	2,018
		PM	0	0	0	0	0	79	0	1,118	0	0	844	201	2,242
3	North Harbor Drive / Spanish Landing	AM	5	0	18	13	0	104	63	684	4	14	873	0	1,778
		PM	7	0	25	12	0	74	42	999	17	5	607	0	1,788
4	North Harbor Drive / Harbor Island Drive	AM	39	5	141	19	7	84	80	443	79	230	1,354	0	2,481
		PM	131	6	215	21	8	101	83	815	101	298	577	0	2,356
5	North Harbor Drive / Winship Lane	AM	0	0	0	107	0	110	58	714	0	0	2,160	203	3,352
		PM	0	0	0	157	0	131	50	1,160	0	0	1,149	161	2,808
6	North Harbor Drive / Rental Car Road	AM	48	0	39	12	0	2	4	1,322	60	102	2,150	23	3,762
		PM	66	0	75	70	0	13	6	1,462	67	76	1,351	32	3,218
7	Sheraton / Harbor Island Drive	AM	13	239	0	0	325	99	85	6	27	0	0	0	794
		PM	23	382	0	0	386	70	77	2	25	0	0	0	965
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	81	0	0	58	1	260
		PM	0	0	0	0	0	55	68	103	0	0	129	1	356
9	Sassafras Street / Pacific Highway	AM	46	405	58	38	451	6	2	34	26	202	85	53	1,406
		PM	18	662	91	96	713	1	8	108	55	165	15	39	1,971
10	Laurel Street / North Harbor Drive	AM	0	0	0	24	0	4	331	1,033	0	0	1,766	38	3,196
		PM	0	0	0	70	0	10	626	1,595	0	0	1,122	100	3,523
11	Hawthorn Street / North Harbor Drive	AM	0	265	0	0	974	0	0	0	0	71	0	1,728	3,038
		PM	0	364	0	0	1,747	0	0	0	0	124	0	758	2,993
12	Grape Street / North Harbor Drive	AM	0	207	107	778	457	0	0	0	0	0	0	0	1,549
		PM	0	429	264	1,018	899	0	0	0	0	0	0	0	2,610
13	Laurel Street / Pacific Highway	AM	26	237	64	64	208	288	80	468	2	46	630	57	2,170
		PM	28	430	108	110	387	232	89	664	2	50	567	71	2,738
14	Hawthorn Street / Pacific Highway	AM	104	152	0	0	114	38	0	0	0	250	1,774	81	2,513
		PM	182	377	0	0	355	40	0	0	0	142	699	79	1,874
15	Grape Street / Pacific Highway	AM	0	426	114	111	610	0	59	752	38	0	0	0	2,110
		PM	0	483	318	182	358	0	52	1,411	41	0	0	0	2,845
16	Laurel Street / Kettner Boulevard	AM	0	0	0	225	310	514	0	554	44	39	209	0	1,895
		PM	0	0	0	272	541	416	0	835	77	54	224	0	2,419
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	169	90	0	0	0	127	2,088	0	2,474
		PM	0	0	0	0	402	79	0	0	0	156	887	0	1,524
18	Grape Street / Kettner Boulevard	AM	0	0	0	80	406	0	0	1,024	64	0	0	0	1,574
		PM	0	0	0	155	428	0	0	2,151	67	0	0	0	2,801
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	62	81	69	0	0	0	32	331	877	0	0	0	1,452
		PM	93	177	173	0	0	0	20	410	1,686	0	0	0	2,558
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	39	38	0	0	0	0	0	0	0	0	2,191	69	2,337
		PM	32	50	0	0	0	0	0	0	0	0	1,346	53	1,481
21	Laurel Street / India Street	AM	37	90	15	0	0	0	445	343	0	0	198	178	1,306
		PM	37	241	71	0	0	0	639	499	0	0	247	244	1,978
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	113	1,225	339	0	50	42	124	93	0	1,986
		PM	0	0	0	186	1,722	232	0	211	97	87	62	0	2,597
23	Sassafras Street / India Street	AM	170	775	11	0	0	0	95	25	52	0	33	21	1,182
		PM	132	1,313	31	0	0	0	271	62	112	0	14	17	1,952
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	161	28	46	0	59	35	135	142	0	606
		PM	0	0	0	426	42	8	0	221	49	183	70	0	999
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	60	10	108	32	0	18	36	191	0	0	210	249	914
		PM	32	23	185	111	0	7	86	535	0	0	221	316	1,519
26	Washington Street / Hancock Street	AM	0	234	94	309	354	0	382	178	138	0	0	0	1,689
		PM	0	595	142	330	355	0	599	358	162	0	0	0	2,541
27	Washington Street / San Diego Avenue	AM	89	553	0	0	508	510	0	0	0	161	190	7	2,018
		PM	178	1,102	0	0	537	465	0	0	0	170	257	16	2,725
28	Rosecrans Street / Pacific Highway	AM	137	103	153	83	122	51	58	170	140	254	123	72	1,466
		PM	242	197	439	101	117	56	109	449	167	207	255	108	2,447
29	Rosecrans Street / Nimitz Boulevard	AM	48	190	91	229	311	238	178	769	34	103	871	55	3,117
		PM	55	421	142	180	266	180	399	977	39	200	894	73	3,826

Source: HNTB, 2007

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2				eb1	ebt	ebr				
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr	eb12	eb1	ebt	wbt	wbr2	wbr	

Table 5-3.13

## Existing 2005 Intersection Operations

Intersection Number	Intersection	Peak Hour	Year 2005	
			Delay (Sec.)	LOS
1	North Harbor Drive/ Nimitz Boulevard	AM	19.3	B
		PM	20.8	C
2	North Harbor Drive/ McCain Road	AM	11.6	B
		PM	12.2	B
3	North Harbor Drive/ Spanish Landing	AM	17.3	B
		PM	12.0	B
4	North Harbor Drive/ Harbor Island Drive	AM	19.9	B
		PM	26.4	C
5	North Harbor Drive/ Winship Lane	AM	10.4	B
		PM	14.9	B
6	North Harbor Drive/ Rental Car Road	AM	5.6	A
		PM	9.3	A
7	Sheraton Harbor Island Drive	AM	10.1	B
		PM	8.8	A
8	Employee Lot Harbor Island Drive	AM	9.8	A
		PM	10.1	B
9	Sassafras Street/ Pacific Highway	AM	27.1	C
		PM	26.4	C
10	Laurel Street/ North Harbor Drive	AM	10.6	B
		PM	14.8	B
11	Hawthorn Street/ North Harbor Drive	AM	24.5	C
		PM	19.0	B
12	Grape Street/ North Harbor Drive	AM	8.1	A
		PM	10.1	B
13	Laurel Street/ Pacific Highway	AM	33.0	C
		PM	34.0	C
14	Hawthorn Street/ Pacific Highway	AM	9.7	A
		PM	19.5	B
15	Grape Street/ Pacific Highway	AM	20.0	B
		PM	23.9	C
16	Laurel Street/ Kettner Boulevard	AM	20.3	C
		PM	22.6	C
17	Hawthorn Street/ Kettner Boulevard	AM	7.1	A
		PM	15.1	B
18	Grape Street/ Kettner Boulevard	AM	18.8	B
		PM	16.9	B
19	Grape Street/ I-5 Southbound On-Ramp	AM	13.7	B
		PM	31.3	C
20	Hawthorn Street/ I-5 Northbound Off-Ramp	AM	52.3	D
		PM	20.9	C
21	Laurel Street/ India Street	AM	17.2	B
		PM	20.5	C
22	Sassafras Street/ Kettner Boulevard	AM	10.8	B
		PM	14.4	B
23	Sassafras Street/ India Street	AM	14.2	B
		PM	21.9	C
24	Washington Street/ Pacific Highway SB-Ramps	AM	20.1	C
		PM	24.1	C
25	Washington Street/ Pacific Highway NB-Ramps	AM	34.7	C
		PM	37.0	D
26	Washington Street/ Hancock Street	AM	22.9	C
		PM	26.0	C
27	Washington Street/ San Diego Avenue	AM	12.3	B
		PM	13.3	B
28	Rosecrans Street/ Pacific Highway	AM	30.3	C
		PM	30.4	C
29	Rosecrans Street/ Nimitz Boulevard	AM	28.2	C
		PM	35.6	D

Source: HNTB, 2007

Note: Existing conditions analysis revised from 2006 DEIR using updated methodology/model.

LOS = level of service

### 5.3.4.4 Existing Freeway Operations

Table 5-3.14 summarizes the existing freeway mainline operations. All freeway segments in the study area are designated CMP Freeways. As shown, all I-5 freeway segments analyzed currently exceed Caltrans target of LOS C during one or both peak hours, except for the southbound I-5 segment between SR-163 and SR-94.

Table 5-3.14

#### Existing 2005 Freeway Operations

SB I-5 Freeway		AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
North of I-8	I-8	6,800	34.0	D	8,300	41.3	E
I-8	Old Town Avenue	6,600	32.9	D	6,500	32.6	D
Old Town Avenue	Washington Street	5,800	29.0	D	5,900	29.2	D
Washington Street	Pacific Highway Viaducts	6,200	30.8	D	6,200	30.9	D
Pacific Highway Viaducts	India Street	7,100	35.5	E	7,800	38.9	E
India Street	Hawthorn Street	7,200	35.8	E	7,800	38.7	E
Hawthorn Street	First Avenue	6,100	30.4	D	7,400	37.1	E
First Avenue	SR 163	6,600	32.8	D	9,000	44.7	E
SR 163	SR 94	3,600	17.8	B	5,100	25.5	C

NB I-5 Freeway		AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
SR 94	SR 163	10,900	54.3	F	7,500	37.4	E
SR 163	First Avenue	8,300	41.4	E	7,900	39.2	E
First Avenue	Hawthorn Street	7,000	34.9	D	6,400	31.9	D
Hawthorn Street	India Street	7,100	35.4	E	7,600	37.9	E
India Street	Pacific Highway Viaducts	7,100	35.3	E	7,500	37.4	E
Pacific Highway Viaducts	Washington Street	5,000	25.1	C	6,000	29.8	D
Washington Street	Old Town Avenue	5,300	26.5	D	6,500	32.3	D
Old Town Avenue	I-8	5,600	27.9	D	6,700	33.6	D
I-8	North of I-8	7,600	38.1	E	7,200	36.0	E

I-8 Freeway		AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
I-5	East	5,900	29.4	D	8,100	40.7	E
East	I-5	7,300	36.4	E	7,100	35.2	E

Source:HNTB, 2007.

Numbers may not add due to rounding.

Note: Existing conditions analysis revised from 2006 DEIR using updated methodology/model.

vph = vehicles per hour

pc/mi/ln = passenger cars per mile per lane

LOS = level of service

### 5.3.4.5 Existing Freeway Ramp Operations

Table 5-3.15 shows the existing freeway ramp operations. Ramp meter rates are set to process vehicles at a rate that allows controlled vehicle entry onto the freeway without slowing mainline freeway traffic by large platoons of vehicles entering at the same time. As shown, all freeway on-ramps located within the study area currently accommodate a lower traffic volume than their set meter rates.

Table 5-3.15  
2005 Freeway Ramp Operations – Existing Conditions

Location	Peak Hour	Demand (veh/hr)	Maximum Meter Rate (veh/hr)	Excess Demand (veh/hr)	Delay (minutes)	Queue (feet)
I-5 NB from San Diego	AM	691	1,992	0	0	0
	PM	599	1,992	0	0	0
I-5 NB from India	AM	642	1,992	0	0	0
	PM	957	1,992	0	0	0
I-5 SB from Kettner	AM	55	996	0	0	0
	PM	74	996	0	0	0
I-5 SB from Washington/Hancock	AM	456	1,140	0	0	0
	PM	301	1,140	0	0	0

Source: HNTB, 2007.

veh/hr = vehicles per hour

### 5.3.4.6 Existing Railroad Crossings

Six at grade railroad crossings are located within the study area. Both trolley and heavy rail train tracks (used by Coaster, Amtrak, and freight trains) cross Washington, Sassafras, and Palm Streets at grade between Pacific Highway and Kettner Boulevard. The Trolley tracks are grade separated at Laurel, Hawthorn and Grape Streets; however, the heavy rail tracks used by Coaster, Amtrak, and freight trains are at grade.

Currently the Coaster operates 11 trains daily in each direction and Amtrak operates 10 trains daily in each direction for a total of 22 and 20 daily trips, respectively. Trolley also operates 160 trips per day along this route and two freight train operations per day were assumed during off-peak, evening hours.

Table 5-3.16 summarizes the railroad crossing delay analysis under existing condition. As shown, delays at all railroad crossings were estimated to be under the VHD threshold for each street segment in all analysis years.

### 5.3.4.7 Existing Transit

Public transit bus service at SDIA is provided by the Airport Flyer Route No. 992, connecting the airport terminals to Downtown San Diego. There are five transit bus stops on terminal roadways and buses operate on 10 minute headways connecting to other MTS bus stops, Trolley, Coaster, and Amtrak Stations. This service is operated by the Metropolitan Transit System (MTS), which is the regional transit provider for San Diego County. In addition, MTS bus Route 923 runs along North Harbor Drive south of the Airport.

### 5.3.4.8 Existing Terminal Curbside

SDIA provides approximately 6,630 feet of total curb frontage at the three terminals.

### 5.3.4.9 Existing Parking

The Airport currently operates 4,085 on-airport, terminal area public parking spaces including 1,225 spaces at Terminal One, 1,355 spaces at Terminal Two, 225 spaces at the Commuter Terminal and 1,300 spaces west of Terminal Two known as SAN Park NTC. Of these 4,085 parking spaces, 2,755 are located immediately in front of the terminals. As documented in the AMP facility requirements the current demand for 6,000 terminal area spaces exceeds this supply.



Table 5-3.16

**2005 Railroad Crossing Operations – Existing Conditions**

Crossing	Year 2005				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Threshold
Washington Street	150	18,700	4.28	52	No
Sassafras Street	75	9,700	3.09	13	No
Palm Street	75	900	3.09	0	No
Laurel Street	150	23,300	0.74	1	No
Hawthorn Street	150	18,000	0.74	9	No
Grape Street	150	23,600	0.74	13	No

Source: HNTB, 2007.

Numbers may not add due to rounding.

Note: Existing conditions analysis revised from 2006 DEIR using updated methodology/model.

VHD = vehicle-hours of delay

ADT = average daily traffic

SDCRAA also operates several remote parking lots served by shuttles: SAN Park Harbor Drive located east of the commuter terminal along Harbor Drive, and SAN Park Pacific Highway located in the North Area along Pacific Highway. In addition, SAN Park NTC described above provides a shuttle to the terminals. Private operators also operate a number of remote off-airport facilities. The total remote parking including both airport-operated and privately operated facilities was estimated at 8,630 spaces in November 2004.

#### **5.3.4.10 Existing On-Airport Traffic Circulation**

Access points to the terminal roadways are all located along North Harbor Drive. An access ramp east of Harbor Island Drive provides primary access to Terminal 1 and adjacent public parking Lot 1. An access ramp, west of Harbor Island Drive provides primary access to Terminal Two and the adjacent public parking Lot 2. Both access ramps are uncontrolled. Access to the Commuter Terminal and adjacent public parking Lot 7 and employee parking Lot 8 is provided via Winship Lane with traffic signals located at North Harbor Drive. The loop road systems for Terminals One and Two are interconnected to form a major loop, allowing recirculation between the two terminals. See **Figure 5.3-6**

**Table 5-3.17** depicts the existing peak hour traffic volumes and LOS on terminal area roadways. As shown, all terminal roadways currently operate at LOS B or better during peak hours. Volumes and LOS shown represent throughput capacity of the on-Airport roadways but do not represent specific curbside operations. Please refer to **Figure 5.3-6** for Link ID Key Map.

### **5.3.5 Impact Analysis**

Traffic impacts associated with the Proposed Project/Preferred Alternative, the East Terminal Alternative, and the No Project Alternative are reported in **Appendix D, Traffic Impacts**, and summarized in this section.

#### **5.3.5.1 Airport Trip Generation and Background Traffic**

The Proposed Project/Preferred Alternative and East Terminal Alternative are projected to accommodate the same level of air passenger activity in the future – approximately 19.5 million annual passengers (MAP) in 2010, and approximately 28.2 MAP in 2030 based upon the high growth passenger forecast

Table 5-3.17

## 2005 On-Airport Roadway Operations – Existing Conditions

Link ID	Lanes	AM		PM	
		Volume (vph)	LOS	Volume (vph)	LOS
1	2	355	A	236	A
2	2	250	A	145	A
3	Link Not Used				
4	Link Not Used				
5	2	105	A	91	A
6	Link Not Used				
7	Link Not Used				
8	3	322	A	196	A
9	Link Not Used				
10	Link Not Used				
11	1	119	A	125	A
12	Link Not Used				
13	Link Not Used				
14	1	63	A	56	A
15	4	441	A	321	A
16	1	0	A	0	A
17	4	503	A	374	A
18	2	386	A	288	A
19	Link Not Used				
20	Link Not Used				
21	Link Not Used				
22	Link Not Used				
23	Link Not Used				
24	Link Not Used				
25	Link Not Used				
26	1	70	A	112	A
27	2	63	A	42	A
28	3	117	A	86	A
29	Link Not Used				
30	2	449	A	330	A
31	3	519	A	442	A
32	1	19	A	16	A
33	3	500	A	426	A
34	4	124	A	107	A
35	2	427	A	375	A
36	1	73	A	51	A
37	1	363	B	306	B
38	1	64	A	68	A
39	Link Not Used				
40	2	533	B	561	B
41	1	92	A	96	A
42	2	441	A	465	A
43	1	86	A	88	A
44	3	527	A	553	A
45	1	32	A	29	A
46	Link Not Used				
47	Link Not Used				
48	4	559	A	579	A
49	2	440	A	454	A
50	1	62	A	119	A
51	3	502	A	573	A
52	2	406	A	466	A
53	1	96	A	108	A
54	1	50	A	47	A
55	1	18	A	18	A
56	4	110	A	114	A
57	2	770	B	772	B
58	2	110	A	129	A

Source: HNTB Corporation, 2007.

vph = vehicles per hour

LOS = level of service

\*Refer to **Figure 5.3-5** for Existing 2005 On-Airport Roadway Link ID Key Map

approved by the FAA. The No Project Alternative would accommodate the same number of passengers through 2020 but only 26.9 MAP in 2030. Consequently, the total traffic generated by each alternative would be similar through 2020 with variations due to shuttles and other mode share changes in the No Project and Project without structure alternatives, as discussed under each alternative.

Airport trip generation rates were calculated based on existing mode shares and adjusted to account for a shift in terminal area parking demand to alternate modes and remote facilities as terminal area facilities become constrained. However, this diversion of passengers does not reduce total trip generation, as discussed in Section 5.3.1.4 5.3.1.5, because while a diversion of passengers to modes with higher occupancies results in fewer airport trips, the diversion of passengers to modes such as private vehicle curbside drop-off and taxis would result in increased airport trips. Trips from most airport modes were estimated to increase relative to origin and destination passenger growth. However, schedule driven modes such as public buses, and airport operated inter-terminal, employee and public parking shuttles were estimated to grow at a slower rate as many of these shuttles currently operate with excess capacity to maintain a set schedule. This results in a slight decrease in the trip generation rate decreases from 2010 to 2030. This trend has also been demonstrated historically at SDIA. In addition, the following assumptions were made to develop future traffic forecasts:

- SAN Park shuttles were assumed to continue operating at their current schedules in the future. Increase in passenger demand was assumed to be accommodated through increased passenger loadings. The same assumption was also made for the Airport Flyer, Blue Bus (employee), Red Bus (terminal-to-terminal).
- It was assumed that the existing employee parking lots cannot accommodate future growth. Trip generations from these lots were assumed to remain as existing. Future growth in employee parking demand was assumed to be accommodated in the TDY area. New employee shuttle service was assumed to be provided to serve the new employee lot.
- The taxi and shuttle staging area west of T2W terminal was assumed to remain at its current location.
- Parking demand at each terminal by type of parking (short-term, long-term and economy) were estimated based on methodologies described in the AMP. Under the No Project Alternative, existing terminal parking would not be able to accommodate future demand. Without any new terminal parking facilities, excess parking demand was assumed to use remote airport parking (e.g., SAN Park) or private off-airport lots, use the curbs, or shift to other modes. The reallocation of excess parking demand to other modes was based on existing mode share patterns. Excess parking demand allocated to private off-airport lots was assumed to generate new shuttle trips to the terminals.
- Trip generation associated with the existing rental car facilities on North Harbor Drive was assumed to grow proportionately to air passenger growth. This applies to both rental car vehicles and shuttles.

After 2020 the forecasts for the No Project Alternative deviate from the Proposed Project and East Terminal Alternative resulting in a decrease in total airport trips. See Section 5.3.1.3 *Traffic Modeling* and Section 2.2.2 *Aviation Forecast Update* for further discussion.

While regional background traffic generally increases between 2010 and 2030, the SANDAG regional transportation forecasts showed that the background (non-airport) traffic on several street and freeway segments would decrease from 2010 to 2030. This is primarily due to planned HOV lanes (one in each direction) on I-5 in the vicinity of the airport which would relieve traffic along Kettner Boulevard and India Street, and widening of I-8 between I-5 and SR-163 from 8 to 10 lanes which would relieve traffic along Pacific Highway. These improvements are assumed in the 2020 RTP that was the basis for the SANDAG model used for this analysis. Airport traffic is assumed to grow in all years although certain projects may divert traffic from specific street segments (i.e. the reconfigured exit at Terminal 2 reduces traffic along sections of North Harbor Drive when compared to other alternatives).

### **5.3.5.2 Proposed Project (Preferred Alternative)**

The Proposed Project includes the Proposed Airport Land Use Plan and the Proposed Airport Implementation Plan. Both are described in Section 4.1, *Proposed Project (Preferred Alternative)*. The Proposed Airport Land Use Plan designates airfield, terminal, ground transportation, and airport support uses, including a future planning area. In areas designated for future development or in the north area, land uses were chosen to provide a feasible worst case for traffic generation and traffic impact analysis. The type of use chosen does not mean that SDCRAA proposes to develop in this manner or intensity. In the event that a project was proposed in a future planning area, further planning and environmental impact analysis would be required.

### **Proposed Airport Implementation Plan**

The Proposed Airport Implementation Plan is the Airport Master Plan and will be hereinafter referred to in this section as the “Implementation Plan” unless otherwise indicated. Under the Proposed Airport Implementation Plan two scenarios are examined:

- Proposed Airport Implementation Plan (With Parking Structure)
- Proposed Airport Implementation Plan (Without Parking Structure)

### **Proposed Airport Implementation Plan (With Parking Structure)**

This scenario assumes all components of the Proposed Airport Implementation Plan are constructed as described in the Assumptions below, including a parking structure in front of Terminal 2. The proposed Terminal 2 West roadways and parking facilities are shown in [Figure 5.3-7](#).

### **Assumptions**

- Projects assumed in the Proposed Airport Implementation Plan are consistent with the Airport Master Plan and are discussed in the Alternatives section of the EIR. These projects include:
  - Expand existing Terminal Two West with 10 new aircraft gates.
  - Construct new second-level curb/road and vehicle circulation serving Terminal Two. This will reduce the SAN Park NTC lot by approximately 130 spaces.
  - Construct new five-level parking structure with approximately 5,000 spaces and associated vehicle circulation serving Terminal Two.
  - Relocate and reconfigure SAN Park Pacific Highway with 500 additional parking spaces.
  - Construct new/replacement general aviation facilities including access in the North Area.
  - Construct a new access road from Sassafras Street/Pacific Highway intersection providing access to general aviation and parking facilities in the North Area.
- Trip generation associated with development in the North Area is assumed to come from other facilities located within the study area and does not represent new demand generated from the development. As a result these trips would not add demand to freeway segments or ramps.
- The regional trip distribution of airport traffic under the Proposed Airport Implementation Plan is assumed to be the same as the No Project Alternative, as discussed in Section ~~5.3.5.5~~ [5.3.1.6](#).

The Proposed Airport Implementation Plan would have a different gate distribution from the No Project Alternative. The Proposed Airport Implementation Plan would add 10 new gates at Terminal Two West. This would consequently shift the passenger and traffic distribution among terminals. This is discussed further in the next section (Trip Generation and Terminal Distribution).

### **Trip Generation and Terminal Distribution**

Total Airport trip generation associated with the Implementation Plan is summarized in [Table 5-3.18](#). As shown, total airport trip generation would increase from approximately 94,600 ADT in 2010 to 135,000 ADT in 2030. This corresponds to an increase in air passenger forecast of 19.5 million annual passengers (MAP) in 2010 to 28.2 MAP in 2030. This represents an increase in trip generation of approximately 6,300

ADT or 4.7% from the No Project Alternative in 2030. Trips from most airport modes were estimated to increase relative to origin and destination passenger growth. However, schedule driven modes such as public buses, and airport operated inter-terminal, employee and public parking shuttles were estimated to grow at a slower rate as many of these shuttles currently operate with excess capacity to maintain a set schedule. This results in a slight decrease in the trip generation rate-from 4.86 1.85 to 1.82 in 2010 and 2030, respectively. This has also been demonstrated by a historical downward trend witnessed at SDIA.

Table 5-3.18  
**Airport Trip Generation – Proposed Airport Implementation Plan**

Activity	Year			
	2005	2010	2015	2030
<b>Airport Passenger Activity Level</b>				
Million Annual Passengers (MAP)	17.4	19.5	22.8	28.2
Million Annual O&D Passengers	16.7	18.6	21.8	27.0
Daily O&D Passengers	45,830	51,076	59,770	74,199
<b>Airport Trip Generation (1)</b>				
Daily	85,100	94,600	<del>0</del> 109,500	135,000
In	42,600	47,350	<del>0</del> 54,800	67,550
Out	42,500	47,250	54,700	67,450
AM Peak Hour	3,180	3,530	4,095	5,070
In	1,760	1,955	2,265	2,790
Out	1,420	1,575	1,830	2,280
PM Peak Hour	3,245	3,620	4,190	5,205
In	1,500	1,675	1,940	2,415
Out	1,745	1,945	2,250	2,790
Trip Rate				
Daily	1.86	1.85	1.83	1.82

O&D = origin and destination

Numbers may not add due to rounding.

(1) Includes terminals and associated facilities, SAN Park lots, rental car facilities on Rental Car Road, Employee Lot 6 on Harbor Island Drive, and north area. Does not include private vehicle trips to private off-airport parking and rental car facilities, but includes shuttle trips between these facilities and the terminals.

Source: HNTB, 2007.

Under existing conditions, Terminal One accommodates approximately 54% of the passenger activity. The Implementation Plan would shift passenger activity to Terminal Two (East and West) accommodating 51 percent of passenger activity in 2010, and up to 56 percent in 2030, as shown in [Table 5-3.19](#). The distribution of passengers (and traffic) among terminals would differ among the alternatives, as shown in [Table 5-3.18](#) [5-3.3](#). Under existing conditions, the distribution of SDIA passengers among the terminals is approximately 55 percent at Terminal One, 40 percent at Terminal Two (East and West), and 5 percent at the Commuter Terminal. Under the No Project Alternative, the passenger split would be approximately 50 percent, 45 percent, and 5 percent at Terminal One, Terminal Two (East and West), and the Commuter Terminal, respectively, in 2015.

The change in passenger distribution between terminals would result in redistribution of traffic at the terminal access driveways along North Harbor Drive. However, the change in passenger distribution would not affect the traffic pattern outside of the study area which is assumed to be the same as the No Project Alternative.

Table 5-3.19

**Terminal Passenger Distribution – Proposed Airport Implementation Plan**

Scenario/Year	Terminal 1	Terminal 1 East *	Terminal 2 East	Terminal 2 West	Commuter Terminal	Total
Existing						
2005	54%	0%	15%	26%	5%	100%
Proposed Airport Implementation Plan						
2010	45%	0%	20%	31%	4%	100%
2015	43%	0%	20%	33%	3%	100%
2030	41%	0%	19%	37%	3%	100%

Source: HNTB, 2007.

\* New unit terminal under Airport Implementation Project Alternative.

**Traffic Impacts**

Traffic impacts were identified by comparing traffic conditions under the Proposed Airport Implementation Plan (With Parking Structure) against traffic conditions under the No Project Alternative. Specific impact categories are discussed in this section.

**Street Segments**

**Table 5-3.20** summarizes the street segment operations for each analysis year under the Proposed Airport Implementation Plan (With Parking Structure).

**Table 5-3.21** compares the street segment volume to capacity (v/c) ratios under the Proposed Airport Implementation Plan (With Parking Structure) against the No Project Alternative to identify traffic impacts based on significance criteria identified in Section 5.3.3, *Traffic Impacts and Significance Criteria*, measured by an increase to LOS E or F or an increase in volume to capacity ratio of greater than 0.02 for streets operating at LOS E and 0.01 for streets operating at LOS F under the No Project Alternative. The following roadway segments would have potentially significant traffic impacts:

**Street Segments with Significant Traffic Impacts****Year 2010**

- Sassafras Street between Pacific Highway and Kettner Boulevard, which operates at LOS E under both the Proposed Airport Implementation Plan and No Project Alternative and experiences an increase in volume to capacity (v/c) ratio of over 0.02 under the Proposed Airport Implementation Plan compared to the No Project Alternative.
- Sassafras Street between Kettner Boulevard and India Street, which operates at LOS F under both the Proposed Airport Implementation Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Implementation Plan compared to the No Project Alternative.

**Year 2015**

- All locations identified in Year 2010 and 2015
- Kettner Boulevard between Sassafras and Palm Street, which increased from LOS D under the No Project Alternative to LOS E under the Proposed Airport Implementation Plan.

Table 5-3.20

Street Segment Operations – Proposed Airport Implementation Plan (With Parking Structure)

Roadway	Segment	Classification	Lanes	LOS E ADT Capacity 1000s	Year 2010					Year 2015					Year 2030				
					SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS	SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS	SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS
North Harbor Drive	West of NTC	6-Lane Prime	6D	60.0	11.1	17.7	28.8	0.48	B	12.9	20.4	33.3	0.55	B	19.7	28.5	48.2	0.80	C
	NTC - Spanish Landing	6-Lane Prime	6D	60.0	12.0	15.1	27.1	0.45	B	13.4	16.3	29.7	0.49	B	18.5	23.3	41.8	0.70	C
	Spanish Landing - T2 Access	6-Lane Prime	6D	60.0	11.2	14.9	26.1	0.43	B	12.4	16.2	28.6	0.48	B	16.1	20.7	36.8	0.61	C
	T2 Access - Harbor Island	6-Lane Prime	4+3	65.0	23.6	15.0	38.6	0.59	C	27.9	16.3	44.2	0.68	C	35.9	19.8	55.7	0.86	D
	Harbor Island - T1 Access	6-Lane Prime	3+4	65.0	22.3	18.3	40.6	0.63	C	26.2	18.4	44.6	0.69	C	31.9	21.1	53.0	0.82	C
	T1 Access - Winship	6-Lane Prime	5+3	70.0	36.4	18.3	54.7	0.78	C	41.8	18.3	60.1	0.86	D	49.5	21.1	70.6	1.01	F
	Winship - Flyover Merge (1)	6-Lane Prime	4+4	70.0	37.9	18.4	56.3	0.80	C	43.7	18.4	62.0	0.89	D	51.1	20.9	71.9	1.03	F
	Rental Car Rd - Laurel	6-Lane Prime	6D	60.0	63.0	20.8	83.8	1.40	F	73.1	20.7	93.8	1.56	F	85.8	21.7	107.5	1.79	F
	Laurel - Hawthorn	6-Lane Prime	6D	60.0	40.8	15.2	56.0	0.93	E	47.2	15.4	62.6	1.04	F	57.8	18.2	76.0	1.27	F
	Hawthorn - Grape	6-Lane Prime	6D	60.0	25.5	14.0	39.5	0.66	C	29.6	13.4	43.0	0.72	C	36.3	14.8	51.2	0.85	D
Grape Street	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	13.6	6.7	20.3	0.81	D	15.8	7.1	22.9	0.92	E	19.5	9.7	29.2	1.17	F
	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	12.5	16.4	28.9	1.15	F	14.4	17.1	31.5	1.26	F	17.7	19.8	37.5	1.50	F
	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	12.2	23.3	35.5	1.42	F	14.2	23.7	37.9	1.52	F	17.6	24.7	42.2	1.69	F
Hawthorn Street	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	15.4	5.1	20.5	0.82	D	17.9	5.4	23.3	0.93	E	22.0	7.9	29.9	1.20	F
	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	12.5	6.0	18.5	0.74	C	14.5	6.2	20.7	0.83	D	17.9	8.7	26.6	1.06	F
	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	12.5	17.2	29.7	1.19	F	14.5	19.2	33.7	1.35	F	17.9	24.5	42.4	1.69	F
Kettner Blvd	north of Washington	3-Lane Collector 1-Way	3U	25.0	0.2	7.2	7.4	0.29	A	0.2	7.2	7.4	0.30	A	0.4	4.2	4.6	0.18	A
	Washington - Sassafras	3-Lane Major 1-Way	3U	25.0	9.0	13.0	22.0	0.88	D	10.5	13.1	23.6	0.94	E	11.0	17.4	28.4	1.14	F
	Sassafras - Palm	3-Lane Major 1-Way	3U	25.0	9.1	11.0	20.1	0.81	D	10.6	11.9	22.5	0.90	E	11.2	14.2	25.4	1.02	F
	Palm - Laurel	3-Lane Major 1-Way	3U	25.0	7.6	8.6	16.2	0.65	C	8.8	9.5	18.3	0.73	C	9.0	12.6	21.5	0.86	D
	Laurel - Hawthorn	3-Lane Major 1-Way	3U	25.0	0.0	7.2	7.2	0.29	A	0.1	7.9	8.0	0.32	A	0.2	11.4	11.6	0.47	B
Laurel Street	Hawthorn - Grape	3-Lane Major 1-Way	3U	25.0	0.0	14.8	14.8	0.59	C	0.1	16.8	16.9	0.67	C	0.2	21.5	21.7	0.87	D
	Harbor - Pacific	4-Lane Major	4U	40.0	22.2	6.3	28.5	0.71	C	25.9	6.7	32.6	0.81	D	28.0	4.3	32.3	0.81	D
	Pacific - Kettner	4-Lane Collector	4D	30.0	17.9	7.2	25.1	0.84	E	21.1	7.8	28.9	0.96	E	22.5	12.1	34.6	1.15	F
Pacific Highway	Kettner - I-5	4-Lane Collector	4D	30.0	10.4	8.5	18.9	0.63	C	12.4	9.6	22.0	0.73	D	14.1	12.9	27.0	0.90	E
	Washington - Sassafras	6-Lane Prime	6D	50.0	4.1	22.8	26.9	0.54	B	4.9	27.3	32.2	0.64	C	6.1	19.1	25.1	0.50	B
	Sassafras - Palm	6-Lane Prime	6D	50.0	6.9	17.5	24.4	0.49	B	8.0	21.0	29.0	0.58	C	9.9	16.3	26.1	0.52	B
	Palm - Laurel	6-Lane Prime	6D	50.0	6.9	18.1	25.0	0.50	B	8.0	21.7	29.7	0.59	C	9.9	15.4	25.3	0.51	B
	Laurel - Hawthorn	6-Lane Major	6D	50.0	2.2	19.1	21.3	0.43	B	2.7	22.6	25.3	0.51	B	3.7	23.3	27.0	0.54	B
	Hawthorn - Grape	6-Lane Major	6D	50.0	4.9	19.6	24.5	0.49	B	5.8	23.2	29.0	0.58	C	7.3	24.1	31.4	0.63	C
	Pacific - Kettner	2-Lane Collector	2U	8.0	0.0	0.9	0.9	0.11	A	0.0	0.9	0.9	0.11	A	0.0	0.1	0.1	0.01	A
Sassafras Street	Pacific - Kettner	3-Lane Collector	3U	12.0	3.4	8.3	11.7	0.97	E	4.3	9.7	14.0	1.17	F	5.8	6.1	11.9	0.99	E
	Kettner-India	2-Lane Collector	2U	8.0	1.7	8.5	10.2	1.27	F	2.2	9.7	11.9	1.48	F	2.9	8.0	10.9	1.36	F
Washington Street	Pacific - Kettner	4-Lane Collector	4U	30.0	3.9	16.5	20.4	0.68	D	4.7	18.6	23.3	0.78	D	6.5	12.7	19.2	0.64	C
	Kettner - San Diego	5-Lane Collector	5D	30.0	3.6	23.3	26.9	0.90	E	4.3	25.5	29.8	0.99	E	5.6	22.5	28.1	0.94	E
	Laurel - Palm	2-Lane Collector	2U	8.0	7.4	8.7	16.1	2.01	F	8.7	10.2	18.9	2.36	F	8.9	12.6	21.4	2.68	F
India Street	Palm - Sassafras	3-Lane Collector	3U	12.0	7.4	13.2	20.7	1.72	F	8.7	15.4	24.0	2.00	F	9.9	16.5	25.3	2.11	F
	Sassafras - Washington	3-Lane Collector	3U	12.0	5.1	13.5	18.6	1.55	F	8.5	14.6	21.1	1.76	F	7.6	21.5	29.1	2.42	F
	Barnett - Sport Arena	6-lane Major	6D	50.0	5.1	40.1	45.3	0.91	E	6.0	42.4	48.4	0.97	E	10.8	33.7	44.5	0.89	D
Rosecrans	Nimitz Quimby - Barnett	4-lane Major 5-lane Major	4U 5U	40.0 45.0	5.1	35.9	41.1	4.03 0.91	F E	6.0	35.4	41.4	4.03 0.92	F E	10.8	29.0	39.8	4.09 0.88	E D
	Nimitz - Quimby	4-lane Major	4U	40.0	5.1	35.9	41.1	1.03	F	6.0	35.4	41.4	0.92	E	10.8	29.0	39.8	1.00	E
	Harbor - Rosecrans	4-lane Major	4U	40.0	9.5	8.7	18.2	0.45	B	11.0	8.5	19.4	0.49	B	17.4	11.7	29.1	0.73	C


Source: HNTB, 2007.  
 Analysis for years 2020 and 2025 presented in Appendix D.  
 (1) Does not include traffic on flyover.

MAP = Million Annual Passengers  
 ADT = Average Daily Traffic  
 LOS = Level of Service  
 V/C = volume-to-capacity ratio

Table 5-3.21

Street Segment Impacts – Proposed Airport Implementation Plan (With Parking Structure)

Roadway	Segment	Year 2010					Year 2015					Year 2030				
		No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C	No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C	No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C
North Harbor Drive	West of NTC	0.48	B	0.48	B	0.00	0.56	B	0.55	B	0.00	0.79	C	0.80	C	0.02
	NTC - Spanish Landing	0.51	B	0.45	B	-0.06	0.57	B	0.49	B	-0.07	0.79	C	0.70	C	-0.09
	Spanish Landing - T2 Access	0.43	B	0.43	B	0.01	0.47	B	0.48	B	0.01	0.60	C	0.61	C	0.01
	T2 Access - Harbor Island	0.56	B	0.59	C	0.03	0.63	C	0.68	C	0.05	0.76	C	0.86	D	0.10
	Harbor Island - T1 Access	0.58	C	0.63	C	0.04	0.62	C	0.69	C	0.06	0.69	C	0.82	C	0.12
	T1 Access - Winship	0.76	C	0.78	C	0.02	0.83	C	0.86	D	0.03	0.94	E	1.01	F	0.07
	Winship - Flyover Merge	0.79	C	0.80	C	0.01	0.87	D	0.89	D	0.01	0.97	E	1.03	F	0.06
	Rental Car Rd - Laurel	1.41	F	1.40	F	-0.01	1.57	F	1.56	F	-0.01	1.73	F	1.79	F	0.06
	Laurel - Hawthorn	0.94	E	0.93	E	-0.01	1.05	F	1.04	F	0.00	1.22	F	1.27	F	0.05
	Hawthorn - Grape	0.66	C	0.66	C	0.00	0.72	C	0.72	C	0.00	0.82	C	0.85	D	0.03
Grape Street	Harbor - Pacific	0.82	D	0.81	D	0.00	0.92	E	0.92	E	0.00	1.13	F	1.17	F	0.03
	Pacific - Kettner	1.16	F	1.15	F	0.00	1.26	F	1.26	F	0.00	1.46	F	1.50	F	0.04
Hawthorn Street	Kettner - I-5	1.43	F	1.42	F	-0.01	1.52	F	1.52	F	-0.01	1.66	F	1.69	F	0.03
	Harbor - Pacific	0.83	D	0.82	D	-0.01	0.94	E	0.93	E	-0.01	1.16	F	1.20	F	0.04
	Pacific - Kettner	0.75	C	0.74	C	-0.01	0.83	D	0.83	D	-0.01	1.03	F	1.06	F	0.03
Kettner Blvd	Kettner - I-5	1.19	F	1.19	F	-0.01	1.35	F	1.35	F	-0.01	1.66	F	1.69	F	0.03
	north of Washington	0.29	A	0.29	A	0.00	0.30	A	0.30	A	0.00	0.18	A	0.18	A	0.00
	Washington - Sassafras	0.88	D	0.88	D	0.00	0.94	E	0.94	E	0.00	1.11	F	1.14	F	0.03
Sassafras Street	Sassafras - Palm	0.80	D	0.81	D	0.00	0.897	D	0.901	E	0.005	0.99	E	1.02	F	0.03
	Palm - Laurel	0.65	C	0.65	C	0.00	0.74	C	0.73	C	0.00	0.85	D	0.86	D	0.01
	Laurel - Hawthorn	0.29	A	0.29	A	0.00	0.32	A	0.32	A	0.00	0.47	B	0.47	B	0.00
	Hawthorn - Grape	0.59	C	0.59	C	0.00	0.68	C	0.67	C	0.00	0.87	D	0.87	D	0.00
Laurel Street	Harbor - Pacific	0.72	C	0.71	C	-0.01	0.82	D	0.81	D	-0.01	0.78	D	0.81	D	0.03
	Pacific - Kettner	0.85	E	0.84	E	-0.01	0.97	E	0.96	E	-0.01	1.133	F	1.154	F	0.02
	Kettner - I-5	0.64	C	0.63	C	-0.01	0.75	D	0.73	D	-0.01	0.90	E	0.90	E	0.00
Pacific Highway	Washington - Sassafras	0.54	B	0.54	B	0.00	0.64	C	0.64	C	0.00	0.50	B	0.50	B	0.01
	Sassafras - Palm	0.48	B	0.49	B	0.01	0.57	C	0.58	C	0.01	0.51	B	0.52	B	0.02
	Palm - Laurel	0.49	B	0.50	B	0.01	0.59	C	0.59	C	0.01	0.49	B	0.51	B	0.02
	Laurel - Hawthorn	0.42	B	0.43	B	0.00	0.50	B	0.51	B	0.00	0.54	B	0.54	B	0.00
Palm Street	Hawthorn - Grape	0.49	B	0.49	B	0.00	0.58	C	0.58	C	0.00	0.62	C	0.63	C	0.01
	Pacific - Kettner	0.11	A	0.11	A	0.00	0.11	A	0.11	A	0.00	0.01	A	0.01	A	0.00
	Sassafras Street	0.95	E	0.97	E	0.021	1.14	F	1.17	F	0.024	0.94	E	0.99	E	0.05
Washington Street	Kettner-India	1.25	F	1.27	F	0.02	1.46	F	1.48	F	0.018	1.32	F	1.36	F	0.04
	Pacific - Kettner	0.68	D	0.68	D	0.001	0.78	D	0.78	D	0.00	0.63	C	0.64	C	0.01
	Kettner - San Diego	0.90	E	0.90	E	0.00	0.99	E	0.99	E	0.00	0.93	E	0.94	E	0.01
India Street	Laurel - Palm	2.03	F	2.01	F	-0.01	2.38	F	2.36	F	-0.01	2.64	F	2.68	F	0.04
	Palm - Sassafras	1.73	F	1.72	F	-0.01	2.01	F	2.00	F	-0.01	2.09	F	2.11	F	0.03
	Sassafras - Washington	1.57	F	1.55	F	-0.02	1.79	F	1.76	F	-0.03	2.41	F	2.42	F	0.011
Rosecrans	Barnett - Sport Arena	0.91	E	0.91	E	0.00	0.97	E	0.97	E	0.00	0.88	D	0.89	D	0.01
	Nimitz Quimby - Barnett	1.03 0.91	F E	1.03 0.91	F E	0.00	1.03 0.92	F E	1.03 0.92	F E	0.00	0.98 0.87	E D	1.00 0.88	E D	0.01
Nimitz	Nimitz - Quimby	1.03	F	1.03	F	0.00	1.03	F	1.03	F	0.00	0.98	E	1.00	E	0.01
	Harbor - Rosecrans	0.46	B	0.45	B	0.00	0.49	B	0.49	B	0.00	0.71	C	0.73	C	0.02

Source: HNTB, 2007.  
 Analysis for years 2020 and 2025 presented in Appendix D.  
 V/C = Volume to capacity ratio  
 LOS = Level of service  
 Legend:  




## Year 2030

- All locations identified in Year 2010 and 2015
- North Harbor Drive between Terminal One Access and Hawthorn Street, which operates at LOS E and F under both the Proposed Airport Implementation Plan and No Project Alternative and experience an increase in the v/c ratio of over 0.01 under the Proposed Airport Implementation Plan compared to the No Project Alternative.
- Grape Street between North Harbor Drive and I-5, which operates at LOS F under both the Proposed Airport Implementation Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Implementation Plan compared to the No Project Alternative.
- Hawthorn Street between North Harbor Drive and I-5, which operates at LOS F under both the Proposed Airport Implementation Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Implementation Plan compared to the No Project Alternative.
- Kettner Boulevard between Washington Street and Palm Street, which operates at LOS E and F under both the Proposed Airport Implementation Plan and No Project Alternative and experience an increase in the v/c ratio of over 0.01 under the Proposed Airport Implementation Plan compared to the No Project Alternative.
- Laurel Street between Pacific Highway and Kettner Boulevard, which operates at LOS F under both the Proposed Airport Implementation Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Implementation Plan compared to the No Project Alternative.
- India Street between Laurel Street and Washington Street, which operates at LOS F under both the Proposed Airport Implementation Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Implementation Plan compared to the No Project Alternative.

### Intersections

**Tables 5-3.22, 5-3.23, and 5-3.24** show the intersection turning volumes under the Proposed Airport Implementation Plan (With Parking Structure) for years 2010 through 2030. **Table 5-3.25** shows the resulting intersection operations. Future intersection lane configurations are shown on **Figure 5.3-3** and are assumed to remain the same under all alternatives except for the following changes:

- North Harbor Drive and McCain Road is currently an unsignalized intersection with right-in / right-out movements only. In 2010 as part of the Liberty Station Development, this intersection is assumed to be signalized, allowing left turn movements inbound and outbound.
- In 2010, the intersection of North Harbor Drive and Winship Lane would be improved as part of the SDIA CIP to provided exclusive right turn lanes on both inbound and outbound approaches.

**Table 5-3.26** compares the intersection delay under the Proposed Airport Implementation Plan (With Parking Structure) against the No Project Alternative to identify intersection impacts based on significance criteria identified in Section 5.3.3, *Traffic Impacts and Significance Criteria*, measured by an increase to LOS E or F or an increase in vehicle delay of greater than 2 seconds for streets operating at LOS E and greater than 1 second for streets operating at LOS F under the No Project Alternative. The following intersections would have potentially significant traffic impacts due to the project:

Table 5-3.22

2010 Intersection Turning Volumes – Proposed Airport Implementation Plan (With Parking Structure)

Intersection Number		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	549	0	23	11	431	0	7	589	293	1,903
		PM	0	0	0	456	0	56	36	562	0	14	584	767	2,475
2	North Harbor Drive / McCain St	AM	0	0	0	121	0	96	155	600	0	0	856	359	2,187
		PM	0	0	0	433	0	211	33	920	0	0	995	99	2,691
3	North Harbor Drive / Spanish Landing	AM	5	0	18	42	0	7	80	700	4	15	1,492	0	2,363
		PM	7	0	25	90	0	16	66	1,605	18	5	1,122	0	2,954
4	North Harbor Drive / Harbor Island Drive	AM	41	5	145	19	9	65	71	608	81	238	1,850	0	3,132
		PM	154	4	327	21	8	63	58	1,539	122	463	1,281	0	4,040
5	North Harbor Drive / Winship Lane	AM	0	0	0	79	0	165	66	705	0	0	2,463	229	3,707
		PM	0	0	0	96	0	195	61	1,826	0	0	2,048	218	4,444
6	North Harbor Drive / Rental Car Road	AM	53	0	43	10	0	14	16	1,533	67	113	2,625	19	4,493
		PM	74	0	83	22	0	16	15	2,625	74	86	2,176	14	5,185
7	Sheraton / Harbor Island Drive	AM	13	107	0	0	229	99	85	6	27	0	0	0	566
		PM	23	408	0	0	524	70	77	2	25	0	0	0	1,129
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	86	0	0	62	1	269
		PM	0	0	0	0	0	55	68	95	0	0	126	1	345
9	Sassafra Street / Pacific Highway	AM	68	494	71	47	546	9	5	65	41	202	130	53	1,731
		PM	62	857	353	125	949	8	13	178	90	165	108	44	2,952
10	Laurel Street / North Harbor Drive	AM	0	0	0	24	0	4	387	1,096	0	0	1,875	40	3,426
		PM	0	0	0	72	0	11	1,111	1,916	0	0	1,607	105	4,822
11	Hawthorn Street / North Harbor Drive	AM	0	282	0	0	1,037	0	0	0	0	80	0	1,901	3,300
		PM	0	580	0	0	2,087	0	0	0	0	133	0	1,058	3,858
12	Grape Street / North Harbor Drive	AM	0	221	111	822	483	0	0	0	0	0	0	0	1,637
		PM	0	639	267	1,154	1,090	0	0	0	0	0	0	0	3,150
13	Laurel Street / Pacific Highway	AM	35	321	85	80	266	349	89	519	2	47	694	61	2,548
		PM	111	605	145	139	480	369	471	691	58	51	794	78	3,992
14	Hawthorn Street / Pacific Highway	AM	113	204	0	0	160	51	0	0	0	258	1,857	84	2,727
		PM	126	592	0	0	557	49	0	0	0	147	1,029	82	2,582
15	Grape Street / Pacific Highway	AM	0	572	161	144	799	0	62	791	38	0	0	0	2,567
		PM	0	666	448	237	542	0	50	1,593	38	0	0	0	3,574
16	Laurel Street / Kettner Boulevard	AM	0	0	0	233	321	546	0	611	45	39	240	0	2,035
		PM	0	0	0	282	601	578	0	872	79	54	290	0	2,756
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	154	82	0	0	0	156	2,499	0	2,891
		PM	0	0	0	0	400	72	0	0	0	192	1,379	0	2,043
18	Grape Street / Kettner Boulevard	AM	0	0	0	91	462	0	0	1,336	92	0	0	0	1,981
		PM	0	0	0	221	487	0	0	3,112	90	0	0	0	3,910
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	65	86	73	0	0	0	42	430	1,056	0	0	0	1,752
		PM	98	187	183	0	0	0	26	532	2,071	0	0	0	3,097
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	45	43	0	0	0	0	0	0	0	0	2,458	78	2,624
		PM	36	57	0	0	0	0	0	0	0	0	1,485	61	1,639
21	Laurel Street / India Street	AM	74	108	19	0	0	0	461	343	30	0	219	195	1,449
		PM	83	290	86	0	0	0	657	499	39	0	273	267	2,194
22	Sassafra Street / Kettner Boulevard	AM	0	0	0	113	1,252	331	0	50	42	121	83	0	1,992
		PM	0	0	0	186	1,736	257	0	212	99	85	86	0	2,661
23	Sassafra Street / India Street	AM	191	790	11	0	0	0	108	24	50	0	33	21	1,228
		PM	178	1,329	31	0	0	0	301	60	110	0	14	17	2,040
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	185	32	53	0	64	37	148	154	0	673
		PM	0	0	0	488	49	10	0	223	51	199	80	0	1,100
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	65	11	117	26	6	18	22	0	230	312	143	47	997
		PM	37	25	199	57	55	7	55	14	592	327	207	59	1,634
26	Washington Street / Hancock Street	AM	0	258	103	321	376	0	354	165	130	0	0	0	1,707
		PM	0	652	157	343	379	0	555	331	155	0	0	0	2,572
27	Washington Street / San Diego Avenue	AM	94	579	0	0	539	536	0	0	0	174	204	7	2,133
		PM	187	1,153	0	0	572	489	0	0	0	185	276	17	2,879
28	Rosecrans Street / Pacific Highway	AM	200	148	220	99	145	61	60	173	143	301	147	86	1,783
		PM	351	287	636	120	139	67	111	459	170	246	304	129	3,019
29	Rosecrans Street / Nimitz Boulevard	AM	16	111	86	39	126	40	148	639	28	110	637	40	2,020
		PM	18	193	110	30	103	30	332	812	33	172	653	53	2,539

Source: HNTB, 2007.

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2				ebl	ebt	ebr				
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr	ebl2	ebl	ebt	wbt	wbr2	wbr	

Table 5-3.23

2015 Intersection Turning Volumes – Proposed Airport Implementation Plan (With Parking Structure)

Intersection Number		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	605	0	22	13	519	0	8	681	342	2,190
		PM	0	0	0	478	0	55	44	677	0	17	674	897	2,842
2	North Harbor Drive / McCain St	AM	0	0	0	134	0	116	187	660	0	0	808	425	2,330
		PM	0	0	0	510	0	257	39	967	0	0	1,010	111	2,894
3	North Harbor Drive / Spanish Landing	AM	5	0	18	56	0	10	100	769	5	16	1,574	0	2,553
		PM	7	0	25	121	0	21	83	1,788	20	6	1,155	0	3,226
4	North Harbor Drive / Harbor Island Drive	AM	44	5	148	19	10	72	78	678	86	240	2,037	0	3,417
		PM	160	4	337	21	9	70	65	1,737	131	467	1,395	0	4,396
5	North Harbor Drive / Winship Lane	AM	0	0	0	84	0	184	69	777	0	0	2,693	257	4,064
		PM	0	0	0	103	0	219	62	2,032	0	0	2,202	246	4,864
6	North Harbor Drive / Rental Car Road	AM	63	0	50	10	0	14	16	1,743	78	133	2,873	19	4,999
		PM	87	0	97	22	0	16	15	2,959	87	100	2,345	14	5,742
7	Sheraton / Harbor Island Drive	AM	13	113	0	0	237	99	85	6	27	0	0	0	580
		PM	23	423	0	0	537	70	77	2	25	0	0	0	1,157
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	95	0	0	69	1	285
		PM	0	0	0	0	0	55	68	104	0	0	136	1	364
9	Sassafras Street / Pacific Highway	AM	78	592	86	56	651	11	5	76	48	248	152	65	2,068
		PM	72	1,028	424	150	1,137	9	15	203	102	202	127	54	3,523
10	Laurel Street / North Harbor Drive	AM	0	0	0	26	0	4	449	1,195	0	0	1,970	39	3,683
		PM	0	0	0	76	0	11	1,176	2,019	0	0	1,684	102	5,068
11	Hawthorn Street / North Harbor Drive	AM	0	311	0	0	1,127	0	0	0	0	87	0	2,069	3,594
		PM	0	588	0	0	2,153	0	0	0	0	145	0	1,167	4,053
12	Grape Street / North Harbor Drive	AM	0	253	109	874	509	0	0	0	0	0	0	0	1,745
		PM	0	648	261	1,200	1,092	0	0	0	0	0	0	0	3,201
13	Laurel Street / Pacific Highway	AM	41	381	106	97	321	415	102	584	2	52	779	66	2,946
		PM	131	718	174	166	574	438	508	769	62	58	886	85	4,569
14	Hawthorn Street / Pacific Highway	AM	130	244	0	0	190	63	0	0	0	267	1,977	91	2,962
		PM	145	705	0	0	658	61	0	0	0	152	1,112	88	2,921
15	Grape Street / Pacific Highway	AM	0	648	182	170	946	0	69	885	43	0	0	0	2,943
		PM	0	755	504	280	639	0	57	1,748	44	0	0	0	4,027
16	Laurel Street / Kettner Boulevard	AM	0	0	0	260	355	616	0	693	49	46	278	0	2,297
		PM	0	0	0	313	664	650	0	976	86	65	335	0	3,089
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	171	90	0	0	0	173	2,793	0	3,227
		PM	0	0	0	0	445	79	0	0	0	213	1,549	0	2,286
18	Grape Street / Kettner Boulevard	AM	0	0	0	105	524	0	0	1,433	96	0	0	0	2,158
		PM	0	0	0	254	554	0	0	3,275	95	0	0	0	4,178
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	77	102	87	0	0	0	43	437	1,131	0	0	0	1,877
		PM	117	223	218	0	0	0	26	541	2,166	0	0	0	3,291
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	48	46	0	0	0	0	0	0	0	0	2,523	77	2,694
		PM	39	61	0	0	0	0	0	0	0	0	1,541	60	1,701
21	Laurel Street / India Street	AM	95	135	23	0	0	0	526	386	47	0	259	231	1,702
		PM	109	361	106	0	0	0	745	560	55	0	323	317	2,576
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	115	1,318	347	0	60	52	139	101	0	2,132
		PM	0	0	0	189	1,804	270	0	249	117	97	102	0	2,828
23	Sassafras Street / India Street	AM	223	919	12	0	0	0	125	28	58	0	34	22	1,421
		PM	208	1,544	36	0	0	0	344	69	126	0	15	18	2,360
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	200	35	57	0	76	42	164	174	0	748
		PM	0	0	0	527	53	12	0	240	56	219	99	0	1,206
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	94	16	155	29	7	20	24	0	258	360	162	53	1,178
		PM	52	36	270	63	60	8	60	15	649	378	234	66	1,891
26	Washington Street / Hancock Street	AM	0	297	120	351	418	0	358	167	134	0	0	0	1,845
		PM	0	742	179	376	423	0	562	335	162	0	0	0	2,779
27	Washington Street / San Diego Avenue	AM	107	637	0	0	565	553	0	0	0	194	225	8	2,289
		PM	208	1,264	0	0	596	504	0	0	0	207	304	18	3,101
28	Rosecrans Street / Pacific Highway	AM	237	177	261	116	170	72	63	183	151	314	153	89	1,986
		PM	418	341	756	141	163	78	119	485	180	257	315	134	3,387
29	Rosecrans Street / Nimitz Boulevard	AM	16	122	99	14	114	15	155	671	30	125	627	40	2,028
		PM	18	205	124	11	92	11	348	852	34	183	643	52	2,573

Source: HNTB, 2007.

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbl	nbt	nbr	nbr2	sbr	eb1	ebt	ebr	wbt	wbr2	wbr
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr	eb12	eb1	ebt	wbt	wbr

Table 5-3.24

2030 Intersection Turning Volumes – Proposed Airport Implementation Plan (With Parking Structure)

Intersection Number			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	839	0	31	16	619	0	11	945	504	2,965
		PM	0	0	0	690	0	75	52	807	0	23	934	1,246	3,827
2	North Harbor Drive / McCain St	AM	0	0	0	147	0	177	219	890	0	0	952	481	2,866
		PM	0	0	0	575	0	335	46	1,269	0	0	1,186	120	3,531
3	North Harbor Drive / Spanish Landing	AM	5	0	18	74	0	17	169	951	7	21	1,825	0	3,087
		PM	7	0	25	160	0	37	140	2,157	28	7	1,334	0	3,895
4	North Harbor Drive / Harbor Island Drive	AM	48	6	153	19	13	107	114	827	103	264	2,412	0	4,066
		PM	169	5	346	21	11	102	96	2,089	158	525	1,669	0	5,191
5	North Harbor Drive / Winship Lane	AM	0	0	0	86	0	221	78	920	0	0	3,133	293	4,731
		PM	0	0	0	106	0	264	69	2,387	0	0	2,569	288	5,683
6	North Harbor Drive / Rental Car Road	AM	81	0	60	10	0	14	17	2,063	105	157	3,331	18	5,856
		PM	114	0	115	21	0	17	15	3,475	114	119	2,726	14	6,730
7	Sheraton / Harbor Island Drive	AM	13	123	0	0	280	99	85	6	27	0	0	0	633
		PM	23	443	0	0	625	70	77	2	25	0	0	0	1,265
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	96	0	0	71	1	288
		PM	0	0	0	0	0	55	68	105	0	0	138	1	367
9	Sassafras Street / Pacific Highway	AM	95	497	66	39	512	13	7	92	57	135	184	35	1,732
		PM	87	844	328	105	842	11	17	239	120	110	156	29	2,888
10	Laurel Street / North Harbor Drive	AM	0	0	0	17	0	3	495	1,391	0	0	2,412	48	4,366
		PM	0	0	0	49	0	7	1,253	2,256	0	0	2,069	126	5,760
11	Hawthorn Street / North Harbor Drive	AM	0	371	0	0	1,385	0	0	0	0	133	0	2,854	4,743
		PM	0	674	0	0	2,623	0	0	0	0	217	0	1,574	5,088
12	Grape Street / North Harbor Drive	AM	0	304	109	1,030	602	0	0	0	0	0	0	0	2,045
		PM	0	663	255	1,391	1,247	0	0	0	0	0	0	0	3,556
13	Laurel Street / Pacific Highway	AM	42	409	119	72	256	345	115	525	1	81	999	102	3,066
		PM	135	759	186	123	454	359	383	658	40	92	1,204	130	4,523
14	Hawthorn Street / Pacific Highway	AM	158	271	0	0	206	74	0	0	0	376	2,675	133	3,893
		PM	170	745	0	0	694	71	0	0	0	214	1,483	126	3,503
15	Grape Street / Pacific Highway	AM	0	698	184	177	991	0	97	1,136	52	0	0	0	3,335
		PM	0	802	512	290	676	0	83	2,280	53	0	0	0	4,696
16	Laurel Street / Kettner Boulevard	AM	0	0	0	349	469	703	0	920	75	63	371	0	2,950
		PM	0	0	0	417	877	772	0	1,331	133	93	452	0	4,075
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	251	131	0	0	0	216	3,477	0	4,075
		PM	0	0	0	0	651	115	0	0	0	266	1,928	0	2,960
18	Grape Street / Kettner Boulevard	AM	0	0	0	136	673	0	0	1,694	111	0	0	0	2,614
		PM	0	0	0	332	710	0	0	3,823	109	0	0	0	4,974
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	206	272	233	0	0	0	44	457	1,268	0	0	0	2,480
		PM	311	593	580	0	0	0	27	565	2,353	0	0	0	4,429
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	62	59	0	0	0	0	0	0	0	0	3,110	95	3,326
		PM	50	78	0	0	0	0	0	0	0	0	1,903	74	2,105
21	Laurel Street / India Street	AM	98	96	16	0	0	0	618	517	78	1	341	310	2,075
		PM	121	254	73	0	0	0	899	750	84	0	431	425	3,037
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	242	2,399	699	0	53	49	114	106	0	3,662
		PM	0	0	0	399	3,502	539	0	200	117	80	106	0	4,943
23	Sassafras Street / India Street	AM	249	974	13	0	0	0	117	23	48	0	43	27	1,494
		PM	233	1,643	39	0	0	0	320	57	104	0	18	22	2,436
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	511	90	147	0	115	57	174	197	0	1,291
		PM	0	0	0	1,347	134	28	0	286	72	221	155	0	2,243
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	19	0	71	0	0	0	1	0	75	143	0	0	309
		PM	33	0	85	52	51	6	56	14	635	348	160	45	1,485
26	Washington Street / Hancock Street	AM	0	260	106	311	408	0	208	97	95	0	0	0	1,485
		PM	0	568	144	333	420	0	326	194	122	0	0	0	2,107
27	Washington Street / San Diego Avenue	AM	113	585	0	0	682	665	0	0	0	277	313	12	2,647
		PM	202	1,142	0	0	722	607	0	0	0	300	423	27	3,423
28	Rosecrans Street / Pacific Highway	AM	207	155	230	144	209	88	61	176	143	313	154	88	1,968
		PM	364	297	661	174	201	98	113	464	171	257	315	133	3,248
29	Rosecrans Street / Nimitz Boulevard	AM	20	158	179	39	171	41	107	461	20	219	514	32	1,961
		PM	23	261	212	31	141	31	239	586	24	245	528	43	2,364

Source: HNTB, 2007.

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2	sbl	sbr2	sbr	eb1	ebt	ebr	wbt	wbr2	wbr
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbt2	nbt	nbr	sbl	sbr2	sbr	eb12	eb1	ebt	wbt	wbr2	wbr

Table 5-3.25

**2010-2030 Peak Hour Intersection Operations – Proposed Airport Implementation Plan  
(With Parking Structure)**

Intersection Number	Intersection	Peak Hour	Year 2010		Year 2015		Year 2030	
			Delay (Sec.)	LOS	Delay (Sec.)	LOS	Delay (Sec.)	LOS
1	North Harbor Drive/ Nimitz Boulevard	AM	20.2	C	20.3	C	21.9	C
		PM	20.7	C	20.3	C	21.7	C
2	North Harbor Drive/ McCain Road	AM	8.4	A	9.2	A	10.7	B
		PM	9.8	A	10.7	B	11.8	B
3	North Harbor Drive/ Spanish Landing	AM	7.8	A	8.4	A	10.0	A
		PM	7.3	A	7.7	A	8.8	A
4	North Harbor Drive/ Harbor Island Drive	AM	19.7	B	19.3	B	20.1	C
		PM	30.5	C	31.0	C	35.2	D
5	North Harbor Drive/ Winship Lane	AM	9.5	A	9.7	A	10.2	B
		PM	9.1	A	9.3	A	9.7	A
6	North Harbor Drive/ Rental Car Road	AM	6.7	A	7.5	A	9.6	A
		PM	7.6	A	8.5	A	10.5	B
7	Sheraton Harbor Island Drive	AM	12.4	B	12.3	B	11.6	B
		PM	7.6	A	7.4	A	6.9	A
8	Employee Lot Harbor Island Drive	AM	9.8	A	9.9	A	9.9	A
		PM	10.1	B	10.1	B	10.2	B
9	Sassafras Street/ Pacific Highway	AM	15.3	B	15.5	B	14.1	B
		PM	14.9	B	17.4	B	14.8	B
10	Laurel Street/ North Harbor Drive	AM	9.1	A	10.0	A	10.8	B
		PM	15.4	B	16.2	B	20.3	C
11	Hawthorn Street/ North Harbor Drive	AM	31.3	C	48.6	D	182.2	F
		PM	23.1	C	25.1	C	62.3	E
12	Grape Street/ North Harbor Drive	AM	8.2	A	8.4	A	8.5	A
		PM	10.9	B	11.0	B	11.0	B
13	Laurel Street/ Pacific Highway	AM	32.1	C	33.7	C	34.0	C
		PM	48.9	D	62.2	E	61.8	E
14	Hawthorn Street/ Pacific Highway	AM	12.6	B	14.3	B	19.8	B
		PM	21.0	C	21.9	C	23.5	C
15	Grape Street/ Pacific Highway	AM	18.5	B	19.0	B	20.3	C
		PM	26.1	C	32.8	C	58.5	E
16	Laurel Street/ Kettner Boulevard	AM	18.8	B	19.5	B	21.9	C
		PM	21.3	C	22.7	C	31.9	C
17	Hawthorn Street/ Kettner Boulevard	AM	5.5	A	6.2	A	13.4	B
		PM	10.9	B	11.2	B	14.2	B
18	Grape Street/ Kettner Boulevard	AM	12.4	B	13.1	B	14.7	B
		PM	16.6	B	22.6	C	80.0	E
19	Grape Street/ I-5 Southbound On-Ramp	AM	11.1	B	10.8	B	15.3	B
		PM	28.3	C	34.7	C	90.1	F
20	Hawthorn Street/ I-5 Northbound Off-Ramp	AM	11.0	B	10.6	B	16.0	B
		PM	11.8	B	12.0	B	11.1	B
21	Laurel Street/ India Street	AM	18.4	B	19.3	B	22.8	C
		PM	21.3	C	22.9	C	22.1	C
22	Sassafras Street/ Kettner Boulevard	AM	8.6	A	9.5	A	9.8	A
		PM	11.6	B	13.1	B	66.7	E
23	Sassafras Street/ India Street	AM	8.2	A	8.3	A	8.1	A
		PM	13.7	B	17.8	B	17.7	B
24	Washington Street/ Pacific Highway SB-Ramps	AM	12.6	B	12.7	B	12.5	B
		PM	14.9	B	15.1	B	17.6	B
25	Washington Street/ Pacific Highway NB-Ramps	AM	33.5	C	46.9	D	21.2	C
		PM	68.5	E	100.5	F	79.8	E
26	Washington Street/ Hancock Street	AM	27.8	C	28.1	C	25.9	C
		PM	30.2	C	30.8	C	28.0	C
27	Washington Street/ San Diego Avenue	AM	12.5	B	13.1	B	14.9	B
		PM	13.6	B	14.1	B	16.8	B
28	Rosecrans Street/ Pacific Highway	AM	36.1	D	36.4	D	37.3	D
		PM	39.1	D	44.8	D	43.0	D
29	Rosecrans Street/ Nimitz Boulevard	AM	21.8	C	21.7	C	27.0	C
		PM	25.0	C	25.2	C	29.2	C

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

LOS = level of service

Table 5-3.26

## 2010-2030 Intersection Impacts – Proposed Airport Implementation Plan (With Parking Structure)

Intersection Number	Intersection	Peak Hour	Year 2010			Year 2015			Year 2030		
			No Proj Delay (Sec.)	No Project Delay (Sec.)	Diff. Delay (Sec.)	No Proj Delay (Sec.)	No Project Delay (Sec.)	Diff. Delay (Sec.)	No Proj Delay (Sec.)	No Project Delay (Sec.)	Diff. Delay (Sec.)
1	North Harbor Drive/ Nimitz Boulevard	AM	20.2	20.2	0.0	20.4	20.3	-0.1	21.7	21.9	0.2
		PM	20.7	20.7	0.0	20.4	20.3	-0.1	21.6	21.7	0.1
2	North Harbor Drive/ McCain Road	AM	6.7	8.4	-1.7	7.2	9.2	2.0	7.6	10.7	3.1
		PM	9.1	9.8	-0.7	9.9	10.7	0.8	10.3	11.8	1.5
3	North Harbor Drive/ Spanish Landing	AM	10.1	7.8	2.3	10.9	8.4	-2.5	13.1	10.0	-3.1
		PM	8.7	7.3	1.4	9.3	7.7	-1.6	11.2	8.8	-2.4
4	North Harbor Drive/ Harbor Island Drive	AM	20.4	19.7	0.7	20.4	19.3	-1.1	21.9	20.1	-1.8
		PM	30.8	30.5	0.3	31.4	31.0	-0.4	34.9	35.2	0.3
5	North Harbor Drive/ Winship Lane	AM	9.9	9.5	0.4	10.6	9.7	-0.9	11.1	10.2	-0.9
		PM	9.6	9.1	0.5	10.3	9.3	-1.0	10.7	9.7	-1.0
6	North Harbor Drive/ Rental Car Road	AM	6.7	6.7	0.0	7.5	7.5	0.0	9.0	9.6	0.6
		PM	7.6	7.6	0.0	8.5	8.5	0.0	10.0	10.5	0.5
7	Sheraton Harbor Island Drive	AM	12.4	12.4	0.0	12.3	12.3	0.0	11.6	11.6	0.0
		PM	7.6	7.6	0.0	7.4	7.4	0.0	6.9	6.9	0.0
8	Employee Lot Harbor Island Drive	AM	9.8	9.8	0.0	9.9	9.9	0.0	9.9	9.9	0.0
		PM	10.1	10.1	0.0	10.1	10.1	0.0	10.1	10.2	0.1
9	Sassafras Street/ Pacific Highway	AM	15.3	15.3	0.0	15.4	15.5	0.1	14.0	14.1	0.1
		PM	14.5	14.9	-0.4	16.6	17.4	0.8	14.1	14.8	0.7
10	Laurel Street/ North Harbor Drive	AM	9.2	9.1	0.1	10.1	10.0	-0.1	10.5	10.8	0.3
		PM	15.5	15.4	0.1	16.3	16.2	-0.1	19.4	20.3	0.9
11	Hawthorn Street/ North Harbor Drive	AM	31.8	31.3	0.5	49.6	48.6	-1.0	173.0	182.2	9.2
		PM	23.2	23.1	0.1	25.2	25.1	-0.1	55.9	62.3	6.4
12	Grape Street/ North Harbor Drive	AM	8.2	8.2	0.0	8.4	8.4	0.0	8.3	8.5	0.2
		PM	10.9	10.9	0.0	11.0	11.0	0.0	10.9	11.0	0.1
13	Laurel Street/ Pacific Highway	AM	32.1	32.1	0.0	33.7	33.7	0.0	33.7	34.0	0.3
		PM	49.0	48.9	0.1	62.4	62.2	-0.2	60.4	61.8	1.4
14	Hawthorn Street/ Pacific Highway	AM	12.6	12.6	0.0	14.3	14.3	0.0	18.9	19.8	0.9
		PM	21.0	21.0	0.0	22.0	21.9	-0.1	23.3	23.5	0.2
15	Grape Street/ Pacific Highway	AM	18.5	18.5	0.0	19.0	19.0	0.0	20.2	20.3	0.1
		PM	26.2	26.1	0.1	32.8	32.8	0.0	56.5	58.5	2.0
16	Laurel Street/ Kettner Boulevard	AM	18.9	18.8	0.1	19.6	19.5	-0.1	21.9	21.9	0.0
		PM	21.4	21.3	0.1	22.9	22.7	-0.2	31.9	31.9	0.0
17	Hawthorn Street/ Kettner Boulevard	AM	5.5	5.5	0.0	6.2	6.2	0.0	13.0	13.4	0.4
		PM	10.9	10.9	0.0	11.3	11.2	-0.1	14.2	14.2	0.0
18	Grape Street/ Kettner Boulevard	AM	12.4	12.4	0.0	13.1	13.1	0.0	14.8	14.7	-0.1
		PM	16.7	16.6	0.1	22.8	22.6	-0.2	77.1	80.0	2.9
19	Grape Street/ I-5 Southbound On-Ramp	AM	11.1	11.1	0.0	8.9	10.8	1.9	15.1	15.3	0.2
		PM	28.6	28.3	0.3	35.2	34.7	-0.5	87.1	90.1	3.0
20	Hawthorn Street/ I-5 Northbound Off-Ramp	AM	11.1	11.0	0.1	10.6	10.6	0.0	15.3	16.0	0.7
		PM	11.8	11.8	0.0	12.0	12.0	0.0	11.0	11.1	0.1
21	Laurel Street/ India Street	AM	18.5	18.4	0.1	19.4	19.3	-0.1	23.0	22.8	-0.2
		PM	21.4	21.3	0.1	22.9	22.9	0.0	32.4	22.1	-10.3
22	Sassafras Street/ Kettner Boulevard	AM	8.3	8.6	-0.3	9.2	9.5	0.3	9.6	9.8	0.2
		PM	11.1	11.6	-0.5	12.5	13.1	0.6	62.5	66.7	4.2
23	Sassafras Street/ India Street	AM	8.1	8.2	-0.1	8.2	8.3	0.1	8.0	8.1	0.1
		PM	13.5	13.7	-0.2	17.3	17.8	0.5	16.6	17.7	1.1
24	Washington Street/ Pacific Highway SB-Ramps	AM	12.6	12.6	0.0	12.7	12.7	0.0	12.4	12.5	0.1
		PM	14.9	14.9	0.0	15.1	15.1	0.0	17.4	17.6	0.2
25	Washington Street/ Pacific Highway NB-Ramps	AM	33.5	33.5	0.0	46.7	46.9	0.2	31.1	21.2	-9.9
		PM	67.7	68.5	-0.8	107.8	100.5	-7.3	79.3	79.8	0.5
26	Washington Street/ Hancock Street	AM	27.8	27.8	0.0	28.1	28.1	0.0	25.9	25.9	0.0
		PM	30.2	30.2	0.0	30.8	30.8	0.0	28.0	28.0	0.0
27	Washington Street/ San Diego Avenue	AM	12.5	12.5	0.0	13.1	13.1	0.0	15.0	14.9	-0.1
		PM	13.6	13.6	0.0	14.1	14.1	0.0	16.8	16.8	0.0
28	Rosecrans Street/ Pacific Highway	AM	36.1	36.1	0.0	36.4	36.4	0.0	37.3	37.3	0.0
		PM	39.1	39.1	0.0	44.8	44.8	0.0	42.9	43.0	0.1
29	Rosecrans Street/ Nimitz Boulevard	AM	21.8	21.8	0.0	21.8	21.7	-0.1	26.8	27.0	0.2
		PM	25.0	25.0	0.0	25.3	25.2	-0.1	28.9	29.2	0.3

Source: HNTB, 2007

Analysis for years 2020 and 2025 presented in Appendix D.

Legend:

	LOS E
	LOS F
	Significant Impact

## **Intersections with Significant Traffic Impacts**

### **Year 2030**

- Hawthorn Street and North Harbor Drive (AM & PM), which operates at LOS E in the AM peak hour and LOS F in the PM peak hour under both the Proposed Airport Implementation Plan and No Project Alternative and would experience an increase in delay greater than 2 seconds under the Proposed Airport Implementation Plan compared to the No Project Alternative.
- Grape Street and Kettner Boulevard (PM), which operates at LOS F in the PM peak hour under both the Proposed Airport Implementation Plan and No Project Alternative and would experience an increase in delay greater than 1 second under the Proposed Airport Implementation Plan compared to the No Project Alternative.
- Grape Street and I-5 Southbound On-Ramp (PM), which operates at LOS F in the PM peak hour under both the Proposed Airport Implementation Plan and No Project Alternative and would experience an increase in delay greater than 1 second under the Proposed Airport Implementation Plan compared to the No Project Alternative.
- Sassafras Street and Kettner Boulevard (PM), which operates at LOS E in the AM peak hour under the No Project Alternative and LOS F in the AM peak hour under the Proposed Airport Implementation Plan and would experience an increase in delay greater than 1 second under the Proposed Airport Implementation Plan compared to the No Project Alternative.

### **Freeway Segments**

**Table 5-3.27** shows the freeway segment operations for each analysis year under the Proposed Airport Implementation Plan (With Parking Structure). As shown, all freeway segments would operate at LOS D, E or F under the Proposed Airport Implementation Plan during either AM or PM peak hours or both.

**Table 5-3.28** compares the freeway segment densities under the Proposed Airport Implementation Plan (With Parking Structure) against the No Project Alternative to identify freeway segment impacts based on significance criteria identified in Section 5.3.3, *Traffic Impacts and Significance Criteria*, measured by an increase to LOS E or F or an increase in volume to capacity ratio of greater than 0.01 for freeways operating at LOS E and .005 for freeways operating at LOS F under the No Project Alternative. It was assumed that an increase in volume to capacity ratio of 0.01 and 0.005 is equivalent to an increase in density of 1 percent and 0.5 percent, respectively. As shown, none of the freeway segments analyzed would be significantly impacted by the Proposed Airport Implementation Plan (with Parking Structure).

### **Freeway Ramps**

**Table 5-3.29** summarizes the freeway ramp metering operations for each analysis year under the Proposed Airport Implementation Plan (With Parking Structure). As shown, all freeway ramps in the study area were estimated to accommodate a lower traffic volume than their set meter rates and, therefore, would have no significant traffic impact.

## **Railroad Crossings**

Forecasts of future train operations were obtained from the San Diego 2030 RTP (Mobility 2030), the 2007 LOSSAN Strategic Business Plan, and the 2000 San Diego International Airport Master Plan Preferred Concept Alternatives Roadway Analysis<sup>44</sup> report. Mobility 2030 projects that the headways for the Coaster Service will decrease from 36 minutes to 20 minutes during peak hours and from 120 minutes to 60 minutes during off-peak hours by 2030. That translates to a 44 percent increase in frequency during peak hours by 2030. The LOSSAN Strategic Business Plan projects that Coaster service would increase from existing 22 trains per day to 54 trains per day in 2025, consistent with Mobility 2030. The LOSSAN Strategic Business Plan also projects that Amtrak Pacific Surfliner service between Los Angeles and San Diego would increase from existing 22 trips per day in 2005/2006 to 26 trains in 2015 and 32

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<sup>44</sup> Linscott, Law & Greenspan Engineers, San Diego International Airport Master Plan Preferred Concept Alternatives Roadway Analysis, March 3, 2000.

Table 5-3.27

2010-2030 Freeway Segment Operations – Proposed Airport Implementation Plan (With Parking Structure)

SB I-5 Freeway		2010						2015						2030					
		AM			PM			AM			PM			AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
North of I-8	I-8	7,000	34.7	D	8,600	42.7	E	7,200	35.8	E	8,400	41.8	E	7,600	38.1	E	9,200	46.0	F
I-8	Old Town Avenue	7,100	35.4	E	7,400	37.1	E	7,300	36.4	E	7,400	36.9	E	7,600	37.7	E	8,400	42.1	E
Old Town Avenue	Washington Street	5,800	29.2	D	6,200	30.8	D	6,000	29.9	D	6,200	31.1	D	5,600	27.7	D	6,400	31.8	D
Washington Street	Pacific Highway Viaducts	6,200	31.2	D	6,500	32.4	D	6,400	32.1	D	6,600	33.1	D	6,100	30.4	D	7,000	34.8	D
Pacific Highway Viaducts	India Street	7,200	35.8	E	8,200	41.1	E	7,400	36.7	E	8,400	42.0	E	6,700	33.4	D	8,300	41.4	E
India Street	Hawthorn Street	7,300	36.3	E	8,400	42.0	E	7,500	37.4	E	8,400	41.8	E	6,900	34.6	D	8,600	42.8	E
Hawthorn Street	First Avenue	6,100	30.5	D	7,500	37.4	E	6,300	31.4	D	7,400	36.9	E	5,600	28.1	D	7,800	39.0	E
First Avenue	SR 163	6,500	32.3	D	9,300	46.5	F	6,600	33.1	D	9,400	46.9	F	6,100	30.5	D	9,800	49.1	F
SR 163	SR 94	3,700	18.4	C	5,300	26.3	D	3,900	19.4	C	5,400	26.7	D	3,700	18.3	C	5,500	27.4	D
NB I-5 Freeway		2010						2015						2030					
		AM			PM			AM			PM			AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
SR 94	SR 163	10,900	54.4	F	7,700	38.4	E	11,400	56.7	F	7,900	39.5	E	10,700	53.6	F	7,500	37.3	E
SR 163	First Avenue	8,400	41.7	E	7,800	39.0	E	8,600	42.8	E	7,900	39.3	E	8,100	40.5	E	7,700	38.2	E
First Avenue	Hawthorn Street	7,000	35.0	E	6,500	32.2	D	7,100	35.4	E	6,500	32.3	D	6,300	31.5	D	6,200	30.7	D
Hawthorn Street	India Street	7,200	36.0	E	7,700	38.5	E	7,300	36.3	E	7,700	38.6	E	6,400	32.0	D	7,900	39.6	E
India Street	Pacific Highway Viaducts	7,200	35.7	E	7,600	37.7	E	7,200	36.1	E	7,600	37.8	E	6,400	31.7	D	7,200	35.8	E
Pacific Highway Viaducts	Washington Street	5,300	26.4	D	6,500	32.2	D	5,100	25.2	C	6,100	30.6	D	4,400	21.8	C	5,900	29.6	D
Washington Street	Old Town Avenue	6,000	29.8	D	7,100	35.5	E	6,100	30.5	D	7,200	35.8	E	5,600	27.9	D	7,100	35.5	E
Old Town Avenue	I-8	5,900	29.2	D	7,300	36.4	E	6,100	30.2	D	7,400	36.8	E	5,300	26.6	D	7,200	35.8	E
I-8	North of I-8	7,400	36.7	E	7,500	37.2	E	7,400	37.1	E	7,700	38.2	E	7,500	37.5	E	8,600	43.0	E
I-8 Freeway		2010						2015						2030					
		AM			PM			AM			PM			AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
I-5	East	5,800	29.1	D	7,900	39.2	E	5,900	29.4	D	7,800	38.9	E	4,900	24.4	C	7,500	37.2	E
East	I-5	7,100	35.6	E	7,200	36.1	E	7,200	35.7	E	7,600	37.8	E	7,300	36.3	E	7,100	35.5	E

Source: HNTB, 2007.

Numbers may not add due to rounding.

Analysis for years 2020 and 2025 presented in Appendix D.

vph = vehicles per hour

pc/mi/ln = passenger cars per mile per lane

LOS = level of service



Table 5-3.28

**2010-2030 Freeway Segment Impacts – Proposed Airport Implementation Plan  
(With Parking Structure)**

AM Peak Hour										
SB I-5 Freeway		Year 2010			Year 2015			Year 2030		
From	To	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase
North of I-8	I-8	34.7	34.7	0.0%	35.8	35.8	0.0%	38.0	38.1	0.3%
I-8	Old Town Avenue	35.4	35.4	0.1%	36.4	36.4	0.1%	37.5	37.7	0.4%
Old Town Avenue	Washington Street	29.1	29.2	0.1%	29.9	29.9	0.1%	27.6	27.7	0.5%
Washington Street	Pacific Highway Viaducts	31.2	31.2	0.0%	32.1	32.1	0.0%	30.4	30.4	0.0%
Pacific Highway Viaducts	India Street	35.8	35.8	0.1%	36.7	36.7	0.1%	33.4	33.4	0.1%
India Street	Hawthorn Street	36.3	36.3	0.1%	37.4	37.4	0.1%	34.5	34.6	0.1%
Hawthorn Street	First Avenue	30.5	30.5	0.0%	31.4	31.4	0.0%	28.0	28.1	0.5%
First Avenue	SR 163	32.3	32.3	0.0%	33.1	33.1	0.0%	30.4	30.5	0.5%
SR 163	SR 94	18.4	18.4	0.0%	19.4	19.4	0.0%	18.2	18.3	0.8%
NB I-5 Freeway										
From	To	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase
SR 94	SR 163	54.4	54.4	0.0%	56.7	56.7	0.0%	53.4	53.6	0.4%
SR 163	First Avenue	41.7	41.7	0.0%	42.7	42.8	0.0%	40.3	40.5	0.6%
First Avenue	Hawthorn Street	35.0	35.0	0.1%	35.4	35.4	0.1%	31.3	31.5	0.7%
Hawthorn Street	India Street	35.9	36.0	0.1%	36.3	36.3	0.1%	31.9	32.0	0.2%
India Street	Pacific Highway Viaducts	35.7	35.7	0.0%	36.1	36.1	0.0%	31.7	31.7	0.0%
Pacific Highway Viaducts	Washington Street	26.4	26.4	0.0%	25.2	25.2	0.0%	21.8	21.8	0.0%
Washington Street	Old Town Avenue	29.8	29.8	0.1%	30.5	30.5	0.0%	27.8	27.9	0.3%
Old Town Avenue	I-8	29.2	29.2	0.1%	30.2	30.2	0.0%	26.5	26.6	0.3%
I-8	North of I-8	36.7	36.7	0.0%	37.1	37.1	0.0%	37.4	37.5	0.2%
I-8 Freeway										
From	To	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase
I-5	East	29.1	29.1	0.0%	29.4	29.4	0.0%	24.4	24.4	0.3%
East	I-5	35.6	35.6	0.0%	35.7	35.7	0.0%	36.2	36.3	0.3%
PM Peak Hour										
SB I-5 Freeway		Year 2010			Year 2015			Year 2030		
From	To	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase
North of I-8	I-8	42.7	42.7	0.0%	41.8	41.8	0.0%	45.9	46.0	0.2%
I-8	Old Town Avenue	37.1	37.1	0.0%	36.9	36.9	0.0%	42.0	42.1	0.2%
Old Town Avenue	Washington Street	30.7	30.8	0.0%	31.1	31.1	0.0%	31.7	31.8	0.3%
Washington Street	Pacific Highway Viaducts	32.4	32.4	0.0%	33.1	33.1	0.0%	34.8	34.8	0.0%
Pacific Highway Viaducts	India Street	41.1	41.1	0.1%	41.9	42.0	0.1%	41.3	41.4	0.2%
India Street	Hawthorn Street	41.9	42.0	0.1%	41.7	41.8	0.1%	42.7	42.8	0.2%
Hawthorn Street	First Avenue	37.4	37.4	0.1%	36.8	36.9	0.1%	38.8	39.0	0.6%
First Avenue	SR 163	46.5	46.5	0.1%	46.8	46.9	0.1%	48.9	49.1	0.4%
SR 163	SR 94	26.3	26.3	0.1%	26.7	26.7	0.1%	27.2	27.4	0.8%
NB I-5 Freeway										
From	To	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase
SR 94	SR 163	38.4	38.4	0.0%	39.5	39.5	0.0%	37.2	37.3	0.4%
SR 163	First Avenue	39.0	39.0	0.0%	39.3	39.3	0.0%	38.0	38.2	0.4%
First Avenue	Hawthorn Street	32.2	32.2	0.0%	32.3	32.3	0.0%	30.6	30.7	0.5%
Hawthorn Street	India Street	38.5	38.5	0.1%	38.5	38.6	0.1%	39.5	39.6	0.2%
India Street	Pacific Highway Viaducts	37.7	37.7	0.0%	37.8	37.8	0.0%	35.8	35.8	0.0%
Pacific Highway Viaducts	Washington Street	32.2	32.2	0.0%	30.6	30.6	0.0%	29.6	29.6	0.0%
Washington Street	Old Town Avenue	35.5	35.5	0.1%	35.7	35.8	0.1%	35.4	35.5	0.4%
Old Town Avenue	I-8	36.4	36.4	0.1%	36.8	36.8	0.1%	35.7	35.8	0.4%
I-8	North of I-8	37.2	37.2	0.0%	38.2	38.2	0.0%	42.9	43.0	0.3%
I-8 Freeway										
From	To	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase
I-5	East	39.2	39.2	0.0%	38.9	38.9	0.0%	37.1	37.2	0.2%
East	I-5	36.1	36.1	0.0%	37.8	37.8	0.0%	35.4	35.5	0.2%

Source: HNTB, 2007

Analysis for years 2020 and 2025 presented in Appendix D.

Notes: vph = vehicles per hour  
pc/mi/ln = passenger cars per mile per lane  
LOS = level of service

Legend:

	LOS E
	LOS F
	Significant Impact

Table 5-3.29

**2010-2030 Freeway Ramp Operations – Proposed Airport Implementation Plan (With Parking Structure)**

Location	Peak Hour	Year 2010					Year 2015					Year 2030				
		Demand (veh/hr)	Maximum Meter Rate (veh/hr)	Excess Demand (veh/hr)	Delay (minutes)	Queue (feet)	Demand (veh/hr)	Maximum Meter Rate (veh/hr)	Excess Demand (veh/hr)	Delay (minutes)	Queue (feet)	Demand (veh/hr)	Maximum Meter Rate (veh/hr)	Excess Demand (veh/hr)	Delay (minutes)	Queue (feet)
I-5 NB from San Diego	AM	799	1,992	0	0	0	525	1,992	0	0	0	890	1,992	0	0	0
	PM	871	1,992	0	0	0	505	1,992	0	0	0	707	1,992	0	0	0
I-5 NB from India	AM	766	1,992	0	0	0	1,042	1,992	0	0	0	1,337	1,992	0	0	0
	PM	830	1,992	0	0	0	1,120	1,992	0	0	0	1,675	1,992	0	0	0
I-5 SB from Kettner	AM	106	996	0	0	0	124	996	0	0	0	95	996	0	0	0
	PM	188	996	0	0	0	138	996	0	0	0	182	996	0	0	0
I-5 SB from Washington/Hancock	AM	476	1,140	0	0	0	481	1,140	0	0	0	594	1,140	0	0	0
	PM	276	1,140	0	0	0	289	1,140	0	0	0	477	1,140	0	0	0

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

veh/hr = vehicles per hour

trains in 2025. Mobility 2030 also projects that headways for the trolley Blue Line service that passes through the study area would decrease from 15 minutes to 7.5 minutes during off-peak hours by 2030. Estimated daily train operations in 2030 include 36 Amtrak trips, 78 Coaster trips, and 384 Trolley trips. For the analysis, freight train operations were estimated to increase to 4 trains per day.

**Table 5-3.30** summarizes the railroad crossing delay analysis for each analysis year under the Proposed Airport Implementation Plan (with Parking Structure). As shown, delays at all railroad crossings were estimated to be under the VHD threshold for each street segment in 2010, 2015 and 2030. As shown in [Appendix D](#), Washington Street railroad crossings exceeded the threshold of VHD in 2020 and 2025. However, due to shifts in regional background traffic described in [Section 5.3.4.5 5.3.5.1, Airport Trip Generation and Background Traffic](#), total traffic on Washington Street in 2030 decreased, causing the VHD to decrease to a level of insignificance.

### **Transit**

Under the Proposed Airport Implementation Plan (With Parking Structure) no existing or planned transit routes would be modified. Therefore, no significant impact would occur to transit operations and no mitigation is required.

### **Parking**

The Proposed Airport Implementation Plan (With Parking Structure) would not remove any parking lots designated for public use. Passenger terminals also are not located close to commercial or residential areas. In addition, the Proposed Airport Implementation Plan (With Parking Structure) would provide additional airport public parking spaces (as previously discussed in [the Assumptions description in Section 5.3.4.5 5.3.5.2](#)) that would address the projected parking shortfall under the No Project Alternative. This is considered as a favorable parking impact of the Proposed Airport Implementation Plan (With Parking Structure) compared to the No Project Alternative.

### **Terminal Curbside**

Currently 6,630 linear feet of curbside is available between all three terminals. In 2015 under the Proposed Airport Implementation Plan (with Parking Structure), 7,150 linear feet of curbside is required at all terminals to accommodate private and commercial vehicle demand. Out of that total 3,660 feet of private and commercial vehicle curbside is required at Terminal Two to accommodate demand associated with passengers at the new and existing aircraft gates. Currently Terminal Two has 2,820 linear feet of curbside which is 840 feet short of the 2015 requirement. The No Project Alternative would maintain the existing curbside supply, which would result in a curbside deficit of 520 linear feet. Under the Proposed Airport Implementation Plan (With Parking Structure) an additional 1,370 linear feet of curbside would be provided at Terminal Two for a total of 8,000 linear feet, providing an airport-wide surplus of 760 linear feet in 2015. Therefore, the Proposed Airport Implementation Plan (With Parking Structure) would result in favorable curbside impact compared to the No Project Alternative.

### **On-Airport Traffic Circulation**

**Table 5-3.31** shows the on-airport roadway operations for each analysis year under the Proposed Airport Implementation Plan (With Parking Structure). Please refer to [Figure 5.3-8](#) for link ID key map. As shown, all terminal roadways would operate at LOS D or better during peak hours under the Proposed Airport Implementation Plan (With Parking Structure). Therefore, there would be no significant on-airport traffic circulation impact under the Proposed Airport Implementation Plan (With Parking Structure) compared to the No Project Alternative, and no mitigation is required.

Table 5-3.30

**2010-2030 Railroad Crossing Operations – Proposed Airport Implementation Plan  
(With Parking Structure)**

Crossing	Year 2010				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	20,400	4.76	64	No
Sassafras Street	75	14,200	3.44	23	No
Palm Street	75	900	3.44	0	No
Laurel Street	300	25,100	0.77	1	No
Hawthorn Street	150	18,500	0.77	10	No
Grape Street	300	28,900	0.77	18	No

Crossing	Year 2015				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	23,300	8.53	135	No
Sassafras Street	150	16,600	6.13	49	No
Palm Street	75	900	6.13	0	No
Laurel Street	300	28,900	0.80	1	No
Hawthorn Street	150	20,700	0.80	12	No
Grape Street	300	31,500	0.80	22	No

Crossing	Year 2030				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	19,200	9.95	138	No
Sassafras Street	75	14,600	7.18	56	No
Palm Street	75	100	7.18	0	No
Laurel Street	300	34,600	1.85	0	No
Hawthorn Street	300	26,600	1.85	44	No
Grape Street	300	37,500	1.85	82	No

Source: HNTB, 2007.

Numbers may not add due to rounding.

Analysis for years 2020 and 2025 presented in Appendix D.

VHD = vehicle-hours of delay

ADT = average daily traffic

Table 5-3.31

**2010-2030 On-Airport Peak Hour Operations – Proposed Airport Implementation Plan  
(With Parking Structure)**

Link ID	Lanes	2010				2015				2030			
		AM	LOS	PM	LOS	AM	LOS	PM	LOS	AM	LOS	PM	LOS
1	2	450	A	371	A	563	B	464	A	722	B	597	B
2	2	369	A	313	A	454	A	387	A	578	B	495	B
3		Link Not Used				Link Not Used				Link Not Used			
4		Link Not Used				Link Not Used				Link Not Used			
5	2	82	A	58	A	109	A	77	A	144	A	103	A
6		Link Not Used				Link Not Used				Link Not Used			
7		Link Not Used				Link Not Used				Link Not Used			
8	4	470	A	399	A	577	A	491	A	765	A	654	A
9		Link Not Used				Link Not Used				Link Not Used			
10		Link Not Used				Link Not Used				Link Not Used			
11	1	179	A	201	A	202	A	227	A	241	B	273	B
12		Link Not Used				Link Not Used				Link Not Used			
13		Link Not Used				Link Not Used				Link Not Used			
14		Link Not Used				Link Not Used				Link Not Used			
15	8	649	A	600	A	779	A	718	A	1,006	A	927	A
16	2	153	A	134	A	181	A	156	A	253	A	219	A
17		Link Not Used				Link Not Used				Link Not Used			
18	2	495	B	466	A	598	B	562	B	753	B	708	B
19		Link Not Used				Link Not Used				Link Not Used			
20		Link Not Used				Link Not Used				Link Not Used			
21		Link Not Used				Link Not Used				Link Not Used			
22		Link Not Used				Link Not Used				Link Not Used			
23	2	67	A	57	A	79	A	66	A	97	A	83	A
24		Link Not Used				Link Not Used				Link Not Used			
25		Link Not Used				Link Not Used				Link Not Used			
26	2	49	A	106	A	66	A	142	A	91	A	197	A
27	1	80	A	66	A	100	A	83	A	169	A	140	A
28	2	49	A	106	A	66	A	142	A	91	A	197	A
29		Link Not Used				Link Not Used				Link Not Used			
30	2	562	B	523	B	677	B	628	B	850	C	790	B
31	3	642	A	589	A	777	B	711	B	1,019	B	930	B
32	1	14	A	10	A	19	A	14	A	34	A	24	A
33	3	628	A	579	A	758	B	697	A	985	B	906	B
34	4	96	A	68	A	128	A	91	A	178	A	127	A
35	2	526	B	493	B	635	B	593	B	798	C	746	B
36	1	101	A	86	A	123	A	104	A	186	A	159	A
37	1	471	C	442	C	574	C	537	C	727	D	680	D
38	1	55	A	51	A	61	A	57	A	72	A	66	A
39		Link Not Used				Link Not Used				Link Not Used			
40	2	540	B	498	B	601	B	559	B	679	B	639	B
41	1	68	A	49	A	68	A	48	A	65	A	46	A
42	2	472	B	449	A	533	B	511	B	614	B	593	B
43	1	75	A	62	A	84	A	69	A	120	A	101	A
44	3	547	A	511	A	617	A	580	A	734	B	694	A
45	1	32	A	27	A	37	A	31	A	45	A	39	A
46		Link Not Used				Link Not Used				Link Not Used			
47		Link Not Used				Link Not Used				Link Not Used			
48	4	579	A	538	A	654	A	611	A	779	A	733	A
49	2	400	A	337	A	452	A	384	A	538	B	460	A
50	1	42	A	90	A	41	A	89	A	42	A	90	A
51	3	442	A	427	A	493	A	473	A	580	A	550	A
52	2	360	A	351	A	403	A	389	A	452	A	431	A
53	1	82	A	77	A	90	A	84	A	129	A	119	A
54	1	45	A	36	A	50	A	40	A	61	A	51	A
55	1	13	A	9	A	13	A	9	A	16	A	12	A
56	4	81	A	58	A	81	A	57	A	81	A	58	A
57	2	831	B	792	B	977	B	926	B	1,178	C	1,111	C
58	2	92	A	92	A	101	A	101	A	138	A	134	A

Source: HNTB, 2007.  
Analysis for years 2020 and 2025 presented in Appendix D.

LOS = Level of service

NOTE: Refer to Figure 5.3-8 for link ID key map.

## **Proposed Airport Implementation Plan (Without Parking Structure)**

For this variation of the Preferred Alternative all elements of the Proposed Airport Implementation Plan are the same as described previously in Section ~~5.3.5.3~~ 5.3.5.2, *Proposed Airport Implementation Plan (with Parking Structure)* except that no parking structure will be constructed. The existing Terminal Two parking lot will be maintained.

### **Assumptions**

Except for the parking structure, this scenario shares most of the assumptions used for the Proposed Implementation Plan (With Parking Structure), including construction of a second level roadway/curbside at Terminal 2 independent of the parking structure to serve curbside demand. Assumptions that differ from previous discussion include:

- Excess parking demand will be served by remote parking facilities, both Airport operated SAN Park facilities and privately owned facilities, and alternate modes of transportation.

### **Trip Generation and Terminal Distribution**

Total trip generation associated with the Implementation Plan (Without Parking Structure) is summarized in [Table 5-3.32](#). As shown, total airport trip generation would increase from approximately 94,600 ADT in 2010 to 134,600 ADT in 2030. This corresponds to an increase in air passenger forecast of 19.5 million annual passengers (MAP) in 2010 to 28.2 MAP in 2030. This represents an increase in trip generation of approximately 5,900 ADT or 4.4% from the No Project Alternative in 2030. Trips from most airport modes increase in relation to passenger growth, however, schedule driven modes such as public buses, and airport operated inter-terminal, employee parking and public parking shuttles grow at a slower rate as many of these shuttles currently operate with excess capacity to maintain a set schedule. This results in a slight decrease in the trip generation rate from ~~4.86~~ 1.85 to 1.81 in 2010 and 2030, respectively. The total trip generation rate for the Proposed Airport Implementation Plan (without Parking Structure) also decreases slightly from the Proposed Airport Implementation Plan (With Parking Structure) in 2030, 1.81 vs 1.82 respectively. This is the result of severely constrained parking conditions in 2030, however, much of the benefit gained from passengers switching to higher occupancy vehicles is offset by increased curbside trips in private vehicles and taxicabs which produce more trips per passenger than terminal parking.

Terminal passenger distribution is assumed to be the same under the Proposed Airport Implementation Plan with and without parking structure and is discussed previously in Section ~~5.3.5.3~~ 5.3.5.2, *Proposed Airport Implementation Plan*. Therefore, the terminal passenger distribution for the Proposed Airport Implementation Plan (Without Parking Structure) would be the same as for the Proposed Airport Implementation Plan (With Parking Structure), as shown in [Table 5-3.33](#).

### **Traffic Impacts**

Traffic impacts of the Proposed Airport Implementation Plan (Without Parking Structure) would be primarily the same as under the Proposed Airport Implementation Plan (With Parking Structure) except for the on-airport (terminal) roadways, street segments and intersections along North Harbor Drive directly serving Terminals One and Two. Specific impact categories are discussed in this section.

#### **Street Segments**

[Table 5-3.34](#) summarizes the street segment operations for each analysis year under the Proposed Airport Implementation Plan (Without Parking Structure).

[Table 5-3.35](#) compares the street segment volume to capacity (v/c) ratios under the Proposed Airport Implementation Plan (Without Parking Structure) against the No Project Alternative to identify traffic impacts based on significance criteria identified in Section 5.3.3, *Traffic Impacts and Significance Criteria* measured by an increase to LOS E or F or an increase in volume to capacity ratio of greater than 0.02 for streets operating at LOS E and 0.01 for streets operating at LOS F under the No Project Alternative. The following roadway segments would have potentially significant traffic impacts:

Table 5-3.32

**2010-2030 Airport Trip Generation – Proposed Airport Implementation Plan  
(Without Parking Structure)**

Activity	Year			
	2005	2010	2015	2030
<b>Airport Passenger Activity Level</b>				
Million Annual Passengers (MAP)	17.4	19.5	22.8	28.2
Million Annual O&D Passengers	16.7	18.6	21.8	27.0
Daily O&D Passengers	45,830	51,076	59,770	74,199
<b>Airport Trip Generation (1)</b>				
Daily	85,100	94,600	109,500	134,600
In	42,600	47,350	54,800	67,350
Out	42,500	47,250	54,700	67,250
AM Peak Hour	3,180	3,530	4,095	5,065
In	1,760	1,955	2,265	2,785
Out	1,420	1,575	1,830	2,280
PM Peak Hour	3,245	3,620	4,190	5,185
In	1,500	1,675	1,940	2,410
Out	1,745	1,945	2,250	2,775
Trip Rate				
Daily	1.86	1.85	1.83	1.81

O&D = origin and destination

Notes:

(1) Includes terminals and associated facilities, SAN Park lots, rental car facilities on Rental Car Road, Employee Lot 6 on Harbor Island Drive, and north area. Does not include private vehicle trips to private off-airport parking and rental car facilities, but includes shuttle trips between these facilities and the terminals.

Source: HNTB, 2007.

Table 5-3.33

**Terminal Passenger Distribution - Proposed Airport Implementation Plan  
(Without Parking Structure)**

Scenario/Year	Terminal 1	Terminal 1 East *	Terminal 2 East	Terminal 2 West	Commuter Terminal	Total
Existing						
2005	54%	0%	15%	26%	5%	100%
Proposed Airport Implementation Plan						
2010	45%	0%	20%	31%	4%	100%
2015	43%	0%	20%	33%	3%	100%
2020	43%	0%	19%	34%	3%	100%
2025	43%	0%	19%	35%	3%	100%
2030	41%	0%	19%	37%	3%	100%

Source: HNTB, 2007.

\* New unit terminal under Airport Implementation Project Alternative.

Table 5-3.34

2010-2030 Street Segment Operations – Proposed Airport Implementation Plan (Without Parking Structure)

Roadway	Segment	Classification	Lanes	LOS E ADT Capacity 1000s	Year 2010					Year 2015					Year 2030				
					SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS	SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS	SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS
North Harbor Drive	West of NTC	6-Lane Prime	6D	60.0	11.1	17.7	28.8	0.48	B	12.8	20.4	33.2	0.55	B	19.5	28.5	48.0	0.80	C
	NTC - Spanish Landing	6-Lane Prime	6D	60.0	12.3	15.1	27.4	0.46	B	13.5	16.3	29.8	0.50	B	18.4	23.3	41.7	0.70	C
	Spanish Landing - T2 Access	6-Lane Prime	6D	60.0	11.4	14.9	26.3	0.44	B	12.2	16.2	28.4	0.47	B	15.2	20.7	35.9	0.60	C
	T2 Access - Harbor Island	6-Lane Prime	4+3	65.0	23.7	15.0	38.7	0.60	C	27.0	16.3	43.3	0.67	C	33.8	19.8	53.6	0.82	C
	Harbor Island - T1 Access	6-Lane Prime	3+4	65.0	22.4	18.3	40.7	0.63	C	25.3	18.4	43.7	0.67	C	29.8	21.1	50.9	0.78	C
	T1 Access - Winship	6-Lane Prime	5+3	70.0	36.5	18.3	54.8	0.78	C	41.0	18.3	59.3	0.85	C	47.6	21.1	68.7	0.98	E
	Winship - Flyover Merge (1)	6-Lane Prime	4+4	70.0	38.1	18.4	56.5	0.81	C	43.3	18.4	61.7	0.88	D	49.9	20.9	70.8	1.01	F
	Rental Car Rd - Laurel	6-Lane Prime	6D	60.0	63.2	20.8	84.0	1.40	F	72.8	20.7	93.5	1.56	F	85.0	21.7	106.7	1.78	F
	Laurel - Hawthorn	6-Lane Prime	6D	60.0	40.9	15.2	56.1	0.93	E	47.0	15.4	62.4	1.04	F	57.1	18.2	75.3	1.26	F
	Hawthorn - Grape	6-Lane Prime	6D	60.0	25.6	14.0	39.6	0.66	C	29.4	13.4	42.8	0.71	C	35.9	14.8	50.7	0.85	D
Grape Street	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	13.7	6.7	20.4	0.81	D	15.7	7.1	22.8	0.91	E	19.2	9.7	28.9	1.15	F
	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	12.5	16.4	28.9	1.16	F	14.4	17.1	31.5	1.26	F	17.5	19.8	37.2	1.49	F
	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	12.3	23.3	35.6	1.42	F	14.2	23.7	37.9	1.52	F	17.4	24.7	42.1	1.68	F
Hawthorn Street	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	15.5	5.1	20.6	0.82	D	17.8	5.4	23.2	0.93	E	21.8	7.9	29.7	1.19	F
	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	12.5	6.0	18.5	0.74	C	14.5	6.2	20.7	0.83	D	17.7	8.7	26.5	1.06	F
	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	12.5	17.2	29.7	1.19	F	14.5	19.2	33.7	1.35	F	17.7	24.5	42.2	1.69	F
Kettner Blvd	north of Washington	3-Lane Collector 1-Way	3U	25.0	0.2	7.2	7.4	0.29	A	0.2	7.2	7.4	0.30	A	0.4	4.2	4.6	0.18	A
	Washington - Sassafras	3-Lane Major 1-Way	3U	25.0	9.0	13.0	22.0	0.88	D	10.5	13.1	23.6	0.94	E	11.0	17.4	28.4	1.14	F
	Sassafras - Palm	3-Lane Major 1-Way	3U	25.0	9.1	11.0	20.1	0.81	D	10.6	11.9	22.5	0.90	E	11.2	14.2	25.4	1.02	F
	Palm - Laurel	3-Lane Major 1-Way	3U	25.0	7.6	8.6	16.2	0.65	C	8.8	9.5	18.3	0.73	C	9.0	12.6	21.5	0.86	D
	Laurel - Hawthorn	3-Lane Major 1-Way	3U	25.0	0.0	7.2	7.2	0.29	A	0.1	7.9	8.0	0.32	A	0.3	11.4	11.7	0.47	B
	Hawthorn - Grape	3-Lane Major 1-Way	3U	25.0	0.0	14.8	14.8	0.59	C	0.1	16.8	16.9	0.68	C	0.3	21.5	21.8	0.87	D
Laurel Street	Harbor - Pacific	4-Lane Major	4U	40.0	22.3	6.3	28.6	0.71	C	25.8	6.7	32.5	0.81	D	27.9	4.3	32.3	0.81	D
	Pacific - Kettner	4-Lane Collector	4D	30.0	18.0	7.2	25.2	0.84	E	21.1	7.8	28.9	0.96	E	22.7	12.1	34.8	1.16	F
	Kettner - I-5	4-Lane Collector	4D	30.0	10.4	8.5	18.9	0.63	C	12.6	9.6	22.2	0.74	D	14.5	12.9	27.4	0.91	E
Pacific Highway	Washington - Sassafras	6-Lane Prime	6D	50.0	4.1	22.8	26.9	0.54	B	4.8	27.3	32.1	0.64	C	6.0	19.1	25.1	0.50	B
	Sassafras - Palm	6-Lane Prime	6D	50.0	6.9	17.5	24.4	0.49	B	8.0	21.0	29.0	0.58	C	9.8	16.3	26.1	0.52	B
	Palm - Laurel	6-Lane Prime	6D	50.0	6.9	18.1	25.0	0.50	B	8.0	21.7	29.7	0.59	C	9.8	15.4	25.3	0.51	B
	Laurel - Hawthorn	6-Lane Major	6D	50.0	2.1	19.1	21.2	0.42	B	2.8	22.6	25.4	0.51	B	3.9	23.3	27.2	0.54	B
	Hawthorn - Grape	6-Lane Major	6D	50.0	4.9	19.6	24.5	0.49	B	5.8	23.2	29.0	0.58	C	7.4	24.1	31.4	0.63	C
	Palm Street	Pacific - Kettner	2-Lane Collector	2U	8.0	0.0	0.9	0.9	0.11	A	0.0	0.9	0.9	0.11	A	0.0	0.1	0.1	0.01
Sassafras Street	Pacific - Kettner	3-Lane Collector	3U	12.0	3.3	8.3	11.6	0.97	E	4.3	9.7	14.0	1.17	F	5.8	6.1	11.9	0.99	E
	Kettner-India	2-Lane Collector	2U	8.0	1.7	8.5	10.1	1.27	F	2.2	9.7	11.9	1.48	F	2.9	8.0	10.9	1.36	F
	Pacific - Kettner	4-Lane Collector	4U	30.0	3.9	16.5	20.4	0.68	D	4.7	18.6	23.3	0.78	D	6.4	12.7	19.1	0.64	C
Washington Street	Kettner - San Diego	5-Lane Collector	5D	30.0	3.6	23.3	26.9	0.90	E	4.3	25.5	29.8	0.99	E	5.6	22.5	28.1	0.94	E
	Laurel - Palm	2-Lane Collector	2U	8.0	7.4	8.7	16.1	2.02	F	8.6	10.2	18.9	2.36	F	8.8	12.6	21.4	2.68	F
	Palm - Sassafras	3-Lane Collector	3U	12.0	7.4	13.2	20.7	1.72	F	8.6	15.4	24.0	2.00	F	8.8	16.5	25.3	2.11	F
Rosecrans	Sassafras - Washington	3-Lane Collector	3U	12.0	5.1	13.5	18.6	1.55	F	6.5	14.6	21.1	1.76	F	7.6	21.5	29.1	2.42	F
	Barnett - Sport Arena	6-lane Major	6D	50.0	5.2	40.1	45.3	0.91	E	5.9	42.4	48.3	0.97	E	10.7	33.7	44.4	0.89	D
	Nimitz Quimby - Barnett	4-lane Major 5-lane Major	4U-5U	40.0-45.0	5.2	35.9	41.1	1.03-0.91	F-E	5.9	35.4	41.3	1.03-0.92	F-E	10.7	29.0	39.7	0.99-0.88	E-D
Nimitz	Nimitz - Quimby	4-lane Major	4U	40.0	5.2	35.9	41.1	1.03	F	5.9	35.4	41.3	1.03	F	10.7	29.0	39.7	0.99	E
	Harbor - Rosecrans	4-lane Major	4U	40.0	9.5	8.7	18.2	0.45	B	10.9	8.5	19.4	0.49	B	17.2	11.7	28.9	0.72	C

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

Notes:

(1) Does not include traffic on flyover.

MAP = Million Annual Passengers

ADT = Average Daily Traffic

LOS = Level of Service

V/C = volume-to-capacity ratio



Table 5-3.35

2010-2030 Street Segment Impacts – Proposed Airport Implementation Plan (Without Parking Structure)

Roadway	Segment	Year 2010					Year 2015					Year 2030				
		No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C	No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C	No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C
North Harbor Drive	West of NTC	0.48	B	0.48	B	0.00	0.56	B	0.55	B	0.00	0.79	C	0.80	C	0.01
	NTC - Spanish Landing	0.51	B	0.46	B	-0.06	0.57	B	0.50	B	-0.07	0.79	C	0.70	C	-0.09
	Spanish Landing - T2 Access	0.43	B	0.44	B	0.01	0.47	B	0.47	B	0.01	0.60	C	0.60	C	0.00
	T2 Access - Harbor Island	0.56	B	0.60	C	0.03	0.63	C	0.67	C	0.04	0.76	C	0.82	C	0.06
	Harbor Island - T1 Access	0.58	C	0.63	C	0.04	0.62	C	0.67	C	0.05	0.69	C	0.78	C	0.09
Grape Street	T1 Access - Winship	0.76	C	0.78	C	0.02	0.83	C	0.85	C	0.02	0.94	E	0.98	E	0.04
	Winship - Rental Car Rd	0.79	C	0.81	C	0.02	0.87	D	0.88	D	0.01	0.97	E	1.01	F	0.04
	Rental Car Rd - Laurel	1.41	F	1.40	F	-0.01	1.57	F	1.56	F	-0.01	1.73	F	1.78	F	0.05
	Laurel - Hawthorn	0.94	E	0.93	E	0.00	1.05	F	1.04	F	-0.01	1.22	F	1.26	F	0.03
	Hawthorn - Grape	0.66	C	0.66	C	0.00	0.72	C	0.71	C	-0.01	0.82	C	0.85	D	0.02
Hawthorn Street	Harbor - Pacific	0.82	D	0.81	D	0.00	0.92	E	0.91	E	-0.01	1.13	F	1.15	F	0.019
	Pacific - Kettner	1.16	F	1.16	F	0.00	1.26	F	1.26	F	0.00	1.46	F	1.49	F	0.03
	Kettner - I-5	1.43	F	1.42	F	0.00	1.52	F	1.52	F	-0.01	1.66	F	1.68	F	0.02
Kettner Blvd	Harbor - Pacific	0.83	D	0.82	D	0.00	0.94	E	0.93	E	-0.01	1.16	F	1.19	F	0.03
	Pacific - Kettner	0.75	C	0.74	C	0.00	0.83	D	0.83	D	-0.01	1.03	F	1.06	F	0.02
	Kettner - I-5	1.19	F	1.19	F	0.00	1.35	F	1.35	F	-0.01	1.66	F	1.69	F	0.02
	north of Washington	0.29	A	0.29	A	0.00	0.30	A	0.30	A	0.00	0.18	A	0.18	A	0.00
	Washington - Sassafras	0.88	D	0.88	D	0.00	0.94	E	0.94	E	0.00	1.11	F	1.14	F	0.02
Laurel Street	Sassafras - Palm	0.80	D	0.81	D	0.00	0.897	D	0.901	E	0.004	0.99	E	1.02	F	0.02
	Palm - Laurel	0.65	C	0.65	C	0.00	0.74	C	0.73	C	0.00	0.85	D	0.86	D	0.01
	Laurel - Hawthorn	0.29	A	0.29	A	0.00	0.32	A	0.32	A	0.00	0.47	B	0.47	B	0.00
	Hawthorn - Grape	0.59	C	0.59	C	0.00	0.68	C	0.68	C	0.00	0.87	D	0.87	D	0.00
	Harbor - Pacific	0.72	C	0.71	C	0.00	0.82	D	0.81	D	-0.01	0.78	D	0.81	D	0.03
Pacific Highway	Pacific - Kettner	0.85	E	0.84	E	-0.01	0.97	E	0.96	E	-0.01	1.13	F	1.16	F	0.03
	Kettner - I-5	0.64	C	0.63	C	-0.01	0.75	D	0.74	D	-0.01	0.90	E	0.91	E	0.015
	Washington - Sassafras	0.54	B	0.54	B	0.00	0.64	C	0.64	C	0.00	0.50	B	0.50	B	0.01
	Sassafras - Palm	0.48	B	0.49	B	0.00	0.57	C	0.58	C	0.01	0.51	B	0.52	B	0.01
	Palm - Laurel	0.49	B	0.50	B	0.00	0.59	C	0.59	C	0.01	0.49	B	0.51	B	0.01
Palm Street	Laurel - Hawthorn	0.42	B	0.42	B	0.00	0.50	B	0.51	B	0.00	0.54	B	0.54	B	0.01
	Hawthorn - Grape	0.49	B	0.49	B	0.00	0.58	C	0.58	C	0.00	0.62	C	0.63	C	0.01
	Pacific - Kettner	0.11	A	0.11	A	0.00	0.11	A	0.11	A	0.00	0.01	A	0.01	A	0.00
	Sassafras Street	0.95	E	0.97	E	0.018	1.14	F	1.17	F	0.02	0.94	E	0.99	E	0.05
	Kettner-India	1.25	F	1.27	F	0.013	1.46	F	1.48	F	0.02	1.32	F	1.36	F	0.04
Washington Street	Pacific - Kettner	0.68	D	0.68	D	0.00	0.78	D	0.78	D	0.00	0.63	C	0.64	C	0.01
	Kettner - San Diego	0.90	E	0.90	E	0.00	0.99	E	0.99	E	0.00	0.93	E	0.94	E	0.01
	Laurel - Palm	2.03	F	2.02	F	-0.01	2.38	F	2.36	F	-0.02	2.64	F	2.68	F	0.04
India Street	Palm - Sassafras	1.73	F	1.72	F	-0.01	2.01	F	2.00	F	-0.01	2.09	F	2.11	F	0.03
	Sassafras - Washington	1.57	F	1.55	F	-0.02	1.79	F	1.76	F	-0.03	2.411	F	2.421	F	0.0099
	Rosecrans	0.91	E	0.91	E	0.00	0.97	E	0.97	E	0.00	0.88	D	0.89	D	0.01
Nimitz	Nimitz Quimby - Barnett	1.03	F	1.03	F	0.00	1.03	F	1.03	F	0.00	0.98	E	0.99	E	0.01
	Nimitz - Quimby	1.03	F	1.03	F	0.00	1.03	F	1.03	F	0.00	0.98	E	0.99	E	0.01
	Harbor - Rosecrans	0.46	B	0.45	B	0.00	0.49	B	0.49	B	0.00	0.71	C	0.72	C	0.02

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

V/C = Volume to capacity ratio

LOS = Level of service

Legend:

	LOS E
	LOS F
	Significant Impact

## **Street Segments with Significant Traffic Impacts**

### **Year 2010**

- Sassafras Street between Kettner Boulevard and India Street, which operates at LOS F under both the Implementation Plan (without Parking Structure) and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Implementation Plan (without Parking Structure) compared to the No Project Alternative.

### **Year 2015**

- All locations identified in Year 2010
- Sassafras Street between Pacific Highway and Kettner Boulevard, which operates at LOS E under both the Implementation Plan (without Parking Structure) and No Project Alternative and experiences an increase in volume to capacity (v/c) ratio of over 0.02 under the Implementation Plan (without Parking Structure) compared to the No Project Alternative.
- Kettner Boulevard between Sassafras Street and Palm Street, which increased from LOS D under the No Project Alternative to LOS E under the Implementation Plan (without Parking Structure).

### **Year 2030**

- All locations identified in Year 2010 and 2015 above
- North Harbor Drive between Terminal 1 Access and Hawthorn Street, which operates at LOS E and F under both the Proposed Airport Implementation Plan (without Parking Structure) and No Project Alternative and experience an increase in the v/c ratio of over 0.01 under the Proposed Airport Implementation Plan (without Parking Structure) compared to the No Project Alternative.
- Grape Street between North Harbor Drive and I-5, which operates at LOS F under both the Proposed Airport Implementation Plan (without Parking Structure) and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Implementation Plan (without Parking Structure) compared to the No Project Alternative.
- Hawthorn Street between North Harbor Drive and I-5, which operates at LOS F under both the Proposed Airport Implementation Plan (without Parking Structure) and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Implementation Plan (without Parking Structure) compared to the No Project Alternative.
- Kettner Boulevard between Washington Street and Palm Street, which operates at LOS E and F under both the Proposed Airport Implementation Plan (without Parking Structure) and No Project Alternative and experience an increase in the v/c ratio of over 0.01 under the Proposed Airport Implementation Plan (without Parking Structure) compared to the No Project Alternative.
- Laurel Street between Pacific Highway and Kettner Boulevard, which operates at LOS F under both the Proposed Airport Implementation Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Implementation Plan (without Parking Structure) compared to the No Project Alternative.

India Street between Laurel Street and Sassafras Street, which operates at LOS F under both the Proposed Airport Implementation Plan (without Parking Structure) and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Implementation Plan (without Parking Structure) compared to the No Project Alternative.

### **Intersections**

**Tables 5-3.36, 5-3.37, and 5-3.38** show the intersection turning volumes under the Proposed Airport Implementation Plan (Without Parking Structure) for analysis years 2010, 2015, and 2030. **Table 5-3.39** shows the resulting intersection operations. Future intersection lane configurations are assumed to remain the same under all alternatives and are shown on ~~Figure 5-3-6~~ **Figure 5.3-5**.

**Table 5-3.40** compares the intersection operations under the Proposed Airport Implementation Plan (Without Parking Structure) against the No Project Alternative to identify intersection impacts based on

Table 5-3.36

2010 Intersection Turning Volumes – Total Peak Hour Traffic - Proposed Airport Implementation Plan (Without Parking Structure)

Intersection Number			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	550	0	23	11	431	0	7	589	293	1,904
		PM	0	0	0	456	0	56	36	562	0	14	584	768	2,476
2	North Harbor Drive / McCain St	AM	0	0	0	124	0	96	156	599	0	0	856	366	2,197
		PM	0	0	0	441	0	212	34	919	0	0	994	104	2,704
3	North Harbor Drive / Spanish Landing	AM	5	0	18	39	0	7	79	703	4	15	1,498	0	2,368
		PM	7	0	25	84	0	15	65	1,613	18	5	1,127	0	2,959
4	North Harbor Drive / Harbor Island Drive	AM	41	5	145	19	9	65	71	609	81	238	1,852	0	3,135
		PM	154	4	327	21	8	63	58	1,541	122	463	1,283	0	4,044
5	North Harbor Drive / Winship Lane	AM	0	0	0	80	0	165	66	706	0	0	2,465	230	3,712
		PM	0	0	0	97	0	195	61	1,828	0	0	2,050	218	4,449
6	North Harbor Drive / Rental Car Road	AM	53	0	43	10	0	14	16	1,534	67	113	2,628	19	4,497
		PM	74	0	83	22	0	16	15	2,628	74	86	2,178	14	5,190
7	Sheraton / Harbor Island Drive	AM	13	107	0	0	229	99	85	6	27	0	0	0	566
		PM	23	408	0	0	524	70	77	2	25	0	0	0	1,129
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	86	0	0	62	1	269
		PM	0	0	0	0	0	55	68	95	0	0	126	1	345
9	Sassafras Street / Pacific Highway	AM	66	494	71	47	546	9	5	64	41	202	127	53	1,725
		PM	61	857	353	125	949	8	13	175	88	165	106	44	2,944
10	Laurel Street / North Harbor Drive	AM	0	0	0	24	0	4	387	1,097	0	0	1,877	40	3,429
		PM	0	0	0	72	0	11	1,112	1,919	0	0	1,609	105	4,828
11	Hawthorn Street / North Harbor Drive	AM	0	283	0	0	1,038	0	0	0	0	80	0	1,903	3,304
		PM	0	581	0	0	2,090	0	0	0	0	133	0	1,059	3,863
12	Grape Street / North Harbor Drive	AM	0	222	111	823	483	0	0	0	0	0	0	0	1,639
		PM	0	640	267	1,155	1,091	0	0	0	0	0	0	0	3,153
13	Laurel Street / Pacific Highway	AM	35	320	85	80	265	349	89	520	2	47	694	61	2,547
		PM	111	604	145	138	479	369	471	692	58	51	795	77	3,990
14	Hawthorn Street / Pacific Highway	AM	114	203	0	0	160	51	0	0	0	258	1,858	84	2,728
		PM	126	591	0	0	556	49	0	0	0	147	1,030	82	2,581
15	Grape Street / Pacific Highway	AM	0	571	161	144	799	0	62	792	38	0	0	0	2,567
		PM	0	666	448	237	541	0	50	1,595	37	0	0	0	3,574
16	Laurel Street / Kettner Boulevard	AM	0	0	0	233	321	546	0	612	45	39	240	0	2,036
		PM	0	0	0	282	601	578	0	873	79	54	290	0	2,757
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	154	82	0	0	0	156	2,501	0	2,893
		PM	0	0	0	0	400	72	0	0	0	192	1,380	0	2,044
18	Grape Street / Kettner Boulevard	AM	0	0	0	91	462	0	0	1,337	92	0	0	0	1,982
		PM	0	0	0	221	487	0	0	3,113	90	0	0	0	3,911
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	65	86	73	0	0	0	42	430	1,057	0	0	0	1,753
		PM	98	187	183	0	0	0	26	532	2,072	0	0	0	3,098
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	45	43	0	0	0	0	0	0	0	0	2,459	78	2,625
		PM	36	57	0	0	0	0	0	0	0	0	1,486	61	1,640
21	Laurel Street / India Street	AM	74	108	19	0	0	0	462	343	30	0	219	195	1,450
		PM	83	290	86	0	0	0	658	499	39	0	273	267	2,195
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	113	1,252	330	0	50	42	121	83	0	1,991
		PM	0	0	0	186	1,736	257	0	211	98	85	86	0	2,659
23	Sassafras Street / India Street	AM	190	791	11	0	0	0	108	24	50	0	33	21	1,228
		PM	177	1,330	31	0	0	0	299	60	110	0	14	17	2,038
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	185	32	53	0	64	37	148	154	0	673
		PM	0	0	0	488	49	10	0	223	51	199	80	0	1,100
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	65	11	117	26	6	18	22	0	230	312	143	47	997
		PM	37	25	199	57	55	7	55	14	592	327	207	59	1,634
26	Washington Street / Hancock Street	AM	0	258	103	321	376	0	354	165	130	0	0	0	1,707
		PM	0	652	157	343	379	0	555	331	155	0	0	0	2,572
27	Washington Street / San Diego Avenue	AM	94	579	0	0	539	536	0	0	0	174	204	7	2,133
		PM	187	1,153	0	0	572	489	0	0	0	185	276	17	2,879
28	Rosecrans Street / Pacific Highway	AM	200	148	220	99	145	61	60	173	143	301	147	86	1,783
		PM	351	287	636	120	139	67	111	459	170	246	304	129	3,019
29	Rosecrans Street / Nimitz Boulevard	AM	16	111	86	39	126	40	148	639	28	111	637	40	2,021
		PM	18	194	110	30	103	30	332	812	33	173	653	53	2,541

Source: HNTB, 2007.

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2					ebl	ebt	ebr				
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr		ebl2	ebl	ebt	wbt	wbr2	wbr	

Table 5-3.37

2015 Intersection Turning Volumes – Total Peak Hour Traffic - Proposed Airport Implementation Plan (Without Parking Structure)

Intersection Number		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	604	0	22	13	519	0	8	681	342	2,189
		PM	0	0	0	478	0	55	44	677	0	17	674	896	2,841
2	North Harbor Drive / McCain St	AM	0	0	0	139	0	117	188	658	0	0	807	432	2,341
		PM	0	0	0	518	0	259	40	966	0	0	1,006	117	2,906
3	North Harbor Drive / Spanish Landing	AM	5	0	18	39	0	7	95	776	5	16	1,583	0	2,544
		PM	7	0	25	84	0	15	79	1,798	20	6	1,163	0	3,197
4	North Harbor Drive / Harbor Island Drive	AM	44	5	149	19	10	73	79	668	86	240	2,016	0	3,389
		PM	160	4	337	21	9	70	65	1,711	131	467	1,383	0	4,358
5	North Harbor Drive / Winship Lane	AM	0	0	0	92	0	187	71	764	0	0	2,671	273	4,058
		PM	0	0	0	119	0	223	64	2,004	0	0	2,189	257	4,856
6	North Harbor Drive / Rental Car Road	AM	63	0	50	10	0	14	16	1,744	78	133	2,868	19	4,995
		PM	87	0	97	22	0	16	15	2,952	87	100	2,343	14	5,733
7	Sheraton / Harbor Island Drive	AM	13	113	0	0	237	99	85	6	27	0	0	0	580
		PM	23	423	0	0	537	70	77	2	25	0	0	0	1,157
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	95	0	0	69	1	285
		PM	0	0	0	0	0	55	68	104	0	0	136	1	364
9	Sassafras Street / Pacific Highway	AM	78	592	86	56	651	11	5	76	48	248	152	65	2,068
		PM	72	1,027	424	150	1,137	9	15	203	102	202	127	54	3,522
10	Laurel Street / North Harbor Drive	AM	0	0	0	26	0	4	450	1,195	0	0	1,965	39	3,679
		PM	0	0	0	76	0	11	1,174	2,014	0	0	1,682	102	5,059
11	Hawthorn Street / North Harbor Drive	AM	0	309	0	0	1,127	0	0	0	0	87	0	2,067	3,590
		PM	0	587	0	0	2,148	0	0	0	0	145	0	1,166	4,046
12	Grape Street / North Harbor Drive	AM	0	251	110	872	510	0	0	0	0	0	0	0	1,743
		PM	0	647	261	1,194	1,093	0	0	0	0	0	0	0	3,195
13	Laurel Street / Pacific Highway	AM	41	381	108	97	321	414	102	585	2	52	778	66	2,947
		PM	131	718	176	166	574	438	507	768	62	59	886	85	4,570
14	Hawthorn Street / Pacific Highway	AM	130	245	0	0	190	63	0	0	0	267	1,974	92	2,961
		PM	146	705	0	0	658	61	0	0	0	152	1,111	89	2,922
15	Grape Street / Pacific Highway	AM	0	649	182	170	946	0	70	884	42	0	0	0	2,943
		PM	0	756	504	280	639	0	57	1,744	42	0	0	0	4,022
16	Laurel Street / Kettner Boulevard	AM	0	0	0	261	355	614	0	696	49	46	279	0	2,300
		PM	0	0	0	314	664	649	0	977	86	66	337	0	3,093
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	171	90	0	0	0	173	2,792	0	3,226
		PM	0	0	0	0	446	79	0	0	0	213	1,548	0	2,286
18	Grape Street / Kettner Boulevard	AM	0	0	0	105	524	0	0	1,433	95	0	0	0	2,157
		PM	0	0	0	256	554	0	0	3,272	94	0	0	0	4,176
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	77	102	87	0	0	0	43	437	1,131	0	0	0	1,877
		PM	117	223	218	0	0	0	26	541	2,164	0	0	0	3,289
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	48	46	0	0	0	0	0	0	0	0	2,521	77	2,692
		PM	39	61	0	0	0	0	0	0	0	0	1,540	60	1,700
21	Laurel Street / India Street	AM	97	135	23	0	0	0	526	386	51	0	258	231	1,707
		PM	113	362	106	0	0	0	743	560	59	0	323	317	2,583
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	115	1,318	347	0	60	52	139	101	0	2,132
		PM	0	0	0	189	1,804	270	0	249	117	97	102	0	2,828
23	Sassafras Street / India Street	AM	223	919	12	0	0	0	125	28	58	0	34	22	1,421
		PM	208	1,544	36	0	0	0	344	69	126	0	15	18	2,360
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	200	35	57	0	76	42	164	174	0	748
		PM	0	0	0	527	53	12	0	240	56	219	99	0	1,206
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	94	16	155	29	7	20	24	0	258	359	162	53	1,177
		PM	52	36	270	63	60	8	60	15	649	378	234	66	1,891
26	Washington Street / Hancock Street	AM	0	297	120	351	417	0	358	167	134	0	0	0	1,844
		PM	0	741	179	376	423	0	562	335	162	0	0	0	2,778
27	Washington Street / San Diego Avenue	AM	107	637	0	0	564	553	0	0	0	194	225	8	2,288
		PM	208	1,264	0	0	596	504	0	0	0	207	304	19	3,102
28	Rosecrans Street / Pacific Highway	AM	237	177	261	116	170	72	63	183	151	314	153	89	1,986
		PM	418	341	756	141	163	78	119	485	180	257	315	134	3,387
29	Rosecrans Street / Nimitz Boulevard	AM	16	122	99	14	114	15	155	671	30	124	627	40	2,027
		PM	18	205	123	11	92	11	348	852	34	183	643	52	2,572

Source: HNTB, 2007.

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. \*2\* represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2	sbr	ebt	ebt	ebr	wbt	wbr2	wbr
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr	ebt	ebt	ebt	wbr

Table 5-3.38

2030 Intersection Turning Volumes – Total Peak Hour Traffic - Proposed Airport Implementation Plan (Without Parking Structure)

Intersection Number		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	834	0	31	16	619	0	11	945	503	2,959
		PM	0	0	0	687	0	75	52	807	0	23	934	1,240	3,818
2	North Harbor Drive / McCain St	AM	0	0	0	151	0	179	220	882	0	0	947	488	2,867
		PM	0	0	0	582	0	339	48	1,265	0	0	1,176	125	3,535
3	North Harbor Drive / Spanish Landing	AM	5	0	18	37	0	9	154	962	7	21	1,835	0	3,048
		PM	7	0	25	80	0	19	130	2,170	28	7	1,347	0	3,813
4	North Harbor Drive / Harbor Island Drive	AM	47	6	153	19	13	107	115	801	103	264	2,360	0	3,988
		PM	168	5	347	21	12	102	96	2,022	157	525	1,641	0	5,096
5	North Harbor Drive / Winship Lane	AM	0	0	0	99	0	230	85	888	0	0	3,080	324	4,706
		PM	0	0	0	135	0	276	74	2,316	0	0	2,537	311	5,649
6	North Harbor Drive / Rental Car Road	AM	81	0	60	10	0	14	17	2,060	105	157	3,309	18	5,831
		PM	114	0	115	21	0	17	15	3,450	114	119	2,718	14	6,697
7	Sheraton / Harbor Island Drive	AM	13	123	0	0	280	99	85	6	27	0	0	0	633
		PM	23	443	0	0	624	70	77	2	25	0	0	0	1,264
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	96	0	0	71	1	288
		PM	0	0	0	0	0	55	68	105	0	0	137	1	366
9	Sassafras Street / Pacific Highway	AM	95	496	66	39	511	13	7	92	57	135	184	35	1,730
		PM	87	842	328	105	841	11	17	239	120	110	156	29	2,885
10	Laurel Street / North Harbor Drive	AM	0	0	0	17	0	3	498	1,384	0	0	2,393	48	4,343
		PM	0	0	0	49	0	7	1,250	2,236	0	0	2,059	126	5,727
11	Hawthorn Street / North Harbor Drive	AM	0	364	0	0	1,378	0	0	0	0	133	0	2,842	4,717
		PM	0	669	0	0	2,603	0	0	0	0	218	0	1,568	5,058
12	Grape Street / North Harbor Drive	AM	0	297	111	1,023	604	0	0	0	0	0	0	0	2,035
		PM	0	658	256	1,371	1,248	0	0	0	0	0	0	0	3,533
13	Laurel Street / Pacific Highway	AM	42	409	125	72	256	344	114	529	1	83	998	102	3,075
		PM	135	759	191	123	454	359	381	657	40	94	1,206	130	4,529
14	Hawthorn Street / Pacific Highway	AM	157	274	0	0	206	74	0	0	0	376	2,664	137	3,888
		PM	170	747	0	0	695	72	0	0	0	214	1,477	129	3,504
15	Grape Street / Pacific Highway	AM	0	699	184	177	991	0	99	1,131	50	0	0	0	3,331
		PM	0	804	512	290	677	0	84	2,264	49	0	0	0	4,680
16	Laurel Street / Kettner Boulevard	AM	0	0	0	354	469	697	0	931	75	65	377	0	2,968
		PM	0	0	0	421	877	769	0	1,334	133	98	460	0	4,092
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	253	131	0	0	0	216	3,469	0	4,069
		PM	0	0	0	0	656	115	0	0	0	266	1,925	0	2,962
18	Grape Street / Kettner Boulevard	AM	0	0	0	138	673	0	0	1,691	110	0	0	0	2,612
		PM	0	0	0	336	711	0	0	3,810	106	0	0	0	4,963
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	206	272	233	0	0	0	44	457	1,266	0	0	0	2,478
		PM	311	593	580	0	0	0	27	564	2,345	0	0	0	4,420
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	62	59	0	0	0	0	0	0	0	0	3,103	95	3,319
		PM	50	78	0	0	0	0	0	0	0	0	1,900	74	2,102
21	Laurel Street / India Street	AM	107	98	16	0	0	0	616	517	95	1	341	310	2,101
		PM	134	258	73	0	0	0	893	749	97	1	430	425	3,060
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	242	2,398	699	0	53	49	114	107	0	3,662
		PM	0	0	0	399	3,503	539	0	200	117	80	106	0	4,944
23	Sassafras Street / India Street	AM	249	974	13	0	0	0	117	23	48	0	43	27	1,494
		PM	233	1,641	39	0	0	0	320	57	104	0	18	22	2,434
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	511	90	147	0	115	57	173	197	0	1,290
		PM	0	0	0	1,347	134	28	0	286	72	220	155	0	2,242
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	19	0	70	24	6	17	23	0	277	317	111	36	900
		PM	33	0	84	52	51	6	56	14	635	348	160	45	1,484
26	Washington Street / Hancock Street	AM	0	260	106	312	407	0	208	97	95	0	0	0	1,485
		PM	0	566	144	333	420	0	326	194	122	0	0	0	2,105
27	Washington Street / San Diego Avenue	AM	113	584	0	0	681	665	0	0	0	277	313	12	2,645
		PM	202	1,141	0	0	721	607	0	0	0	300	423	28	3,422
28	Rosecrans Street / Pacific Highway	AM	207	155	230	144	209	88	61	176	143	312	154	88	1,967
		PM	364	297	661	174	201	98	113	464	171	257	315	133	3,248
29	Rosecrans Street / Nimitz Boulevard	AM	20	157	178	39	169	41	107	461	20	216	514	32	1,954
		PM	23	258	208	31	140	31	239	586	24	243	528	43	2,354

Source: HNTB, 2007.

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. \*2\* represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2	sbr	ebt	ebr	wbt	wbr				
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr	ebt	ebt	ebt	wbt	wbr2	wbr

Table 5-3.39

**2010-2030 Peak Hour Intersection Operations – Proposed Airport Implementation Plan  
(Without Parking Structure)**

Intersection Number	Intersection	Peak Hour	Year 2010		Year 2015		Year 2030	
			Delay (Sec.)	LOS	Delay (Sec.)	LOS	Delay (Sec.)	LOS
1	North Harbor Drive/ Nimitz Boulevard	AM	20.2	C	20.3	C	21.8	C
		PM	20.7	C	20.3	C	21.7	C
2	North Harbor Drive/ McCain Road	AM	8.4	A	9.2	A	10.7	B
		PM	9.9	A	10.8	B	11.9	B
3	North Harbor Drive/ Spanish Landing	AM	7.8	A	8.1	A	9.4	A
		PM	7.2	A	7.4	A	8.0	A
4	North Harbor Drive/ Harbor Island Drive	AM	19.7	B	19.5	B	20.3	C
		PM	30.5	C	31.0	C	34.6	C
5	North Harbor Drive/ Winship Lane	AM	9.5	A	10.0	A	11.1	B
		PM	9.2	A	9.7	A	10.6	B
6	North Harbor Drive/ Rental Car Road	AM	6.7	A	7.5	A	9.5	A
		PM	7.6	A	8.5	A	10.5	B
7	Sheraton Harbor Island Drive	AM	12.4	B	12.3	B	11.6	B
		PM	7.6	A	7.4	A	6.9	A
8	Employee Lot Harbor Island Drive	AM	9.8	A	9.9	A	9.9	A
		PM	10.1	B	10.1	B	10.2	B
9	Sassafras Street/ Pacific Highway	AM	15.3	B	15.5	B	14.1	B
		PM	14.8	B	17.4	B	14.8	B
10	Laurel Street/ North Harbor Drive	AM	9.1	A	10.0	A	10.9	B
		PM	15.4	B	16.2	B	20.1	C
11	Hawthorn Street/ North Harbor Drive	AM	31.5	C	48.4	D	179.9	F
		PM	23.1	C	25.0	C	60.5	E
12	Grape Street/ North Harbor Drive	AM	8.2	A	8.4	A	8.4	A
		PM	10.9	B	11.0	B	11.0	B
13	Laurel Street/ Pacific Highway	AM	32.1	C	33.7	C	34.0	C
		PM	48.9	D	62.2	E	61.7	E
14	Hawthorn Street/ Pacific Highway	AM	12.6	B	14.3	B	19.6	B
		PM	21.0	C	22.0	C	23.5	C
15	Grape Street/ Pacific Highway	AM	18.5	B	19.0	B	20.3	C
		PM	26.1	C	32.7	C	57.6	E
16	Laurel Street/ Kettner Boulevard	AM	18.8	B	19.5	B	22.0	C
		PM	21.3	C	22.8	C	32.5	C
17	Hawthorn Street/ Kettner Boulevard	AM	5.5	A	6.2	A	13.3	B
		PM	10.9	B	11.2	B	14.2	B
18	Grape Street/ Kettner Boulevard	AM	12.4	B	13.1	B	14.8	B
		PM	16.7	B	22.6	C	79.0	E
19	Grape Street/ I-5 Southbound On-Ramp	AM	11.1	B	10.8	B	15.3	B
		PM	28.3	C	34.6	C	124.0	F
20	Hawthorn Street/ I-5 Northbound Off-Ramp	AM	11.0	B	10.6	B	15.8	B
		PM	11.8	B	12.0	B	11.1	B
21	Laurel Street/ India Street	AM	18.4	B	19.3	B	23.2	C
		PM	21.3	C	22.9	C	32.5	C
22	Sassafras Street/ Kettner Boulevard	AM	8.5	A	9.5	A	9.8	A
		PM	11.5	B	13.1	B	66.8	E
23	Sassafras Street/ India Street	AM	8.2	A	8.3	A	8.1	A
		PM	13.7	B	17.8	B	17.6	B
24	Washington Street/ Pacific Highway SB-Ramps	AM	12.6	B	12.7	B	12.5	B
		PM	14.9	B	15.1	B	17.6	B
25	Washington Street/ Pacific Highway NB-Ramps	AM	33.5	C	46.7	D	31.5	C
		PM	68.5	E	100.5	F	79.8	E
26	Washington Street/ Hancock Street	AM	27.8	C	28.1	C	25.9	C
		PM	30.2	C	30.8	C	28.0	C
27	Washington Street/ San Diego Avenue	AM	12.5	B	13.1	B	14.9	B
		PM	13.6	B	14.1	B	16.8	B
28	Rosecrans Street/ Pacific Highway	AM	36.1	D	36.4	D	37.3	D
		PM	39.1	D	44.8	D	43.0	D
29	Rosecrans Street/ Nimitz Boulevard	AM	21.8	C	21.7	C	27.0	C
		PM	25.0	C	25.2	C	29.1	C

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

LOS = level of service

Table 5-3.40

**2010-2030 Intersection Impacts – Proposed Airport Implementation Plan  
(Without Parking Structure)**

Intersection Number	Intersection	Peak Hour	Year 2010			Year 2015			Year 2030		
			No Proj	No Project	Diff.	No Proj	No Project	Diff.	No Proj	No Project	Diff.
			Delay (Sec.)	Delay (Sec.)	Delay (Sec.)	Delay (Sec.)	Delay (Sec.)	Delay (Sec.)	Delay (Sec.)	Delay (Sec.)	Delay (Sec.)
1	North Harbor Drive/ Nimitz Boulevard	AM	20.2	20.2	0.0	20.4	20.3	-0.1	21.7	21.8	0.1
		PM	20.7	20.7	0.0	20.4	20.3	-0.1	21.6	21.7	0.1
2	North Harbor Drive/ McCain Road	AM	6.7	8.4	-1.7	7.2	9.2	2.0	7.6	10.7	3.1
		PM	9.1	9.9	-0.8	9.9	10.8	0.9	10.3	11.9	1.6
3	North Harbor Drive/ Spanish Landing	AM	10.1	7.8	2.3	10.9	8.1	-2.8	13.1	9.4	-3.7
		PM	8.7	7.2	1.5	9.3	7.4	-1.9	11.2	8.0	-3.2
4	North Harbor Drive/ Harbor Island Drive	AM	20.4	19.7	0.7	20.4	19.5	-0.9	21.9	20.3	-1.6
		PM	30.8	30.5	0.3	31.4	31.0	-0.4	34.9	34.6	-0.3
5	North Harbor Drive/ Winship Lane	AM	9.9	9.5	0.4	10.6	10.0	-0.6	11.1	11.1	0.0
		PM	9.6	9.2	0.4	10.3	9.7	-0.6	10.7	10.6	-0.1
6	North Harbor Drive/ Rental Car Road	AM	6.7	6.7	0.0	7.5	7.5	0.0	9.0	9.5	0.5
		PM	7.6	7.6	0.0	8.5	8.5	0.0	10.0	10.5	0.5
7	Sheraton Harbor Island Drive	AM	12.4	12.4	0.0	12.3	12.3	0.0	11.6	11.6	0.0
		PM	7.6	7.6	0.0	7.4	7.4	0.0	6.9	6.9	0.0
8	Employee Lot Harbor Island Drive	AM	9.8	9.8	0.0	9.9	9.9	0.0	9.9	9.9	0.0
		PM	10.1	10.1	0.0	10.1	10.1	0.0	10.1	10.2	0.1
9	Sassafras Street/ Pacific Highway	AM	15.3	15.3	0.0	15.4	15.5	0.1	14.0	14.1	0.1
		PM	14.5	14.8	-0.3	16.6	17.4	0.8	14.1	14.8	0.7
10	Laurel Street/ North Harbor Drive	AM	9.2	9.1	0.1	10.1	10.0	-0.1	10.5	10.9	0.4
		PM	15.5	15.4	0.1	16.3	16.2	-0.1	19.4	20.1	0.7
11	Hawthorn Street/ North Harbor Drive	AM	31.8	31.5	0.3	49.6	48.4	-1.2	173.0	179.9	6.9
		PM	23.2	23.1	0.1	25.2	25.0	-0.2	55.9	60.5	4.6
12	Grape Street/ North Harbor Drive	AM	8.2	8.2	0.0	8.4	8.4	0.0	8.3	8.4	0.1
		PM	10.9	10.9	0.0	11.0	11.0	0.0	10.9	11.0	0.1
13	Laurel Street/ Pacific Highway	AM	32.1	32.1	0.0	33.7	33.7	0.0	33.7	34.0	0.3
		PM	49.0	48.9	0.1	62.4	62.2	-0.2	60.4	61.7	1.3
14	Hawthorn Street/ Pacific Highway	AM	12.6	12.6	0.0	14.3	14.3	0.0	18.9	19.6	0.7
		PM	21.0	21.0	0.0	22.0	22.0	0.0	23.3	23.5	0.2
15	Grape Street/ Pacific Highway	AM	18.5	18.5	0.0	19.0	19.0	0.0	20.2	20.3	0.1
		PM	26.2	26.1	0.1	32.8	32.7	-0.1	56.5	57.6	1.1
16	Laurel Street/ Kettner Boulevard	AM	18.9	18.8	0.1	19.6	19.5	-0.1	21.9	22.0	0.1
		PM	21.4	21.3	0.1	22.9	22.8	-0.1	31.9	32.5	0.6
17	Hawthorn Street/ Kettner Boulevard	AM	5.5	5.5	0.0	6.2	6.2	0.0	13.0	13.3	0.3
		PM	10.9	10.9	0.0	11.3	11.2	-0.1	14.2	14.2	0.0
18	Grape Street/ Kettner Boulevard	AM	12.4	12.4	0.0	13.1	13.1	0.0	14.8	14.8	0.0
		PM	16.7	16.7	0.0	22.8	22.6	-0.2	77.1	79.0	1.9
19	Grape Street/ I-5 Southbound On-Ramp	AM	11.1	11.1	0.0	8.9	10.8	1.9	15.1	15.3	0.2
		PM	28.6	28.3	0.3	35.2	34.6	-0.6	87.1	124.0	36.9
20	Hawthorn Street/ I-5 Northbound Off-Ramp	AM	11.1	11.0	0.1	10.6	10.6	0.0	15.3	15.8	0.5
		PM	11.8	11.8	0.0	12.0	12.0	0.0	11.0	11.1	0.1
21	Laurel Street/ India Street	AM	18.5	18.4	0.1	19.4	19.3	-0.1	23.0	23.2	0.2
		PM	21.4	21.3	0.1	22.9	22.9	0.0	32.4	32.5	0.1
22	Sassafras Street/ Kettner Boulevard	AM	8.3	8.5	-0.2	9.2	9.5	0.3	9.6	9.8	0.2
		PM	11.1	11.5	-0.4	12.5	13.1	0.6	62.5	66.8	4.3
23	Sassafras Street/ India Street	AM	8.1	8.2	-0.1	8.2	8.3	0.1	8.0	8.1	0.1
		PM	13.5	13.7	-0.2	17.3	17.8	0.5	16.6	17.6	1.0
24	Washington Street/ Pacific Highway SB-Ramps	AM	12.6	12.6	0.0	12.7	12.7	0.0	12.4	12.5	0.1
		PM	14.9	14.9	0.0	15.1	15.1	0.0	17.4	17.6	0.2
25	Washington Street/ Pacific Highway NB-Ramps	AM	33.5	33.5	0.0	46.7	46.7	0.0	31.1	31.5	0.4
		PM	67.7	68.5	-0.8	107.8	100.5	-7.3	79.3	79.8	0.5
26	Washington Street/ Hancock Street	AM	27.8	27.8	0.0	28.1	28.1	0.0	25.9	25.9	0.0
		PM	30.2	30.2	0.0	30.8	30.8	0.0	28.0	28.0	0.0
27	Washington Street/ San Diego Avenue	AM	12.5	12.5	0.0	13.1	13.1	0.0	15.0	14.9	-0.1
		PM	13.6	13.6	0.0	14.1	14.1	0.0	16.8	16.8	0.0
28	Rosecrans Street/ Pacific Highway	AM	36.1	36.1	0.0	36.4	36.4	0.0	37.3	37.3	0.0
		PM	39.1	39.1	0.0	44.8	44.8	0.0	42.9	43.0	0.1
29	Rosecrans Street/ Nimitz Boulevard	AM	21.8	21.8	0.0	21.8	21.7	-0.1	26.8	27.0	0.2
		PM	25.0	25.0	0.0	25.3	25.2	-0.1	28.9	29.1	0.2

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

## Legend:

	LOS E
	LOS F
	Significant Impact

significance criteria identified in Section 5.3.3, *Traffic Impacts and Significance Criteria*, measured by an increase to LOS E or F or an increase in vehicle delay of greater than 2 seconds for streets operating at LOS E and greater than 1 second for streets operating at LOS F under the No Project Alternative. The following intersections would have potentially significant traffic impacts due to the project:

### **Intersections with Significant Traffic Impacts**

#### **Year 2030**

- Hawthorn Street and North Harbor Drive (AM & PM), which operates at LOS E in the AM peak hour and LOS F in the PM peak hour under both the Implementation Plan and No Project Alternative and would experience an increase in delay greater than 2 seconds under the Implementation Plan compared to the No Project Alternative.
- Grape Street and I-5 Southbound On-Ramp (PM), which operates at LOS F in the PM peak hour under both the Implementation Plan and No Project Alternative and would experience an increase in delay greater than 1 second under the Implementation Plan compared to the No Project Alternative.
- Sassafras Street and Kettner Boulevard (PM), which operates at LOS E in the AM peak hour under the No Project Alternative and LOS F in the AM peak hour under the Implementation Plan and would experience an increase in delay greater than 1 second under the Implementation Plan compared to the No Project Alternative.

#### **Freeway Segments**

The traffic forecasts on freeway segments for the Implementation Plan (Without Parking Structure) would be the same as for the Implementation Plan (With Parking Structure). As discussed in Section 5.3.4.4, the Implementation Plan would not result in any significant freeway impacts.

#### **Freeway Ramps**

The traffic forecasts on freeway ramps for the Implementation Plan (Without Parking Structure) would be the same as for the Implementation Plan (With Parking Structure). As discussed in Section 5.3.4.4 5.3.4.5, the Implementation Plan would not result in any significant freeway ramp impacts.

### **Railroad Crossings**

Forecasts of future train operations were obtained from the San Diego 2030 RTP (Mobility 2030), the 2007 LOSSAN Strategic Business Plan, and the 2000 San Diego International Airport Master Plan Preferred Concept Alternatives Roadway Analysis<sup>45</sup> report. Mobility 2030 projects that the headways for the Coaster Service will decrease from 36 minutes to 20 minutes during peak hours and from 120 minutes to 60 minutes during off-peak hours by 2030. That translates to a 44% increase in frequency during peak hours by 2030. The LOSSAN Strategic Business Plan projects that Coaster service would increase from existing 22 trains per day to 54 trains per day in 2025, consistent with the above. The LOSSAN Strategic Business Plan also projects that Amtrak Pacific Surfliner service between Los Angeles and San Diego would increase from existing 22 trips per day in 2005/2006 to 26 trains in 2015 and 32 trains in 2025. Mobility 2030 also projects that headways for the trolley Blue Line service that passes through the study area would decrease from 15 minutes to 7.5 minutes during off-peak hours by 2030. Estimated daily train operations in 2030 include 36 Amtrak trips, 78 Coaster trips, and 384 Trolley trips. For the analysis, freight train operations were estimated to increase to four trains per day.

**Table 5-3.41** summarizes the railroad crossing delay analysis for each analysis year under the Implementation Plan (without parking structure). As shown, delays at all railroad crossings were estimated to be under the VHD threshold for each street segment in 2010, 2015 and 2030. As shown in [Appendix D](#), Washington Street railroad crossings exceeded the threshold of VHD in 2020 and 2025. However, due to shifts in regional background traffic described in Section 5.3.4.5 5.3.5.1, *Airport Trip*

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<sup>45</sup> Linscott, Law & Greenspan Engineers March 3, 2000 San Diego International Airport Master Plan Preferred Concept Alternatives Roadway Analysis.



Table 5-3.41

**2010-2030 Railroad Crossing Operations – Proposed Airport Implementation Plan  
(Without Parking Structure)**

Crossing	Year 2010				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	20,400	4.76	64	No
Sassafras Street	75	14,100	3.44	23	No
Palm Street	75	900	3.44	0	No
Laurel Street	300	25,200	0.77	1	No
Hawthorn Street	150	18,500	0.77	10	No
Grape Street	300	28,900	0.77	18	No

Crossing	Year 2015				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	23,300	8.53	134	No
Sassafras Street	150	16,600	6.13	49	No
Palm Street	75	900	6.13	0	No
Laurel Street	300	28,900	0.80	1	No
Hawthorn Street	150	20,700	0.80	12	No
Grape Street	300	31,500	0.80	22	No

Crossing	Year 2030				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	19,100	9.95	137	No
Sassafras Street	75	14,600	7.18	56	No
Palm Street	75	100	7.18	0	No
Laurel Street	300	34,800	1.85	0	No
Hawthorn Street	300	26,500	1.85	44	No
Grape Street	300	37,200	1.85	81	No

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

VHD = vehicle-hours of delay

ADT = average daily traffic

*Generation and Background Traffic*, total traffic on Washington Street in 2030 decreased causing in the VHD to decrease to a level of insignificance.

### **Transit**

Under the Proposed Airport Implementation Plan (Without Parking Structure) no existing or planned transit routes would be modified. Therefore, no significant impact would occur to transit operations and no mitigation would be required.

### **Parking**

The Proposed Airport Implementation Plan (Without Parking Structure) would not remove any parking lots designated for public use. Passenger terminals also are not located close to commercial or residential areas. In addition, the Proposed Airport Implementation Plan (Without Parking Structure) would provide 500 additional airport public parking spaces at SAN Park Pacific Highway and Terminal Two roadway/curbside construction would eliminate 130 spaces at SAN Park NTC (as previously discussed in ~~Section 5.3.5.3~~ for the Proposed Airport Implementation Plan (with Parking Structure)) for a net parking increase of 370 spaces compared to the No Project Alternative. However, demand for terminal area spaces (8,400 spaces in 2015 and 10,500 spaces in 2030, as documented in the AMP facility requirements) would continue to exceed the supply of 3,955 spaces (4,085 less 130 SAN Park NTC spaces), resulting in a deficit of approximately 4,445 spaces in 2015 and 6,545 in 2030.

### **Terminal Curbside**

Currently 6,630 linear feet of curbside is available between all three terminals. In 2015 under the Proposed Airport Implementation Plan (without Parking Structure), 7,150 linear feet of curbside is required at all terminals to accommodate private and commercial vehicle demand. Out of that total 3,660 feet of private and commercial vehicle curbside is required at Terminal Two to accommodate demand associated with passengers at the new and existing aircraft gates. Currently Terminal Two has 2,820 linear feet of curbside which is 840 feet short of the 2015 requirement. The No Project Alternative would maintain the existing curbside supply, which would result in a total curbside deficit of 520 linear feet, Under the Proposed Airport Implementation Plan (Without Parking Structure) an additional 1,370 linear feet of curbside would be provided at Terminal Two for a total of 8,000 linear feet, providing an airport-wide surplus of 760 linear feet in 2015. Therefore, the Proposed Airport Implementation Plan (Without Parking Structure) would result in favorable curbside impact compared to the No Project Alternative.

### **On-Airport Traffic Circulation**

**Table 5-3.42** shows the total peak hour traffic volumes and LOS on terminal roadways under the Proposed Airport Implementation Plan (Without Parking Structure) (refer to **Figure 5.3-9** for link ID key map). As shown, all terminal roadways would operate at LOS D or better during peak hours under the Proposed Airport Implementation Plan (Without Parking Structure), except segment 37 (the exit from Terminal 2 to eastbound North Harbor Drive), which operates at LOS E in 2030.

Table 5-3.42

**On-Airport Peak Hour Operations – Proposed Airport Implementation Plan  
(Without Parking Structure)**

Link ID	Lanes	2010				2015				2030			
		AM	LOS	PM	LOS	AM	LOS	PM	LOS	AM	LOS	PM	LOS
1	2	445	A	368	A	532	B	444	A	660	B	557	B
2	2	369	A	313	A	457	A	390	A	587	B	505	B
3		Link Not Used				Link Not Used				Link Not Used			
4		Link Not Used				Link Not Used				Link Not Used			
5	2	76	A	54	A	76	A	54	A	73	A	52	A
6		Link Not Used				Link Not Used				Link Not Used			
7		Link Not Used				Link Not Used				Link Not Used			
8	4	470	A	399	A	580	A	494	A	776	A	667	A
9		Link Not Used				Link Not Used				Link Not Used			
10		Link Not Used				Link Not Used				Link Not Used			
11	1	179	A	201	A	203	A	228	A	246	B	278	B
12		Link Not Used				Link Not Used				Link Not Used			
13		Link Not Used				Link Not Used				Link Not Used			
14		Link Not Used				Link Not Used				Link Not Used			
15	8	649	A	600	A	783	A	722	A	1,022	A	945	A
16	2	153	A	134	A	181	A	156	A	255	A	222	A
17		Link Not Used				Link Not Used				Link Not Used			
18	2	495	B	466	A	602	B	566	B	767	B	723	B
19		Link Not Used				Link Not Used				Link Not Used			
20		Link Not Used				Link Not Used				Link Not Used			
21		Link Not Used				Link Not Used				Link Not Used			
22		Link Not Used				Link Not Used				Link Not Used			
23	2	67	A	57	A	79	A	66	A	97	A	83	A
24		Link Not Used				Link Not Used				Link Not Used			
25		Link Not Used				Link Not Used				Link Not Used			
26	2	46	A	99	A	46	A	99	A	46	A	99	A
27	1	79	A	65	A	95	A	79	A	154	A	130	A
28	2	46	A	99	A	46	A	99	A	46	A	99	A
29		Link Not Used				Link Not Used				Link Not Used			
30	2	562	B	523	B	681	B	632	B	864	C	806	C
31	3	641	A	588	A	775	B	711	B	1,018	B	936	B
32	1	14	A	10	A	13	A	10	A	17	A	12	A
33	3	627	A	578	A	762	B	701	A	1,001	B	924	B
34	4	90	A	64	A	89	A	64	A	90	A	64	A
35	2	526	B	493	B	639	B	597	B	812	C	762	B
36	1	101	A	86	A	123	A	104	A	189	A	162	A
37	1	471	C	442	C	577	D	540	C	741	E	696	D
38	1	55	A	51	A	61	A	57	A	72	A	66	A
39		Link Not Used				Link Not Used				Link Not Used			
40	2	540	B	498	B	603	B	561	B	685	B	647	B
41	1	68	A	49	A	68	A	49	A	65	A	46	A
42	2	472	B	449	A	535	B	513	B	621	B	600	B
43	1	75	A	62	A	84	A	70	A	121	A	101	A
44	3	547	A	511	A	619	A	582	A	741	B	702	A
45	1	32	A	27	A	37	A	31	A	45	A	39	A
46		Link Not Used				Link Not Used				Link Not Used			
47		Link Not Used				Link Not Used				Link Not Used			
48	4	579	A	538	A	656	A	613	A	786	A	741	A
49	2	400	A	337	A	453	A	385	A	540	B	463	A
50	1	42	A	90	A	41	A	89	A	42	A	90	A
51	3	442	A	427	A	494	A	474	A	582	A	553	A
52	2	360	A	351	A	404	A	390	A	453	A	433	A
53	1	82	A	77	A	90	A	84	A	129	A	119	A
54	1	45	A	36	A	50	A	40	A	61	A	51	A
55	1	13	A	9	A	13	A	9	A	16	A	12	A
56	4	81	A	58	A	81	A	58	A	81	A	58	A
57	2	831	B	792	B	981	B	930	B	1,194	C	1,129	C
58	2	92	A	92	A	101	A	101	A	139	A	135	A

Source: HNTB, 2007.

NOTE: Please refer to Figure 5.3-9 for link ID key map

Analysis for years 2020 and 2025 presented in Appendix D.

## **Proposed Airport Land Use Plan**

The Proposed Airport Land Use Plan will be hereinafter referred to in this section as the “Land Use Plan” unless otherwise indicated. As described in introduction to Chapter 3 the Proposed Airport Land Use Plan is considered on a Program level in this EIR. Because the Airport Land use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

### **Assumptions**

Projects assumed in the Land Use Plan are discussed in the Alternatives section of the EIR and include all projects in the Proposed Airport Implementation Plan (With Parking Structure) with additional development in the North Area and the former Teledyne Ryan Property (TDY site). Additional projects included in the Land Use Plan (not included in the Proposed Airport Implementation Plan) include:

- Development of the TDY site providing 3,000 new surface parking spaces, 11 acres of general aviation and 11 acres of SDCRAA office and maintenance space. Trip generation associated with these projects is discussed in the next section. It is assumed the Rental Car Road, north of North Harbor Drive, would provide access to this site.
- Development of the North Area providing new cargo facilities and a 6-level rental car and public parking structure with 9,000 ready, return, and storage rental car spaces and 2,170 public parking spaces. For this study it was assumed that the rental car companies located along Rental Car Road south of North Harbor Drive along with the off-Airport rental car companies located along Pacific Highway would relocate to the 9,000 space Consolidated Rental Car (CONRAC) Facility in the north area. The provision of 9,000 rental car spaces is based upon 2015 rental car requirements discussed in Section 7.3 Ground Transportation Requirements of the AMP document. As rental car demand grows past 2015, it is assumed that public parking in the structure will be displaced in favor of rental car spaces. The public parking demand will be relocated to the TDY site adjacent to the Commuter Terminal.
- Development of an Airport Transit Center in the north area between Pacific Highway and the north access road. The Transit Center would be integrated with, or immediately adjacent to, the Consolidated Rental Car (CONRAC) / public parking structure. A pedestrian connection would also be provided between the Transit Center and Washington Street Trolley station.
- Extension of the North Area access road (proposed in the Proposed Airport Implementation Plan) connecting to Sassafras Street would be extended providing access to the west portion of the North Area site.
- A dedicated transit corridor connecting the north CONRAC / Transit Center and south terminal areas. A consolidated shuttle serving all rental car companies, public parking and the Transit Center would replace the individual rental car company shuttles operating between the current Harbor Island and Pacific Highway rental car operations.
- The Proposed Airport Land Use Plan would accommodate the same volume of air passengers as the Proposed Airport Implementation Plan. However, the replacement of the individual rental car company shuttles with a consolidated shuttle operating on a dedicated transit corridor would reduce *terminal* trip generation under the Proposed Airport Land Use Plan. Trip generation associated with additional non-terminal area development is discussed in the next section and would increase total airport trip generation.
- The trip distribution of airport traffic under the Proposed Airport Land Use Plan is assumed to be the same as the No Project Alternative, as discussed in the section that follows (*Trip Generation and Terminal Distribution*).
- The Proposed Airport Land Use Plan would have the same gate distribution as the Proposed Airport Implementation Plan, as 10 new gates would be provided at Terminal Two West in both alternatives. Therefore, terminal passenger distribution for the Proposed Airport Land Use Plan would be the same as for the Proposed Airport Implementation Plan and is shown in [Tables 5-3.19](#) and [5-3.33](#).

- The Proposed Airport Land Use Plan was assumed to be a long-term forecast of potential projects and therefore, was only analyzed for 2015 and beyond. It was assumed that none of the additional projects included in the Proposed Airport Land Use Plan would be constructed by 2010 and the earliest most could be constructed would be between 2015 and 2020. Analysis for 2020 and 2025 is provided in [Appendix D](#).
- The Proposed Airport Land Use Plan is a planning guide to ensure that airport facilities are planned with foresight to serve the greatest number of airport users. The Proposed Airport Land Use Plan groups similar airport uses to insure compatible, shared and orderly development of future airport facilities. Where specific types of airport uses are contemplated in the future, transportation and circulation impacts associated with such uses can be assessed. Specific projects to be developed, constructed and operated are proposed in the Proposed Airport Implementation Plan. Any future projects to be developed that are not included in the Proposed Airport Implementation Plan will be 1) evaluated to ensure consistency with the Airport Land Use Plan and 2) reviewed at a project level to determine environmental impacts and incorporate the mitigation measures required by the Proposed Airport Land Use Plan.

### **Trip Generation and Terminal Distribution**

Total trip generation associated with the Proposed Airport Land Use Plan is summarized in [Table 5-3.43](#). As shown, total airport trip generation would increase from approximately 122,600 ADT in 2015 to 148,450 ADT in 2030. This corresponds to an increase in air passenger forecast of 22.8 million annual passengers (MAP) in 2015 to 28.2 MAP in 2030. This total trip generation takes into account airport traffic generated by passenger activity, including terminal trip generation, along with new non-terminal area traffic that may attract additional trips to the airport. Terminal trip generation would decrease under the Proposed Airport Land Use Plan compared to the Proposed Airport Implementation Plan and No Project Alternative due to the consolidation of rental car shuttles; however, total trip generation increases due to new trip generating projects and in-fill development in the existing rental car area along North Harbor Drive. Specific project specific trip generation associated with projects in the North Area, TDY property, and vacated rental car area on Harbor Island is shown in [Table 5-3.44](#) and described below.

#### **North Area**

- The CONRAC facility would be developed with 9,000 ready, return, and storage spaces to accommodate rental car demand through 2015. The 2,170 parking spaces at the SAN Park Pacific Highway provided in the Implementation Plan would also be accommodated in this structure. However, as rental car demand grows past 2015 requirements it is assumed that rental car functions will begin to replace public parking functions in the north area structure. By 2030, it is assumed that all 2,170 public parking spaces in the North Area would be converted to rental car use. This phase-out of the North Area public parking would be offset by the new 3,000 parking spaces at TDY, which is assumed to capture the public parking demand previously accommodated in the SAN Park Pacific Highway facility.

The new consolidated rental car facility in the North Area was also assumed to accommodate the off-airport rental car facilities located along Pacific Highway. All existing rental car shuttles from the Rental Car Road and Pacific Highway facilities would be replaced by a consolidated shuttle service with less total terminal area trips than the individual shuttles. The consolidated shuttle would also serve the north area Transit Center and would use a dedicated transit corridor connecting the North Area and the South Terminal Area. This corridor would allow shuttles to travel in a dedicated lane/roadway separate from public traffic.

Trip generation associated with the rental car companies was calculated for a 9,000 space facility as shown in [Table 5-3.44](#); however, a portion of the traffic generated at this facility would be relocated from the Harbor Island rental car facilities.

Table 5-3.43

**2010-2030 Airport Trip Generation – Proposed Airport Land Use Plan**

Activity	Year		
	2005	2015	2030
<b>Airport Passenger Activity Level</b>			
<b>Million Annual Passengers (MAP)</b>	<b>17.4</b>	<b>22.8</b>	<b>28.2</b>
Million Annual O&D Passengers	16.7	21.8	27.0
Daily O&D Passengers	45,830	59,770	74,199
<b>Airport Trip Generation (1)</b>			
Daily	85,100	122,600	148,450
In	42,600	61,450	74,400
Out	42,500	61,150	74,050
AM Peak Hour	3,180	4,690	5,700
In	1,760	2,725	3,315
Out	1,420	1,965	2,385
PM Peak Hour	3,245	4,850	5,810
In	1,500	2,350	2,810
Out	1,745	2,500	3,000
Trip Rate			
Daily	1.86	2.05	2.00

O&D = origin and destination

Notes:

(1) Includes terminals and associated facilities, SAN Park lots, rental car facilities on Rental Car Road, Employee Lot 6 on Harbor Island Drive, and north area. Does not include private vehicle trips to private off-airport parking and rental car facilities, but includes shuttle trips between these facilities and the terminals.

Source: HNTB, 2007.

O&D = origin and destination

**NOTE:** The contents of [Tables 5-3.43](#) and [5-3.44](#) in the 2007 Draft EIR were mistakenly switched with one another. The tables are shown correctly in this Final EIR.

Table 5-3.44

**North Area and TDY Trip Generation – Proposed Airport Land Use Plan**

Land Use	Trip Rate	Unit	2015	2030
<b>Rental Car/Parking Garage (North Area)</b>				
<b>CONRAC/ITC</b>				
Number of Spaces			9,000	11,700
Trip Generation				
Average Daily Traffic (ADT)	(1)		9,104	11,301
AM Peak Hour	(1)		384	477
PM Peak Hour	(1)		409	508
<b>Public Parking Spaces</b>				
Number of Spaces			2,170	0
Trip Generation				
Average Daily Traffic (ADT)	(2)		178	0
AM Peak Hour	(2)		7	0
PM Peak Hour	(2)		8	0
<b>TDY Site</b>				
<b>Authority Office Space</b>				
Area (acres)			11	11
Square feet of building floor area (1,000 sf)			192	192
Trip Generation				
Average Daily Traffic (ADT)	14	ADT/1,000 sf	2,683	2,683
AM Peak Hour	0.15	vph/1,000 sf	29	29
PM Peak Hour	0.15	vph/1,000 sf	29	29
<b>General Aviation</b>				
Area		Acres	11	11
Trip Generation				
Average Daily Traffic (ADT)	6	ADT/acre	66	66
AM Peak Hour	0.54	vph/acre	6	6
PM Peak Hour	0.90	vph/acre	10	10
<b>Existing Rental Car Area</b>				
<b>Airport Serving Hotel</b>				
Area		Acres	33.1	33.1
Trip Generation				
Average Daily Traffic (ADT)	300.00	ADT/acre	9,930	9,930
AM Peak Hour	18.00	vph/acre	596	596
PM Peak Hour	24.00	vph/acre	794	794

## Sources:

SH&E, San Diego International Airport Aviation Activity Forecasts, February 2004, and HNTB analysis.

ITE - Institute of Transportation Engineers, Trip Generation 6th Edition, 1997.

City of San Diego, Trip Generation Manual, May 2003.

SANDAG, (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002.

## Notes:

- (1) CONRAC trip generation based on observed trip generation at existing rental car area, projected into future years based on air passenger growth, then prorated to accommodate 100% demand.
- (2) Public parking trip generation based on observed terminal and SAN Park trip generation, projected into future years based on air passenger growth, then reallocated to various parking facilities based on capacity.

**NOTE:** The contents of [Tables 5-3.43](#) and [5-3.44](#) in the 2007 Draft EIR were mistakenly switched with one another. The tables are shown correctly in this Final EIR.

- In 2015, the same amount of public parking provided in the SAN Park Pacific Highway facility under the Implementation Plan, approximately 2,170 spaces, would be accommodated in the north area structure. As in the Implementation plan this parking would not generate new trips but would accommodate increased parking demand. As rental car demand grows through 2030 public parking in this facility would be displaced and parking demand would be relocated to the 3,000 space TDY parking facility. By 2030 it is assumed that the entire structure would be required to accommodate rental car demand and no public parking would be provided.
- The new cargo facilities would not increase the amount of air cargo accommodated at SDIA, but instead would allow cargo operators to sort cargo on-site as opposed to sorting off site and trucking loaded containers to the airport to load onto airplanes. Trip generation rates were adjusted to reflect this operation and were derived from similar domestic air cargo facilities at LAX. The new trip was assumed to be 2.31. Air cargo activity was assumed to grow from approximately 187,700 annual tons in 2005 to approximately 622,100 annual tons in 2030. Cargo vehicular traffic to and from the site was estimated based on the new trip rate.

### South Area

- SDCRAA office and maintenance facilities were assumed to be developed on approximately 11 acres of the TDY site. In order to assess a “worst case” scenario, trips associated with the 11-acre SDCRAA office/maintenance area were estimated based on the trip generation rate for an office building. It was assumed that if a portion of the 11 acres were used for a SDCRAA maintenance facility peak hour trips would be less than those analyzed because a maintenance facility would have fewer employees per square foot than an office building. Trip generation associated with this development is shown in [Table 5.3-44](#).
- Development of additional general aviation facilities were assumed on 11 acres of the TDY site. Trip generation associated with this development is shown in [Table 5.3-44](#).
- A 3,000 space parking facility developed on the TDY site would accommodate demand for public (economy) and employee parking. Employee parking demand that is accommodated in the north area under the Implementation Plan would be displaced by development of the CONRAC structure and was assumed to move to the TDY site. In addition, unaccommodated public economy parking and public parking displaced by growing rental car demand would be accommodated here. Traffic would be relocated from other facilities and no new trip generation is assumed.

### Existing Rental Car Area – Port of San Diego, Harbor Island East

- The existing rental car facilities on Rental Car Road, adjacent to North Harbor Drive, were assumed to be relocated to a consolidated facility in the North Area. Although this property is controlled by the Port of San Diego and not SDCRAA, in order to estimate worst case traffic conditions under the land use plan, it was assumed, after discussions with Port of San Diego staff, that new visitor-serving commercial (with hotel, convention facilities, restaurants) would replace the vacated rental car area along Rental Car Road. Alternate land uses may ultimately be developed in this area however the daily trip generation rate associated with visitor-serving commercial uses was used to estimate a high utilization of that site. Trip generation for the new development was based on trip rates from the City of San Diego Trip Generation Manual. The trip generation rate, 300 daily, 18 AM peak hour and 24 PM peak hour ADT per acre, for visitor-serving commercial is higher than the rental car facilities that it replaces and traffic from this development is accounted for as project related airport traffic under the Land Use Plan. The existing rental car site is estimated to be 33.1 acres generating 9,930 daily trips under the new land use assumptions.

Terminal passenger distribution under the Proposed Airport Land Use Plan would be the same as under the Proposed Airport Implementation Plan and is shown again in [Table 5-3.45](#).



Table 5-3.45

**Terminal Passenger Distribution – Proposed Airport Land Use Plan**

Scenario/Year	Terminal 1	Terminal 1 East *	Terminal 2 East	Terminal 2 West	Commuter Terminal	Total
Existing						
2005	54%	0%	15%	26%	5%	100%
Proposed Airport Implementation Plan						
2010	45%	0%	20%	31%	4%	100%
2015	43%	0%	20%	33%	3%	100%
2030	41%	0%	19%	37%	3%	100%

Source: HNTB, 2007.

\* New unit terminal under Airport Implementation Project Alternative.

**Traffic Impacts**

The Proposed Airport Land Use Plan includes existing and future airport uses. The future airport uses for the transportation and circulation analysis purposes including those specific project components identified in the Proposed Airport Implementation Plan as well as future uses in the North Area and the future planning areas on the former Teledyne Ryan site. Specific impact categories as they relate to the Proposed Airport Land Use Plan are discussed below. The future airport uses describe a maximum development scenario accommodating regional growth at SDIA. This analysis is provided to inform the public and agencies responsible for traffic and circulation of the effects accommodating regional growth. Future projects will be 1) evaluated to ensure consistency with the adopted Proposed Airport Land Use Plan and 2) reviewed at a project level to determine if any significant impacts to traffic and circulation may occur and incorporate the mitigation measures required by the Proposed Airport Land Use Plan. This will require coordination between the SDCRAA and the agency responsible for the transportation facilities (i.e. the City of San Diego for city-dedicated streets) in order to mitigate any significant impacts.

**Street Segments**

**Table 5-3.46** summarizes the street segment operations for each analysis year under the Proposed Airport Land Use Plan.

**Table 5-3.47** compares the street segment volume to capacity (v/c) ratios under the Proposed Airport Land Use Plan against the No Project Alternative to identify traffic impacts based on significance criteria identified in Section 5.3.3, *Traffic Impacts and Significance Criteria*, measured by an increase to LOS E or F or an increase in volume to capacity ratio of greater than 0.02 for streets operating at LOS E and 0.01 for streets operating at LOS F under the No Project Alternative. The following roadway segments would have potentially significant traffic impacts:

**Street Segments with Significant Traffic Impacts****Year 2015**

- North Harbor Drive between Rental Car Road and Hawthorn Street, which operates at LOS F under both the Proposed Airport Land Use Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- Grape Street between North Harbor Drive and I-5, which operates at LOS E and F under both the Proposed Airport Land Use Plan and No Project Alternative and experience an increase in the v/c ratio of over 0.01 under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- Hawthorn Street between North Harbor Drive and Pacific Highway, which operates at LOS E and F under both the Proposed Airport Land Use Plan and No Project Alternative and experience an increase in the v/c ratio of over 0.01 under the Proposed Airport Land Use Plan compared to the No Project Alternative.

Table 5-3.46

2015 – 2030 Street Segment Operations – Proposed Airport Land Use Plan

Roadway	Segment	Classification	Lanes	LOS E ADT Capacity 1000s	Year 2015					Year 2030				
					SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS	SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS
North Harbor Drive	West of NTC	6-Lane Prime	6D	60.0	15.6	20.4	36.0	0.60	C	23.4	28.5	51.9	0.87	D
	NTC - Spanish Landing	6-Lane Prime	6D	60.0	16.1	16.3	32.4	0.54	B	22.2	23.3	45.5	0.76	C
	Spanish Landing - T2 Access	6-Lane Prime	6D	60.0	15.2	16.2	31.4	0.52	B	19.8	20.7	40.5	0.67	C
	T2 Access - Harbor Island	6-Lane Prime	4+3	65.0	30.6	16.3	46.9	0.72	C	39.5	19.8	59.3	0.91	D
	Harbor Island - T1 Access	6-Lane Prime	3+4	65.0	29.6	18.4	48.0	0.74	C	36.4	21.1	57.5	0.88	D
	T1 Access - Winship	6-Lane Prime	5+3	70.0	43.9	18.3	62.2	0.89	D	52.4	21.1	73.5	1.05	F
	Winship - Flyover Merge (1)	6-Lane Prime	4+4	70.0	44.7	18.4	63.1	0.90	D	52.7	20.9	73.6	1.05	F
	Rental Car Rd - Laurel	6-Lane Prime	6D	60.0	86.8	20.7	107.5	1.79	F	99.2	21.7	120.9	2.01	F
	Laurel - Hawthorn	6-Lane Prime	6D	60.0	57.5	15.4	72.9	1.22	F	68.7	18.2	87.0	1.45	F
	Hawthorn - Grape	6-Lane Prime	6D	60.0	36.2	13.4	49.6	0.83	C	43.3	14.8	58.2	0.97	E
Grape Street	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	19.2	7.1	26.3	1.05	F	23.1	9.7	32.8	1.31	F
	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	17.8	17.1	34.9	1.40	F	21.2	19.8	41.0	1.64	F
	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	17.4	23.7	41.1	1.64	F	20.9	24.7	45.6	1.82	F
Hawthorn Street	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	21.7	5.4	27.1	1.08	F	26.1	7.9	34.0	1.36	F
	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	17.5	6.2	23.7	0.95	E	21.1	8.7	29.8	1.19	F
	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	17.5	19.2	36.7	1.47	F	21.1	19.2	40.3	1.61	F
Kettner Blvd	north of Washington	3-Lane Collector 1-Way	3U	25.0	0.3	7.2	7.5	0.30	A	0.7	4.2	4.9	0.19	A
	Washington - Sassafras	3-Lane Major 1-Way	3U	25.0	12.2	13.1	25.3	1.01	F	12.5	17.4	29.9	1.20	F
	Sassafras - Palm	3-Lane Major 1-Way	3U	25.0	12.2	11.9	24.1	0.96	E	12.5	14.2	26.7	1.07	F
	Palm - Laurel	3-Lane Major 1-Way	3U	25.0	10.6	9.5	20.1	0.80	D	10.6	12.6	23.1	0.92	E
	Laurel - Hawthorn	3-Lane Major 1-Way	3U	25.0	0.0	7.9	7.9	0.32	A	0.1	11.4	11.6	0.46	B
Laurel Street	Hawthorn - Grape	3-Lane Major 1-Way	3U	25.0	0.0	16.8	16.8	0.67	C	0.1	21.5	21.7	0.87	D
	Harbor - Pacific	4-Lane Major	4U	40.0	29.2	6.7	35.9	0.90	E	30.5	4.3	34.8	0.87	D
	Pacific - Kettner	4-Lane Collector	4D	30.0	23.7	7.8	31.5	1.05	F	24.4	12.1	36.5	1.22	F
Pacific Highway	Kettner - I-5	4-Lane Collector	4D	30.0	13.1	9.6	22.7	0.76	D	14.2	12.9	27.1	0.90	E
	Washington - Sassafras	6-Lane Major	6D	50.0	5.9	27.3	33.2	0.66	C	7.3	19.1	26.3	0.53	B
	Sassafras - Palm	6-Lane Major	6D	50.0	8.6	21.0	29.6	0.59	C	10.4	16.3	26.7	0.53	B
	Palm - Laurel	6-Lane Major	6D	50.0	8.6	21.7	30.3	0.61	C	10.4	15.4	25.9	0.52	B
	Laurel - Hawthorn	6-Lane Major	6D	50.0	2.5	22.6	25.1	0.50	B	3.7	23.3	26.9	0.54	B
	Hawthorn - Grape	6-Lane Major	6D	50.0	6.4	23.2	29.6	0.59	C	8.0	24.1	32.1	0.64	C
	Pacific - Kettner	2-Lane Collector	2U	8.0	0.0	0.9	0.9	0.11	A	0.0	0.1	0.1	0.01	A
Sassafras Street	Pacific - Kettner	3-Lane Collector	3U	12.0	6.3	9.7	16.0	1.33	F	7.7	6.1	13.8	1.15	F
	Kettner-India	2-Lane Collector	2U	8.0	3.1	9.7	12.8	1.60	F	3.9	8.0	11.9	1.48	F
Washington Street	Pacific - Kettner	4-Lane Collector	4U	30.0	5.9	18.6	24.5	0.82	D	8.2	12.7	20.9	0.70	D
	Kettner - San Diego	5-Lane Collector	5D	30.0	5.2	25.5	30.7	1.02	F	6.8	22.5	29.4	0.98	E
India Street	Laurel - Palm	2-Lane Collector	2U	8.0	10.6	10.2	20.8	2.60	F	10.5	12.6	23.1	2.89	F
	Palm - Sassafras	3-Lane Collector	3U	12.0	10.6	15.4	25.9	2.16	F	10.5	16.5	27.0	2.25	F
	Sassafras - Washington	3-Lane Collector	3U	12.0	12.0	14.6	26.6	2.22	F	12.4	21.5	33.9	2.82	F
Rosecrans	Barnett - Sport Arena	6-lane Major	6D	50.0	7.3	42.4	49.7	0.99	E	12.8	33.7	46.6	0.93	E
	Nimitz Quimby - Barnett	4-lane Major 5-lane Major	4U-5U	40.0 45.0	7.3	35.4	42.7	1.07 0.95	F-E	12.8	29.0	41.9	1.05 0.93	F-E
	Nimitz - Quimby	4-lane Major	4U	40.0	7.3	35.4	42.7	1.07	F	12.8	29.0	41.9	1.05	F
Nimitz	Harbor - Rosecrans	4-lane Major	4U	40.0	13.4	8.5	21.9	0.55	C	20.7	11.7	32.4	0.81	D

Source: HNTB, 2007.  
 Analysis for years 2020 and 2025 presented in Appendix D.

Notes:  
 (1) Does not include traffic on flyover.

MAP = Million Annual Passengers  
 ADT = Average Daily Traffic  
 LOS = Level of Service  
 V/C = volume-to-capacity ratio

5-3.47

2015-2030 Street Segment Impacts – Proposed Airport Land Use Plan

Roadway	Segment	Year 2015					Year 2030				
		No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C	No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C
North Harbor Drive	West of NTC	0.56	B	0.60	C	0.05	0.79	C	0.87	D	0.08
	NTC - Spanish Landing	0.57	B	0.54	B	-0.03	0.79	C	0.76	C	-0.03
	Spanish Landing - T2 Access	0.47	B	0.52	B	0.06	0.60	C	0.67	C	0.07
	T2 Access - Harbor Island	0.63	C	0.72	C	0.09	0.76	C	0.91	D	0.15
	Harbor Island - T1 Access	0.62	C	0.74	C	0.12	0.69	C	0.88	D	0.19
	T1 Access - Winship	0.83	C	0.89	D	0.06	0.94	E	1.05	F	0.11
	Winship - Rental Car Rd	0.87	D	0.90	D	0.03	0.97	E	1.05	F	0.08
	Rental Car Rd - Laurel	1.57	F	1.79	F	0.22	1.73	F	2.01	F	0.29
	Laurel - Hawthorn	1.05	F	1.22	F	0.17	1.22	F	1.45	F	0.23
	Hawthorn - Grape	0.72	C	0.83	C	0.11	0.82	C	0.97	E	0.15
Grape Street	Harbor - Pacific	0.92	E	1.05	F	0.13	1.13	F	1.31	F	0.18
	Pacific - Kettner	1.26	F	1.40	F	0.13	1.46	F	1.64	F	0.18
	Kettner - I-5	1.52	F	1.64	F	0.12	1.66	F	1.82	F	0.16
Hawthorn Street	Harbor - Pacific	0.94	E	1.08	F	0.15	1.16	F	1.36	F	0.20
	Pacific - Kettner	0.83	D	0.95	E	0.11	1.03	F	1.19	F	0.16
	Kettner - I-5	1.35	F	1.47	F	0.11	1.66	F	1.61	F	-0.05
Kettner Blvd	north of Washington	0.30	A	0.30	A	0.01	0.18	A	0.19	A	0.01
	Washington - Sassafras	0.94	E	1.01	F	0.07	1.11	F	1.20	F	0.08
	Sassafras - Palm	0.90	D	0.96	E	0.07	0.99	E	1.07	F	0.08
	Palm - Laurel	0.74	C	0.80	D	0.07	0.85	D	0.92	E	0.08
Laurel Street	Laurel - Hawthorn	0.32	A	0.32	A	0.00	0.47	B	0.46	B	-0.01
	Hawthorn - Grape	0.68	C	0.67	C	-0.01	0.87	D	0.87	D	-0.01
	Harbor - Pacific	0.82	D	0.90	E	0.08	0.78	D	0.87	D	0.09
Pacific Highway	Pacific - Kettner	0.97	E	1.05	F	0.08	1.13	F	1.22	F	0.08
	Kettner - I-5	0.75	D	0.76	D	0.01	0.90	E	0.90	E	0.01
	Washington - Sassafras	0.64	C	0.66	C	0.02	0.50	B	0.53	B	0.03
	Sassafras - Palm	0.57	C	0.59	C	0.02	0.51	B	0.53	B	0.03
Palm Street	Palm - Laurel	0.59	C	0.61	C	0.02	0.49	B	0.52	B	0.03
	Laurel - Hawthorn	0.50	B	0.50	B	0.00	0.54	B	0.54	B	0.00
	Hawthorn - Grape	0.58	C	0.59	C	0.02	0.62	C	0.64	C	0.02
Sassafras Street	Pacific - Kettner	0.11	A	0.11	A	0.00	0.01	A	-0.08	A	-0.09
	Kettner-India	1.46	F	1.60	F	0.14	1.32	F	1.48	F	0.16
	Pacific - Kettner	0.78	D	0.82	D	0.04	0.63	C	0.70	D	0.07
Washington Street	Kettner - San Diego	0.99	E	1.02	F	0.03	0.93	E	0.98	E	0.05
	India Street	2.38	F	2.60	F	0.22	2.64	F	2.9	F	0.25
Rosecrans	Palm - Sassafras	2.01	F	2.16	F	0.15	2.09	F	2.2	F	0.16
	Sassafras - Washington	1.79	F	2.22	F	0.42	2.41	F	2.8	F	0.41
	Barnett - Sport Arena	0.97	E	0.99	E	0.03	0.88	D	0.93	E	0.05
Nimitz	Nimitz-Quimby - Barnett	4.03-0.92	F-E	4.07-0.95	F-E	0.03	0.98-0.87	E-D	4.05-0.93	F-E	0.06
	Nimitz - Quimby	1.03	F	1.07	F	0.03	0.98	E	1.05	F	0.06
	Harbor - Rosecrans	0.49	B	0.55	C	0.06	0.71	C	0.81	D	0.10

Source: HNTB, 2007.  
Analysis for years 2020 and 2025 presented in Appendix D.

V/C = Volume to capacity ratio  
LOS = Level of service

Legend:  

 LOS E  
 LOS F  
 Significant Impact

- Hawthorn Street between Pacific Highway and Kettner Boulevard, which increased from LOS D under the No Project Alternative to LOS E under the Proposed Airport Land Use Plan.
- Hawthorn Street between Kettner Boulevard and I-5, which operates at LOS F under both the Proposed Airport Land Use Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- Kettner Boulevard between Washington Street and Sassafras Street, which operates at LOS E and F under both the Proposed Airport Land Use Plan and No Project Alternative and experience an increase in the v/c ratio of over 0.01 under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- Kettner Boulevard between Sassafras Street and Palm Street, which increased from LOS D under the No Project Alternative to LOS E under the Proposed Airport Land Use Plan.
- Laurel Street between North Harbor Drive and Pacific Highway, which increased from LOS D under the No Project Alternative to LOS E under the Proposed Airport Land Use Plan.
- Laurel Street between Pacific Highway and Kettner Boulevard, which operates at LOS E and F under both the Proposed Airport Land Use Plan and No Project Alternative and experience an increase in the v/c ratio of over 0.01 under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- Sassafras Street between Pacific Highway and India Street, which operates at LOS F under both the Proposed Airport Land Use Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- Washington Street between Kettner Boulevard and San Diego Street, which operates at LOS E and F under both the Proposed Airport Land Use Plan and No Project Alternative and experience an increase in the v/c ratio of over 0.01 under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- India Street between Laurel Street and Washington Street, which operates at LOS F under both the Proposed Airport Land Use Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Proposed Airport Land Use Plan compared to the No Project Alternative.

Rosecrans Avenue between Barnett Avenue and Nimitz Boulevard, which operates at LOS E and F under both the Proposed Airport Land Use Plan and No Project Alternative and experience an increase in the v/c ratio of over 0.01 under the Proposed Airport Land Use Plan compared to the No Project Alternative.

### **Year 2030**

- All locations identified in Year 2015 above, except:
  - Hawthorn Street between Kettner Boulevard and I-5, which operates at LOS F under both the Proposed Airport Land Use Plan and No Project Alternative but the impact decreased to a level of insignificance due to a decrease in background traffic and shift in regional distribution.
  - Laurel Street between North Harbor Drive and Pacific Highway, which improved from LOS E under the Proposed Airport Land Use Plan in 2015 to LOS D under the Proposed Airport Land Use Plan in 2030 due to a decrease in background traffic and shift in regional distribution.
- North Harbor Drive between Terminal 1 Access and Rental Car Road, which operates at LOS E and F under both the Proposed Airport Land Use Plan and No Project Alternative and experience an increase in the v/c ratio of over 0.01 under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- North Harbor Drive between Hawthorn Street and Grape Street, which increased from LOS D under the No Project Alternative to LOS E under the Proposed Airport Land Use Plan.
- Kettner Boulevard between Palm Street and Laurel Street, which increased from LOS D under the No Project Alternative to LOS E under the Proposed Airport Land Use Plan.

## Intersections

**Tables 5-3.48 and 5-3.49** show the intersection turning volumes under the ~~Proposed Airport Implementation Plan (With Parking Structure)~~ Proposed Airport Land Use Plan for each analysis year. Intersection lane configurations under the No Project Alternative were assumed to remain the same under the ~~Proposed Airport Implementation Plan (With Parking Structure)~~ Proposed Airport Land Use Plan. **Table 5-3.50** shows the resulting intersection operations.

**Table 5-3.51** compares the intersection delay under the Proposed Airport Land Use Plan against the No Project Alternative to identify intersection impacts based on significance criteria identified in Section 5.3.1.8, measured by an increase in vehicle delay of greater than 2 seconds. The following intersections would have significant traffic impacts due to the project:

### **Intersections with Significant Traffic Impacts**

#### **Year 2015**

- Hawthorn Street and North Harbor Drive (AM), which deteriorated to LOS F under the Proposed Airport Land Use Plan.
- Laurel Street and Pacific Highway (PM), which operates at LOS E in the PM peak hour under both the Proposed Airport Land Use Plan and No Project Alternative and would experience an increase in delay greater than 2 seconds under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- Washington Street and Pacific Highway NB Ramps (AM), which deteriorated to LOS E under the Proposed Airport Land Use Plan.

#### **Year 2030**

- Hawthorn Street and North Harbor Drive (AM & PM), which operates at LOS E or F in the AM and PM peak hours under both the Proposed Airport Land Use Plan and No Project Alternative and would experience an increase in delay greater than 1 second under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- Laurel Street and Pacific Highway (PM), which operates at LOS E in the PM peak hour under both the Proposed Airport Land Use Plan and No Project Alternative and would experience an increase in delay greater than 2 seconds under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- Grape Street and Pacific Highway (PM), which operates at LOS E in the PM peak hour under both the Proposed Airport Land Use Plan and No Project Alternative and would experience an increase in delay greater than 2 seconds under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- Grape Street and Kettner Boulevard (PM), which operates at LOS E and F in the PM peak hour under both the Proposed Airport Land Use Plan and No Project Alternative and would experience an increase in delay greater than 1 second under the Proposed Airport Land Use Plan compared to the No Project Alternative.

Table 5-3.48

2015 Intersection Turning Volumes – Total Peak Hour Traffic – Proposed Airport Land Use Plan

Intersection Number		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	666	0	22	13	531	0	8	687	381	2,308
		PM	0	0	0	552	0	55	44	689	0	17	683	968	3,008
2	North Harbor Drive / McCain St	AM	0	0	0	134	0	115	187	733	0	0	854	425	2,448
		PM	0	0	0	510	0	256	39	1,052	0	0	1,090	111	3,058
3	North Harbor Drive / Spanish Landing	AM	5	0	18	56	0	10	99	842	5	16	1,619	0	2,670
		PM	7	0	25	120	0	21	82	1,873	20	6	1,235	0	3,389
4	North Harbor Drive / Harbor Island Drive	AM	44	5	154	40	10	72	78	752	86	243	2,079	0	3,563
		PM	160	4	343	44	9	69	64	1,822	131	471	1,472	0	4,589
5	North Harbor Drive / Winship Lane	AM	0	0	0	84	0	114	90	857	0	0	2,734	166	4,045
		PM	0	0	0	103	0	125	85	2,124	0	0	2,279	129	4,845
6	North Harbor Drive / Rental Car Road	AM	38	0	200	118	0	40	65	1,695	57	300	2,822	253	5,588
		PM	51	0	267	318	0	81	57	2,892	77	400	2,276	193	6,612
7	Sheraton / Harbor Island Drive	AM	13	119	0	0	240	99	85	6	27	0	0	0	589
		PM	23	429	0	0	541	70	77	2	25	0	0	0	1,167
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	98	0	0	75	1	294
		PM	0	0	0	0	0	55	68	108	0	0	142	1	374
9	Sassafras Street / Pacific Highway	AM	90	624	86	56	672	14	6	79	44	248	194	65	2,178
		PM	71	1,056	424	150	1,160	11	11	146	71	202	147	54	3,503
10	Laurel Street / North Harbor Drive	AM	0	0	0	26	0	4	492	1,362	0	0	2,232	39	4,155
		PM	0	0	0	76	0	11	1,270	2,324	0	0	1,999	102	5,782
11	Hawthorn Street / North Harbor Drive	AM	0	376	0	0	1,294	0	0	0	0	86	0	2,266	4,022
		PM	0	667	0	0	2,458	0	0	0	0	141	0	1,403	4,669
12	Grape Street / North Harbor Drive	AM	0	318	117	981	568	0	0	0	0	0	0	0	1,984
		PM	0	727	261	1,392	1,202	0	0	0	0	0	0	0	3,582
13	Laurel Street / Pacific Highway	AM	41	409	101	97	321	432	115	613	2	51	848	69	3,099
		PM	131	726	171	164	553	454	527	844	62	56	965	85	4,738
14	Hawthorn Street / Pacific Highway	AM	167	270	0	0	191	62	0	0	0	267	2,137	88	3,182
		PM	190	712	0	0	638	57	0	0	0	152	1,304	86	3,139
15	Grape Street / Pacific Highway	AM	0	703	182	170	946	0	77	992	43	0	0	0	3,113
		PM	0	807	504	280	619	0	57	1,940	43	0	0	0	4,250
16	Laurel Street / Kettner Boulevard	AM	0	0	0	257	355	713	0	718	49	44	252	0	2,388
		PM	0	0	0	311	664	766	0	1,046	86	61	297	0	3,231
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	169	90	0	0	0	173	2,950	0	3,382
		PM	0	0	0	0	441	79	0	0	0	213	1,738	0	2,471
18	Grape Street / Kettner Boulevard	AM	0	0	0	103	524	0	0	1,535	101	0	0	0	2,263
		PM	0	0	0	251	553	0	0	3,461	101	0	0	0	4,366
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	77	102	87	0	0	0	43	438	1,230	0	0	0	1,977
		PM	117	223	218	0	0	0	26	542	2,347	0	0	0	3,473
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	48	46	0	0	0	0	0	0	0	0	2,678	77	2,849
		PM	39	61	0	0	0	0	0	0	0	0	1,729	60	1,889
21	Laurel Street / India Street	AM	54	133	23	0	0	0	588	392	0	0	272	231	1,693
		PM	54	357	106	0	0	0	857	570	0	0	336	317	2,597
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	115	1,412	399	0	77	70	139	153	0	2,365
		PM	0	0	0	189	1,918	302	0	256	124	97	135	0	3,021
23	Sassafras Street / India Street	AM	244	979	12	0	0	0	126	28	58	0	34	22	1,503
		PM	218	1,653	36	0	0	0	316	69	126	0	15	18	2,451
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	200	35	58	0	73	41	185	238	0	830
		PM	0	0	0	527	53	12	0	231	53	243	109	0	1,228
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	112	16	167	29	7	20	24	0	255	427	162	53	1,272
		PM	55	36	289	63	60	8	60	15	640	409	234	66	1,935
26	Washington Street / Hancock Street	AM	0	307	119	351	463	0	358	167	156	0	0	0	1,921
		PM	0	755	175	376	450	0	562	335	166	0	0	0	2,819
27	Washington Street / San Diego Avenue	AM	106	649	0	0	588	553	0	0	0	216	225	8	2,345
		PM	204	1,282	0	0	620	504	0	0	0	211	304	18	3,143
28	Rosecrans Street / Pacific Highway	AM	237	177	263	116	171	72	64	184	151	317	153	89	1,994
		PM	418	342	759	141	164	79	119	485	180	260	316	134	3,397
29	Rosecrans Street / Nimitz Boulevard	AM	16	140	120	14	142	15	155	671	30	158	627	40	2,128
		PM	18	237	162	11	125	11	348	852	34	223	643	52	2,716

Source: HNTB, 2007

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2				eb1	ebt	ebr				
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr	eb12	eb1	ebt	wbt	wbr2	wbr	

Table 5-3.49

2030 Intersection Turning Volumes – Total Peak Hour Traffic – Proposed Airport Land Use Plan

Intersection Number		AM	PM	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	920	0	31	16	632	0	11	951	556	3,117	
		PM	0	0	0	786	0	75	52	820	0	23	943	1,342	4,041	
2	North Harbor Drive / McCain St	AM	0	0	0	147	0	176	219	984	0	0	1,010	481	3,017	
		PM	0	0	0	575	0	334	46	1,379	0	0	1,292	120	3,746	
3	North Harbor Drive / Spanish Landing	AM	5	0	18	74	0	17	168	1,046	7	21	1,883	0	3,239	
		PM	7	0	25	159	0	37	138	2,267	28	7	1,440	0	4,108	
4	North Harbor Drive / Harbor Island Drive	AM	48	6	160	45	13	106	113	923	103	267	2,467	0	4,251	
		PM	169	5	353	49	11	101	95	2,199	158	529	1,771	0	5,440	
5	North Harbor Drive / Winship Lane	AM	0	0	0	86	0	135	104	1,023	0	0	3,188	181	4,717	
		PM	0	0	0	106	0	148	97	2,504	0	0	2,672	143	5,670	
6	North Harbor Drive / Rental Car Road	AM	47	0	191	131	0	53	90	2,007	71	286	3,268	279	6,423	
		PM	63	0	255	347	0	110	78	3,395	95	382	2,642	218	7,585	
7	Sheraton / Harbor Island Drive	AM	13	130	0	0	283	99	85	6	27	0	0	0	643	
		PM	23	449	0	0	629	70	77	2	25	0	0	0	1,275	
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	99	0	0	78	1	298	
		PM	0	0	0	0	0	55	68	110	0	0	144	1	378	
9	Sassafras Street / Pacific Highway	AM	107	545	66	39	532	17	7	96	51	135	235	35	1,865	
		PM	84	875	328	105	862	13	13	176	83	110	179	29	2,857	
10	Laurel Street / North Harbor Drive	AM	0	0	0	17	0	3	519	1,563	0	0	2,680	48	4,830	
		PM	0	0	0	49	0	7	1,319	2,576	0	0	2,391	126	6,468	
11	Hawthorn Street / North Harbor Drive	AM	0	438	0	0	1,557	0	0	0	0	131	0	3,055	5,181	
		PM	0	754	0	0	2,943	0	0	0	0	212	0	1,815	5,724	
12	Grape Street / North Harbor Drive	AM	0	371	126	1,139	663	0	0	0	0	0	0	0	2,299	
		PM	0	743	257	1,591	1,362	0	0	0	0	0	0	0	3,953	
13	Laurel Street / Pacific Highway	AM	42	453	114	71	256	359	127	538	1	81	1,045	106	3,193	
		PM	135	771	183	121	429	370	399	709	40	90	1,254	131	4,632	
14	Hawthorn Street / Pacific Highway	AM	196	313	0	0	207	72	0	0	0	376	2,838	130	4,132	
		PM	215	756	0	0	672	66	0	0	0	214	1,679	124	3,726	
15	Grape Street / Pacific Highway	AM	0	762	184	177	991	0	114	1,245	52	0	0	0	3,525	
		PM	0	857	512	290	654	0	85	2,480	53	0	0	0	4,931	
16	Laurel Street / Kettner Boulevard	AM	0	0	0	346	469	784	0	928	75	61	339	0	3,002	
		PM	0	0	0	416	877	870	0	1,376	133	89	404	0	4,165	
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	249	131	0	0	0	216	3,638	0	4,234	
		PM	0	0	0	0	648	115	0	0	0	266	2,122	0	3,151	
18	Grape Street / Kettner Boulevard	AM	0	0	0	135	672	0	0	1,799	116	0	0	0	2,722	
		PM	0	0	0	329	710	0	0	4,017	115	0	0	0	5,171	
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	206	272	233	0	0	0	44	457	1,371	0	0	0	2,583	
		PM	311	593	580	0	0	0	27	565	2,543	0	0	0	4,619	
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	62	59	0	0	0	0	0	0	0	0	3,270	95	3,486	
		PM	50	78	0	0	0	0	0	0	0	0	2,096	74	2,298	
21	Laurel Street / India Street	AM	50	94	16	0	0	0	670	524	25	0	356	310	2,045	
		PM	56	250	72	0	0	0	996	760	20	0	445	425	3,024	
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	242	2,478	756	0	72	67	114	164	0	3,893	
		PM	0	0	0	399	3,598	573	0	204	121	80	141	0	5,116	
23	Sassafras Street / India Street	AM	275	1,024	13	0	0	0	120	23	48	0	43	27	1,573	
		PM	245	1,737	39	0	0	0	289	57	104	0	18	22	2,511	
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	511	90	148	0	109	54	196	321	0	1,429	
		PM	0	0	0	1,347	134	28	0	271	66	245	174	0	2,265	
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	53	0	83	24	6	17	23	0	271	430	111	36	1,054	
		PM	39	0	104	52	51	6	56	14	619	386	160	45	1,532	
26	Washington Street / Hancock Street	AM	0	269	103	311	478	0	208	97	137	0	0	0	1,603	
		PM	0	579	137	333	452	0	326	194	129	0	0	0	2,150	
27	Washington Street / San Diego Avenue	AM	110	597	0	0	709	665	0	0	0	319	313	11	2,724	
		PM	195	1,160	0	0	746	607	0	0	0	307	423	27	3,465	
28	Rosecrans Street / Pacific Highway	AM	207	155	231	144	210	89	61	177	143	316	155	88	1,976	
		PM	364	298	663	174	202	98	114	465	171	260	317	133	3,259	
29	Rosecrans Street / Nimitz Boulevard	AM	20	177	211	39	201	41	107	461	20	270	514	32	2,093	
		PM	23	297	272	31	177	31	239	586	24	305	528	43	2,556	

Source: HNTB, 2007

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2	sbl	sbr2	sbr	ebt	ebr	ebt	wbt	wbr2	wbr
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr	ebt	ebr	ebt	wbt	wbr2	wbr

Table 5-3.50

## 2015-2030 Peak Hour Intersection Operations – Proposed Airport Land Use Plan

Intersection Number	Intersection	Peak Hour	Year 2015		Year 2030	
			Delay (Sec.)	LOS	Delay (Sec.)	LOS
1	North Harbor Drive/ Nimitz Boulevard	AM	20.7	C	22.5	C
		PM	21.0	C	22.6	C
2	North Harbor Drive/ McCain Road	AM	9.0	A	10.4	B
		PM	10.6	B	11.7	B
3	North Harbor Drive/ Spanish Landing	AM	8.2	A	9.9	A
		PM	7.7	A	8.9	A
4	North Harbor Drive/ Harbor Island Drive	AM	19.6	B	20.3	C
		PM	31.5	C	37.4	D
5	North Harbor Drive/ Winship Lane	AM	8.3	A	8.6	A
		PM	7.2	A	7.5	A
6	North Harbor Drive/ Rental Car Road	AM	20.2	C	27.7	C
		PM	32.5	C	47.8	D
7	Sheraton Harbor Island Drive	AM	12.1	B	11.5	B
		PM	7.4	A	6.8	A
8	Employee Lot Harbor Island Drive	AM	9.9	A	9.9	A
		PM	10.2	B	10.2	B
9	Sassafras Street/ Pacific Highway	AM	15.7	B	14.5	B
		PM	15.7	B	13.4	B
10	Laurel Street/ North Harbor Drive	AM	10.6	B	11.8	B
		PM	19.6	B	31.3	C
11	Hawthorn Street/ North Harbor Drive	AM	84.4	F	225.9	F
		PM	37.7	D	115.4	F
12	Grape Street/ North Harbor Drive	AM	8.9	A	9.1	A
		PM	11.7	B	11.9	B
13	Laurel Street/ Pacific Highway	AM	34.5	C	34.8	C
		PM	69.3	E	66.6	E
14	Hawthorn Street/ Pacific Highway	AM	15.9	B	26.1	C
		PM	23.0	C	24.9	C
15	Grape Street/ Pacific Highway	AM	19.6	B	20.9	C
		PM	38.4	D	72.2	E
16	Laurel Street/ Kettner Boulevard	AM	19.5	B	22.1	C
		PM	23.7	C	35.2	D
17	Hawthorn Street/ Kettner Boulevard	AM	6.4	A	16.9	B
		PM	10.9	B	14.2	B
18	Grape Street/ Kettner Boulevard	AM	12.8	B	14.7	B
		PM	29.6	C	98.3	F
19	Grape Street/ I-5 Southbound On-Ramp	AM	10.4	B	15.4	B
		PM	48.9	D	113.0	F
20	Hawthorn Street/ I-5 Northbound Off-Ramp	AM	21.4	C	22.5	C
		PM	18.3	B	10.8	B
21	Laurel Street/ India Street	AM	18.4	B	16.9	B
		PM	23.2	C	22.1	C
22	Sassafras Street/ Kettner Boulevard	AM	9.6	A	13.2	B
		PM	12.4	B	80.9	F
23	Sassafras Street/ India Street	AM	8.2	A	8.0	A
		PM	18.2	B	17.6	B
24	Washington Street/ Pacific Highway SB-Ramps	AM	12.2	B	12.8	B
		PM	15.3	B	18.1	B
25	Washington Street/ Pacific Highway NB-Ramps	AM	69.3	E	54.6	D
		PM	106.8	F	81.9	F
26	Washington Street/ Hancock Street	AM	27.8	C	26.0	C
		PM	30.6	C	27.7	C
27	Washington Street/ San Diego Avenue	AM	13.3	B	15.2	B
		PM	14.0	B	16.6	B
28	Rosecrans Street/ Pacific Highway	AM	36.4	D	37.3	D
		PM	45.0	D	43.2	D
29	Rosecrans Street/ Nimitz Boulevard	AM	23.5	C	27.8	C
		PM	27.5	C	30.7	C

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

LOS = Level of service



Table 5-3.51

## 2015-2030 Intersection Impacts – Proposed Airport Land Use Plan

Intersection Number	Intersection	Peak Hour	Year 2015			Year 2030		
			No Proj. Delay (Sec.)	No-Project Delay (Sec.)	Diff. Delay (Sec.)	No Proj. Delay (Sec.)	No-Project Delay (Sec.)	Diff. Delay (Sec.)
1	North Harbor Drive/ Nimitz Boulevard	AM	20.4	20.7	0.3	21.7	22.5	0.8
		PM	20.4	21.0	0.6	21.6	22.6	1.0
2	North Harbor Drive/ McCain Road	AM	7.2	9.0	1.8	7.6	10.4	2.8
		PM	9.9	10.6	0.7	10.3	11.7	1.4
3	North Harbor Drive/ Spanish Landing	AM	10.9	8.2	-2.7	13.1	9.9	-3.2
		PM	9.3	7.7	-1.6	11.2	8.9	-2.3
4	North Harbor Drive/ Harbor Island Drive	AM	20.4	19.6	-0.8	21.9	20.3	-1.6
		PM	31.4	31.5	0.1	34.9	37.4	2.5
5	North Harbor Drive/ Winship Lane	AM	10.6	8.3	-2.3	11.1	8.6	-2.5
		PM	10.3	7.2	-3.1	10.7	7.5	-3.2
6	North Harbor Drive/ Rental Car Road	AM	7.5	20.2	12.7	9.0	27.7	18.7
		PM	8.5	32.5	24.0	10.0	47.8	37.8
7	Sheraton Harbor Island Drive	AM	12.3	12.1	-0.2	11.6	11.5	-0.1
		PM	7.4	7.4	0.0	6.9	6.8	-0.1
8	Employee Lot Harbor Island Drive	AM	9.9	9.9	0.0	9.9	9.9	0.0
		PM	10.1	10.2	0.1	10.1	10.2	0.1
9	Sassafras Street/ Pacific Highway	AM	15.4	15.7	0.3	14.0	14.5	0.5
		PM	16.6	15.7	-0.9	14.1	13.4	-0.7
10	Laurel Street/ North Harbor Drive	AM	10.1	10.6	0.5	10.5	11.8	1.3
		PM	16.3	19.6	3.3	19.4	31.3	11.9
11	Hawthorn Street/ North Harbor Drive	AM	49.6	84.4	34.8	173.0	225.9	52.9
		PM	25.2	37.7	12.5	55.9	115.4	59.5
12	Grape Street/ North Harbor Drive	AM	8.4	8.9	0.5	8.3	9.1	0.8
		PM	11.0	11.7	0.7	10.9	11.9	1.0
13	Laurel Street/ Pacific Highway	AM	33.7	34.5	0.8	33.7	34.8	1.1
		PM	62.4	69.3	6.9	60.4	66.6	6.2
14	Hawthorn Street/ Pacific Highway	AM	14.3	15.9	1.6	18.9	26.1	7.2
		PM	22.0	23.0	1.0	23.3	24.9	1.6
15	Grape Street/ Pacific Highway	AM	19.0	19.6	0.6	20.2	20.9	0.7
		PM	32.8	38.4	5.6	56.5	72.2	15.7
16	Laurel Street/ Kettner Boulevard	AM	19.6	19.5	-0.1	21.9	22.1	0.2
		PM	22.9	23.7	0.8	31.9	35.2	3.3
17	Hawthorn Street/ Kettner Boulevard	AM	6.2	6.4	0.2	13.0	16.9	3.9
		PM	11.3	10.9	-0.4	14.2	14.2	0.0
18	Grape Street/ Kettner Boulevard	AM	13.1	12.8	-0.3	14.8	14.7	-0.1
		PM	22.8	29.6	6.8	77.1	98.3	21.2
19	Grape Street/ I-5 Southbound On-Ramp	AM	8.9	10.4	1.5	15.1	15.4	0.3
		PM	35.2	48.9	13.7	87.1	113.0	25.9
20	Hawthorn Street/ I-5 Northbound Off-Ramp	AM	10.6	21.4	10.8	15.3	22.5	7.2
		PM	12.0	18.3	6.3	11.0	10.8	-0.2
21	Laurel Street/ India Street	AM	19.4	18.4	-1.0	23.0	16.9	-6.1
		PM	22.9	23.2	0.3	32.4	22.1	-10.3
22	Sassafras Street/ Kettner Boulevard	AM	9.2	9.6	0.4	9.6	13.2	3.6
		PM	12.5	12.4	-0.1	62.5	80.9	18.4
23	Sassafras Street/ India Street	AM	8.2	8.2	0.0	8.0	8.0	0.0
		PM	17.3	18.2	0.9	16.6	17.6	1.0
24	Washington Street/ Pacific Highway SB-Ramps	AM	12.7	12.2	-0.5	12.4	12.8	0.4
		PM	15.1	15.3	0.2	17.4	18.1	0.7
25	Washington Street/ Pacific Highway NB-Ramps	AM	46.7	69.3	22.6	31.1	54.6	23.5
		PM	107.8	106.8	-1.0	79.3	81.9	2.6
26	Washington Street/ Hancock Street	AM	28.1	27.8	-0.3	25.9	26.0	0.1
		PM	30.8	30.6	-0.2	28.0	27.7	-0.3
27	Washington Street/ San Diego Avenue	AM	13.1	13.3	0.2	15.0	15.2	0.2
		PM	14.1	14.0	-0.1	16.8	16.6	-0.2
28	Rosecrans Street/ Pacific Highway	AM	36.4	36.4	0.0	37.3	37.3	0.0
		PM	44.8	45.0	0.2	42.9	43.2	0.3
29	Rosecrans Street/ Nimitz Boulevard	AM	21.8	23.5	1.7	26.8	27.8	1.0
		PM	25.3	27.5	2.2	28.9	30.7	1.8

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

## Legend:

	LOS E
	LOS F
	Significant Impact

- Grape Street and I-5 Southbound On-Ramp (PM), which operates at LOS F in the PM peak hour under both the Proposed Airport Land Use Plan and No Project Alternative and would experience an increase in delay greater than 1 second under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- Sassafras Street and Kettner Boulevard (PM), which operates at LOS E and F in the PM peak hour under both the Proposed Airport Land Use Plan and No Project Alternative and would experience an increase in delay greater than 1 second under the Proposed Airport Land Use Plan compared to the No Project Alternative.
- Washington Street and Pacific Highway NB Ramps (PM), which operates at LOS E and F in the PM peak hour under both the Proposed Airport Land Use Plan and No Project Alternative and would experience an increase in delay greater than 1 second under the Proposed Airport Land Use Plan compared to the No Project Alternative.

### Freeway Segments

**Table 5-3.52** shows the freeway segment operations for each analysis year under the Proposed Airport Land Use Plan. As shown, all freeway segments would operate at LOS D, E or F under the Proposed Airport Land Use Plan during either AM or PM peak hours or both.

**Table 5-3.53** compares the freeway segment densities under the ~~Proposed Airport Implementation Plan (With Parking Structure)~~ Proposed Airport Land Use Plan against the No Project Alternative to identify freeway segment impacts based on significance criteria identified in Section 5.3.3, *Traffic Impacts and Significance Criteria*, measured by an increase to LOS E or F or an increase in volume to capacity ratio of greater than 0.01 for freeways operating at LOS E and .005 for freeways operating at LOS F under the No Project Alternative. It was assumed that an increase in volume to capacity ratio of 0.01 and 0.005 is equivalent to an increase in density of 1 percent and 0.5 percent, respectively. As shown, the following freeway segments would potentially be significantly impacted by the ~~Proposed Airport Implementation Plan (With Parking Structure)~~ Proposed Airport Land Use Plan:

### **Freeway Segments with Significant Traffic Impacts**

#### **Year 2015**

- I-5 (~~northbound and southbound segments, AM and PM peak hours~~)
  - ~~n~~North of I-8 (AM and PM – southbound segment only)
  - I-8 to Old Town Avenue (AM – southbound segment only; PM – both directions)
  - Old Town Avenue to Washington Street (PM – northbound segment only)
  - Hawthorn Street to First Avenue (AM – northbound segment only; PM – southbound segment only)
  - First Avenue to SR-163 (AM – northbound segment only; PM – both directions)
  - SR-163 to SR-94 (AM and PM – northbound segment only)
- I-8 East of I-5 (westbound segment only, AM and PM)

#### **Year 2030**

- All segments identified in Year 2015 (except for I-5 northbound between First Avenue and Hawthorn Street which improved to LOS D during the AM peak hour) plus the following:
  - ~~Northbound I-5 between Hawthorn Street and India Street (AM)~~
  - ~~I-8 East of I-5 (eastbound segment, AM and PM)~~
  - ~~Northbound I-5 between Pacific Highway Viaduct and Washington Street (AM)~~
  - 1-5 North of I-8 (PM – northbound segment)
  - I-8 East of I-5 (eastbound segment, PM)

Table 5-3.52

2015-2030 Freeway Segment Operations – Proposed Airport Land Use Plan Freeway Ramps

SB I-5 Freeway		2015						2030					
		AM			PM			AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
North of I-8	I-8	7,300	36.3	E	8,500	42.3	E	7,800	38.7	E	9,300	46.5	F
I-8	Old Town Avenue	7,400	37.0	E	7,500	37.6	E	7,700	38.2	E	8,500	42.6	E
Old Town Avenue	Washington Street	6,100	30.5	D	6,400	31.7	D	5,700	28.3	D	6,500	32.4	D
Washington Street	Pacific Highway Viaducts	6,400	32.1	D	6,600	33.1	D	6,100	30.4	D	7,000	34.7	D
Pacific Highway Viaducts	India Street	7,400	36.7	E	8,400	41.8	E	6,700	33.4	D	8,300	41.2	E
India Street	Hawthorn Street	7,500	37.4	E	8,300	41.6	E	6,900	34.6	D	8,500	42.6	E
Hawthorn Street	First Avenue	6,400	31.9	D	7,500	37.6	E	5,700	28.6	D	8,000	39.7	E
First Avenue	SR 163	6,700	33.6	D	9,500	47.6	F	6,200	31.0	D	10,000	49.8	F
SR 163	SR 94	4,000	19.9	C	5,500	27.5	D	3,800	18.9	C	5,700	28.2	D

NB I-5 Freeway		2015						2030					
		AM			PM			AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
SR 94	SR 163	11,600	57.7	F	8,100	40.5	E	11,000	54.7	F	7,700	38.4	E
SR 163	First Avenue	8,800	43.8	E	8,100	40.4	E	8,300	41.6	E	7,900	39.3	E
First Avenue	Hawthorn Street	7,300	36.4	E	6,700	33.3	D	6,500	32.7	D	6,400	31.8	D
Hawthorn Street	India Street	7,300	36.5	E	7,700	38.6	E	6,500	32.3	D	8,000	39.7	E
India Street	Pacific Highway Viaducts	7,300	36.3	E	7,600	37.9	E	6,400	31.9	D	7,200	35.9	E
Pacific Highway Viaducts	Washington Street	5,100	25.4	C	6,100	30.6	D	4,400	22.0	C	5,900	29.6	D
Washington Street	Old Town Avenue	6,200	30.8	D	7,200	36.1	E	5,600	28.1	D	7,200	35.8	E
Old Town Avenue	I-8	6,100	30.5	D	7,500	37.2	E	5,400	26.9	D	7,200	36.1	E
I-8	North of I-8	7,500	37.3	E	7,700	38.6	E	7,600	37.7	E	8,700	43.4	E

I-8 Freeway		2015						2030					
		AM			PM			AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
I-5	East	5,900	29.6	D	7,900	39.3	E	4,900	24.6	C	7,500	37.5	E
East	I-5	7,200	36.1	E	7,700	38.2	E	7,400	36.8	E	7,200	35.9	E

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

Notes: vph = vehicles per hour

pc/mi/ln = passenger cars per mile per lane

LOS = level of service

Table 5-3.53

2010-2030 Freeway Segment Impacts – Proposed Airport Land Use Plan

AM Peak Hour													
SB I-5 Freeway													
From	To	Year 2015			Year 2020			Year 2025			Year 2030		
		No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase
North of I-8	I-8	35.8	36.3	1.4%	34.8	35.3	1.6%	35.6	36.2	1.8%	38.0	38.7	1.8%
I-8	Old Town Avenue	36.4	37.0	1.7%	34.5	35.2	1.9%	35.4	36.1	2.1%	37.5	38.2	1.8%
Old Town Avenue	Washington Street	29.9	30.5	2.0%	25.7	26.4	2.6%	26.5	27.2	2.8%	27.6	28.3	2.4%
Washington Street	Pacific Highway Viaducts	32.1	32.1	0.0%	28.5	28.5	0.0%	29.8	29.8	0.0%	30.4	30.4	0.0%
Pacific Highway Viaducts	India Street	36.7	36.7	0.1%	30.9	30.9	0.2%	32.2	32.2	0.2%	33.4	33.4	0.1%
India Street	Hawthorn Street	37.4	37.4	0.1%	32.5	32.5	0.2%	33.7	33.7	0.2%	34.5	34.6	0.1%
Hawthorn Street	First Avenue	31.4	31.9	1.6%	26.8	27.3	1.9%	27.8	28.4	2.1%	28.0	28.6	2.4%
First Avenue	SR 163	33.1	33.6	1.5%	28.8	29.3	1.8%	30.1	30.7	1.9%	30.4	31.0	2.2%
SR 163	SR 94	19.4	19.9	2.6%	17.2	17.7	3.0%	17.8	18.4	3.2%	18.2	18.9	3.6%
NB I-5 Freeway													
From	To	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase
SR 94	SR 163	56.7	57.7	1.8%	53.6	54.7	2.1%	54.3	55.6	2.3%	53.4	54.7	2.6%
SR 163	First Avenue	42.7	43.8	2.4%	41.2	42.3	2.7%	41.8	43.0	3.0%	40.3	41.6	3.4%
First Avenue	Hawthorn Street	35.4	36.4	2.9%	33.1	34.2	3.4%	32.6	33.9	3.8%	31.3	32.7	4.4%
Hawthorn Street	India Street	36.3	36.5	0.7%	35.1	35.4	1.1%	34.6	35.1	1.3%	31.9	32.3	1.3%
India Street	Pacific Highway Viaducts	36.1	36.3	0.3%	34.6	34.7	0.4%	34.2	34.3	0.5%	31.7	31.9	0.7%
Pacific Highway Viaducts	Washington Street	25.2	25.4	0.4%	24.0	24.1	0.6%	23.4	23.6	0.8%	21.8	22.0	1.0%
Washington Street	Old Town Avenue	30.5	30.8	1.0%	29.9	30.2	1.1%	29.3	29.7	1.3%	27.8	28.1	1.2%
Old Town Avenue	I-8	30.2	30.5	1.0%	28.8	29.1	1.1%	28.2	28.5	1.3%	26.5	26.9	1.3%
I-8	North of I-8	37.1	37.3	0.7%	37.1	37.4	0.7%	37.2	37.5	0.8%	37.4	37.7	0.9%
I-8 Freeway													
From	To	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase
I-5	East	29.4	29.6	0.7%	25.2	25.4	0.9%	25.3	25.5	1.0%	24.4	24.6	1.2%
East	I-5	35.7	36.1	1.2%	33.5	34.0	1.4%	34.7	35.2	1.5%	36.2	36.8	1.6%
PM Peak Hour													
SB I-5 Freeway													
From	To	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase
North of I-8	I-8	41.8	42.3	1.2%	48.0	48.5	1.1%	47.2	47.8	1.2%	45.9	46.5	1.3%
I-8	Old Town Avenue	36.9	37.6	1.7%	44.6	45.2	1.5%	44.1	44.9	1.6%	42.0	42.6	1.5%
Old Town Avenue	Washington Street	31.1	31.7	2.0%	31.9	32.6	2.1%	32.0	32.7	2.2%	31.7	32.4	2.0%
Washington Street	Pacific Highway Viaducts	33.1	33.1	-0.1%	37.6	37.6	-0.1%	38.0	38.0	-0.1%	34.8	34.7	-0.1%
Pacific Highway Viaducts	India Street	41.9	41.8	-0.2%	41.9	41.8	-0.1%	42.2	42.2	-0.1%	41.3	41.2	-0.3%
India Street	Hawthorn Street	41.7	41.6	-0.2%	44.0	44.0	-0.1%	44.5	44.4	-0.1%	42.7	42.6	-0.1%
Hawthorn Street	First Avenue	36.8	37.6	2.1%	37.9	38.7	2.2%	38.7	39.6	2.3%	38.8	39.7	2.5%
First Avenue	SR 163	46.8	47.6	1.6%	47.6	48.4	1.7%	48.5	49.4	1.9%	48.9	49.8	2.0%
SR 163	SR 94	26.7	27.5	2.9%	27.1	28.0	3.1%	28.0	28.9	3.2%	27.2	28.2	3.6%
NB I-5 Freeway													
From	To	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase
SR 94	SR 163	39.5	40.5	2.6%	34.8	35.8	3.0%	35.4	36.6	3.2%	37.2	38.4	3.3%
SR 163	First Avenue	39.3	40.4	2.6%	37.9	38.9	2.8%	38.5	39.6	2.9%	38.0	39.3	3.2%
First Avenue	Hawthorn Street	32.3	33.3	3.1%	29.0	30.0	3.6%	29.1	30.3	3.9%	30.6	31.8	4.0%
Hawthorn Street	India Street	38.5	38.6	0.3%	36.5	36.7	0.4%	36.8	37.0	0.5%	39.5	39.7	0.4%
India Street	Pacific Highway Viaducts	37.8	37.9	0.1%	34.4	34.4	0.1%	34.8	34.8	0.1%	35.8	35.9	0.1%
Pacific Highway Viaducts	Washington Street	30.6	30.6	0.1%	28.1	28.1	0.1%	28.0	28.0	0.1%	29.6	29.6	0.1%
Washington Street	Old Town Avenue	35.7	36.1	1.2%	35.3	35.8	1.3%	35.3	35.9	1.5%	35.4	35.8	1.2%
Old Town Avenue	I-8	36.8	37.2	1.1%	34.6	35.1	1.4%	34.2	34.7	1.5%	35.7	36.1	1.2%
I-8	North of I-8	38.2	38.6	0.992%	39.1	39.5	1.1%	39.1	39.6	1.2%	42.9	43.4	1.1%
I-8 Freeway													
From	To	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase
I-5	East	38.9	39.3	0.8%	38.0	38.3	0.9%	37.8	38.2	1.03%	37.1	37.5	1.1%
East	I-5	37.8	38.2	1.1%	35.6	36.1	1.3%	36.1	36.6	1.3%	35.4	35.9	1.5%

Source: HNTB, 2007.  
Analysis for years 2020 and 2025 presented in Appendix D.

LOS = level of service

Legend:  

 LOS E  
 LOS F  
 Significant Impact

## Freeway Ramps

**Table 5-3.54** summarizes the freeway ramp operations under the Proposed Airport Land Use Plan. No ramp volumes exceed the ramp meter rates and therefore no significant impacts occur.

Table 5-3.54

### 2015-2030 Freeway Ramp Operations – Proposed Airport Land Use Plan

Location	Peak Hour	2015					2030				
		Demand (veh/hr)	Maximum Meter Rate (veh/hr)	Excess Demand (veh/hr)	Delay (minutes)	Queue (feet)	Demand (veh/hr)	Maximum Meter Rate (veh/hr)	Excess Demand (veh/hr)	Delay (minutes)	Queue (feet)
I-5 NB from San Diego	AM	524	1,992	0	0	0	887	1,992	0	0	0
	PM	501	1,992	0	0	0	700	1,992	0	0	0
I-5 NB from India	AM	1,103	1,992	0	0	0	1,390	1,992	0	0	0
	PM	1,201	1,992	0	0	0	1,738	1,992	0	0	0
I-5 SB from Kettner	AM	125	996	0	0	0	97	996	0	0	0
	PM	109	996	0	0	0	150	996	0	0	0
I-5 SB from Washington/Hancock	AM	480	1,140	0	0	0	591	1,140	0	0	0
	PM	285	1,140	0	0	0	470	1,140	0	0	0

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

veh/hr = vehicles per hour

## Railroad Crossings

Forecasts of future train operations were obtained from the San Diego 2030 RTP (Mobility 2030), the 2007 LOSSAN Strategic Business Plan, and the 2000 San Diego International Airport Master Plan Preferred Concept Alternatives Roadway Analysis<sup>46</sup> report. Mobility 2030 projects that the headways for the Coaster Service will decrease from 36 minutes to 20 minutes during peak hours and from 120 minutes to 60 minutes during off-peak hours by 2030. That translates to a 44% increase in frequency during peak hours by 2030. The LOSSAN Strategic Business Plan projects that Coaster service would increase from existing 22 trains per day to 54 trains per day in 2025, consistent with the above. The LOSSAN Strategic Business Plan also projects that Amtrak Pacific Surfliner service between Los Angeles and San Diego would increase from existing 22 trips per day in 2005/2006 to 26 trains in 2015 and 32 trains in 2025. Mobility 2030 also projects that headways for the trolley Blue Line service that passes through the study area would decrease from 15 minutes to 7.5 minutes during off-peak hours by 2030. Estimated daily train operations in 2030 include 36 Amtrak trips, 78 Coaster trips, and 384 Trolley trips. For the analysis, freight train operations were estimated to increase to four trains per day.

**Table 5-3.55** summarizes the railroad crossing delay analysis for each analysis year under the Proposed Airport Land Use Plan. As shown, delays at all railroad crossings were estimated to be under the VHD threshold for each street segment in all analysis years. Therefore, no mitigation is required at any railroad crossing.

## Transit

Under the Proposed Airport Land Use Plan, no existing or planned transit routes would be modified. However, MTS bus routes along Pacific Highway could be rerouted into the Airport Transit Center off Pacific Highway. Changes to the bus routes are not part of this EIR but could be coordinated between MTS and SDCRAA. No significant impact would occur to transit operations under the Proposed Airport Land Use Plan.

## Parking

The Proposed Airport Land Use Plan would not remove any parking lots designated for public use. Passenger terminals also are not located close to commercial or residential areas.

<sup>46</sup> Linscott, Law & Greenspan Engineers March 3, 2000 San Diego International Airport Master Plan Preferred Concept Alternatives Roadway Analysis.

Table 5-3.55

**2015-2030 Railroad Crossing Operations – Proposed Airport Land Use Plan**

Crossing	Year 2015				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	24,500	8.53	144	No
Sassafras Street	150	16,100	6.13	47	No
Palm Street	75	900	6.13	0	No
Laurel Street	300	31,500	0.80	1	No
Hawthorn Street	150	23,700	0.80	14	No
Grape Street	300	34,900	0.80	26	No

Crossing	Year 2030				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	20,900	9.95	141	No
Sassafras Street	75	13,800	7.18	47	No
Palm Street	75	100	7.18	0	No
Laurel Street	300	36,500	1.85	0	No
Hawthorn Street	300	29,800	1.85	47	No
Grape Street	300	41,000	1.85	102	No

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

VHD = vehicle-hours of delay

ADT = average daily traffic

In addition, ~~the also passenger terminals~~ are not located close to commercial or residential areas. The Land Use Plan would provide additional airport public parking spaces (as previously discussed) that would address the projected parking shortfall under the No Project Alternative. This is a favorable parking impact of the ~~also are not located close to commercial or residential areas.~~ Land Use Plan compared to the No Project Alternative.

**Terminal Curbside**

Currently 6,630 linear feet of curbside is available between all three terminals. In 2015, 7,240 linear feet of curbside is required at Terminals One and Two and the Commuter Terminal to accommodate private and commercial vehicle demand. The No Project Alternative would maintain the existing curbside supply, which would result in a curbside deficit of 610 linear feet. Under the ~~Implementation Plan (With Parking Structure)~~ Proposed Airport Land Use Plan, an additional 1,370 linear feet of curbside would be provided at Terminal Two for a total of 8,000 linear feet, providing an airport-wide surplus of 760 linear feet in 2015. Therefore, the ~~Proposed Airport Implementation Plan (With Parking Structure)~~ Proposed Airport Land Use Plan would result in favorable curbside impact compared to the No Project Alternative.

**On-Airport Traffic Circulation**

**Table 5-3.56** shows the on-airport roadway operations for each analysis year under the Proposed Airport Land Use Plan. Refer to **Figure 5.3-10** for link ID key map. As shown, all terminal roadways would operate at LOS D or better during peak hours under the Proposed Airport Land Use Plan. Therefore, there would be no significant on-airport traffic circulation impact under the Proposed Airport Land Use Plan compared to the No Project Alternative, and no mitigation is required.

Table 5-3.56

2015-2030 On-Airport Roadway Operations – Proposed Airport Land Use Plan

Link ID	Lanes	2015				2030			
		AM		PM		AM		PM	
		Volume (vph)	LOS	Volume (vph)	LOS	Volume (vph)	LOS	Volume (vph)	LOS
1	2	559	B	459	A	718	B	593	B
2	2	450	A	382	A	575	B	490	B
3		Link Not Used				Link Not Used			
4		Link Not Used				Link Not Used			
5	2	109	A	77	A	143	A	102	A
6		Link Not Used				Link Not Used			
7		Link Not Used				Link Not Used			
8	4	572	A	485	A	761	A	649	A
9		Link Not Used				Link Not Used			
10		Link Not Used				Link Not Used			
11	1	132	A	133	A	155	A	157	A
12		Link Not Used				Link Not Used			
13		Link Not Used				Link Not Used			
14		Link Not Used				Link Not Used			
15	8	704	A	618	A	916	A	806	A
16	2	180	A	155	A	252	A	219	A
17		Link Not Used				Link Not Used			
18	2	524	B	463	A	664	B	587	B
19		Link Not Used				Link Not Used			
20		Link Not Used				Link Not Used			
21		Link Not Used				Link Not Used			
22		Link Not Used				Link Not Used			
23	2	79	A	66	A	97	A	83	A
24		Link Not Used				Link Not Used			
25		Link Not Used				Link Not Used			
26	2	66	A	141	A	91	A	196	A
27	1	99	A	82	A	168	A	138	A
28	2	66	A	141	A	91	A	196	A
29		Link Not Used				Link Not Used			
30	2	603	B	529	B	761	B	670	B
31	3	702	A	611	A	928	B	808	B
32	1	19	A	14	A	34	A	24	A
33	3	683	A	597	A	894	B	784	B
34	4	128	A	91	A	177	A	126	A
35	2	561	B	494	B	709	B	626	B
36	1	122	A	103	A	186	A	158	A
37	1	479	C	415	C	612	D	532	C
38	1	82	A	80	A	98	A	94	A
39		Link Not Used				Link Not Used			
40	2	527	B	460	A	589	B	519	B
41	1	68	A	49	A	65	A	46	A
42	2	459	A	412	A	524	B	473	B
43	1	83	A	69	A	119	A	100	A
44	3	542	A	480	A	643	A	573	A
45	1	37	A	31	A	45	A	39	A
46		Link Not Used				Link Not Used			
47		Link Not Used				Link Not Used			
48	4	579	A	511	A	688	A	612	A
49	2	447	A	378	A	533	B	455	A
50	1	41	A	89	A	42	A	90	A
51	3	488	A	467	A	575	A	545	A
52	2	399	A	384	A	448	A	427	A
53	1	89	A	83	A	128	A	118	A
54	1	50	A	40	A	61	A	51	A
55	1	13	A	9	A	16	A	12	A
56	4	81	A	58	A	81	A	58	A
57	2	877	B	799	B	1,059	C	959	B
58	2	121	A	123	A	163	A	161	A

Source: HNTB Corporation, 2007.

NOTE: Please refer to **Figure 5.3-10** for link ID key map.

Analysis for years 2020 and 2025 presented in Appendix D.

LOS = Level of service

### **5.3.5.3 East Terminal Alternative**

Under the Airport Implementation Plan Alternative, two scenarios are examined:

- Airport Implementation Plan Alternative (With Parking Structure)
- Airport Implementation Plan Alternative (Without Parking Structure)

#### **Airport Implementation Plan Alternative (With Parking Structure)**

This scenario assumes all components of the Airport Implementation Plan Alternative are constructed as described in the assumptions below, including a parking structure in front of the new Terminal One East Unit Terminal.

#### **Assumptions**

- Projects assumed in the Airport Implementation Plan Alternative are discussed in Chapter Four, *Proposed Project and Alternatives*, of this EIR. These projects include:
  - Construct new unit terminal east of Terminal One with 7 new aircraft gates and five replacement aircraft gates and expand Terminal Two West with 3 new aircraft gates.
  - Construct new surface and structured parking, second level curbside, and vehicle circulation at Terminal 1 and New Unit Terminal, including six story parking structure with approximately 3,000 spaces in front of the New Unit Terminal. Primary access to Terminal One East would be provided in the vicinity of Winship Lane, with an access ramp similar to the one currently serving Terminal One from westbound North Harbor Drive. The Terminal One East roadway would have a connection to the existing Terminal One roadway.
  - Construct new surface parking and vehicle circulation west of Terminal Two West with approximately 2,000 parking spaces.
  - Relocate and reconfigure SAN Park Pacific Highway with 500 additional parking spaces in the North Area
  - Construct new/replacement general aviation facilities including access in the North Area.
  - Construct a new access road from the Sassafras Street/Pacific Highway intersection providing access to general aviation and parking facilities in the North Area.
- As discussed previously, the Airport Implementation Plan Alternative would accommodate the same volume of air passengers as the No Project Alternative and the Proposed Airport Implementation Plan through 2020. Therefore, total terminal traffic generation under the Airport Implementation Plan Alternative would be the same as under the No Project Alternative and Proposed Airport Implementation Plan through 2020. After 2020 the Airport Implementation Plan Alternative would begin to accommodate more passengers than the No Project Alternative.
- The regional trip distribution of airport traffic under the Airport Implementation Plan Alternative is assumed to be the same as the No Project Alternative, as discussed in Section 5.3.1.6.
- The Airport Implementation Plan Alternative would have a different gate distribution from the No Project Alternative and the Airport Proposed Implementation Plan. The Airport Implementation Plan Alternative would construct a new unit terminal east of Terminal One with five replacement gates and seven new jet gates, expand existing Terminal Two West with three new jet gates, and relocate commuter operations to Terminals One and Two. This would consequently shift the passenger and traffic distribution among terminals. This is discussed further in the next section.

#### **Trip Generation and Terminal Distribution**

Trip generation associated with the Airport Implementation Plan Alternative is summarized in [Table 5-3.57](#). As shown, total airport trip generation would increase from approximately 94,600 ADT in 2010 to ~~134,900~~ 134,850 ADT in 2030. This corresponds to an increase in air passenger forecast of 19.5 million annual passengers (MAP) in 2010 to 28.2 MAP in 2030. This represents an increase in trip generation of



approximately 6,200 ADT or 4.6% from the No Project Alternative in 2030. Trips from most airport modes were estimated to increase relative to origin and destination passenger growth.

However, schedule driven modes such as public buses, and airport operated inter-terminal, employee and public parking shuttles were estimated to grow at a slower rate as many of these shuttles currently operate with excess capacity to maintain a set schedule. This results in a slight decrease in the trip generation rate from 4.86 ~~1.85~~ to 1.82 in 2010 and 2030, respectively. This has also been demonstrated by a historical downward trend witnessed at SDIA.

Under existing conditions, Terminal One accommodates approximately 54 percent of the passenger activity. The Airport Implementation Plan Alternative would shift passenger activity to the new unit Terminal One East accommodating 36 percent of passenger activity in 2010, decreasing to 32 percent in 2030, as shown in [Table 5-3.58](#).

The change in passenger distribution between terminals would result in redistribution of traffic at the terminal access driveways along North Harbor Drive. However, the change in passenger distribution would not affect the traffic pattern outside of the study area which is assumed to be the same as the No Project Alternative.

Table 5-3.57

**2010-2030 Airport Trip Generation - Airport Implementation Plan Alternative  
(With Parking Structure)**

Activity	Year			
	2005	2010	2015	2030
<b>Airport Passenger Activity Level</b>				
<b>Million Annual Passengers (MAP)</b>	<b>17.4</b>	<b>19.5</b>	<b>22.8</b>	<b>28.2</b>
Million Annual O&D Passengers	16.7	18.6	21.8	27.0
Daily O&D Passengers	45,830	51,076	59,769	74,199
<b>Airport Trip Generation (1)</b>				
Daily	85,100	94,600	109,500	134,850
In	42,600	47,350	54,800	67,500
Out	42,500	47,250	54,700	67,400
AM Peak Hour	3,180	3,530	4,095	5,070
In	1,760	1,955	2,265	2,790
Out	1,420	1,575	1,830	2,280
PM Peak Hour	3,245	3,620	4,190	5,195
In	1,500	1,675	1,940	2,415
Out	1,745	1,945	2,250	2,780
<b>Trip Rate</b>				
Daily	1.86	1.85	1.83	1.82

O&D = origin and destination

Notes:

(1) Includes terminals and associated facilities, SAN Park lots, rental car facilities on Rental Car Road, Employee Lot 6 on Harbor Island Drive, and north area. Does not include private vehicle trips to private off-airport parking and rental car facilities, but includes shuttle trips between these facilities and the terminals.

Source: HNTB, 2007.

O&D = origin and destination

Table 5-3.58

**2010-2030 Terminal Passenger Distribution –Airport Implementation Plan Alternative  
(With Parking Structure)**

Scenario/Year	Terminal 1	Terminal 1 East *	Terminal 2 East	Terminal 2 West	Commuter Terminal	Total
Existing						
2005	54%	0%	15%	26%	5%	100%
Airport Implementation Plan Alternative						
2010	20%	36%	25%	18%	0%	100%
2015	20%	36%	25%	20%	0%	100%
2030	24%	32%	23%	20%	0%	100%

Source: HNTB, 2007.

\* New unit terminal under Airport Implementation Project Alternative.

### **Traffic Impacts**

Traffic impacts were identified by comparing traffic conditions under the Airport Implementation Plan Alternative (With Parking Structure) against traffic conditions under the No Project Alternative. Specific impact categories are discussed below.

### **Street Segments**

**Table 5-3.59** summarizes the street segment operations for each analysis year under the Airport Implementation Plan Alternative (With Parking Structure).

**Table 5-3.60** compares the street segment volume to capacity (v/c) ratios under the Airport Implementation Plan (With Parking Structure) against the No Project Alternative to identify traffic impacts based on significance criteria identified in Section 5.3.3, *Traffic Impacts and Significance Criteria*, measured by an increase to LOS E or F or an increase in volume to capacity ratio of greater than 0.02 for streets operating at LOS E and 0.01 for streets operating at LOS F under the No Project. The following roadway segments would have potentially significant traffic impacts:

### **Street Segments with Significant Traffic Impacts**

#### **Year 2010**

- Sassafras Street between Pacific Highway and Kettner Boulevard, which operates at LOS E under both the Airport Implementation Plan Alternative and No Project Alternative and experiences an increase in volume to capacity (v/c) ratio of over 0.02 under the Airport Implementation Plan Alternative compared to the No Project Alternative.
- Sassafras Street between Kettner Boulevard and India Street, which operates at LOS F under both the Airport Implementation Plan Alternative and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Airport Implementation Plan Alternative compared to the No Project Alternative.

#### **Year 2015**

- All locations identified in Year 2010
- Kettner Boulevard between Sassafras Street and Palm Street, which increased from LOS D under the No Project Alternative to LOS E under the Airport Implementation Plan Alternative.

#### **Year 2030**

- All locations identified in Year 2015
- North Harbor Drive between Rental Car Road and Hawthorn Street, which operates at LOS F under both the Airport Implementation Plan Alternative and No Project Alternative and experiences an increase in

Table 5-3.59

2010-2030 Street Segment Operations – Airport Implementation Plan Alternative (With Parking Structure)

Roadway	Segment	Classification	Lanes	LOS E ADT Capacity 1000s	Year 2010					Year 2015					Year 2030					
					SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS	SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS	SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS	
North Harbor Drive	West of NTC	6-Lane Prime	6D	60.0	11.0	17.7	28.7	0.48	B	12.8	20.4	33.2	0.55	B	19.6	28.5	48.1	0.80	C	
	NTC - Spanish Landing	6-Lane Prime	6D	60.0	15.7	15.1	30.8	0.51	B	17.9	16.3	34.2	0.57	B	25.4	23.3	48.7	0.81	C	
	Spanish Landing - T2 Access	6-Lane Prime	6D	60.0	11.4	14.9	26.3	0.44	B	12.8	16.2	29.0	0.48	B	17.6	20.7	38.3	0.64	C	
	T2 Access - Harbor Island	6-Lane Prime	4+3	65.0	22.0	15.0	37.0	0.57	B	25.4	16.3	41.7	0.64	C	32.2	19.8	52.0	0.80	C	
	Harbor Island - T1 Access	6-Lane Prime	3+4	65.0	22.8	18.3	41.1	0.63	C	25.9	18.4	44.3	0.68	C	30.5	21.1	51.6	0.79	C	
	T1 Access - Winship	6-Lane Prime	5+3	70.0	27.8	18.3	46.1	0.66	C	31.7	18.3	50.0	0.71	C	39.0	21.1	60.0	0.86	D	
	Winship - Flyover Merge (1)	6-Lane Prime	4+4	70.0	31.0	18.4	49.4	0.71	C	35.6	18.4	54.0	0.77	C	41.7	20.9	62.5	0.89	D	
	Rental Car Rd - Laurel	6-Lane Prime	6D	60.0	62.8	20.8	83.6	1.39	F	72.9	20.7	93.6	1.56	F	85.5	21.7	107.2	1.79	F	
	Laurel - Hawthorn	6-Lane Prime	6D	60.0	40.6	15.2	55.8	0.93	E	47.0	15.4	62.4	1.04	F	57.5	18.2	75.8	1.26	F	
	Hawthorn - Grape	6-Lane Prime	6D	60.0	25.5	14.0	39.5	0.66	C	29.6	13.4	43.0	0.72	C	36.3	14.8	51.1	0.85	D	
Grape Street	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	13.6	6.7	20.3	0.81	D	15.8	7.1	22.9	0.91	E	19.5	9.7	29.2	1.17	F	
	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	12.6	16.4	29.0	1.16	F	14.6	17.1	31.7	1.27	F	17.9	19.8	37.7	1.51	F	
Hawthorn Street	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	12.2	23.3	35.5	1.42	F	14.2	23.7	37.9	1.52	F	17.5	24.7	42.2	1.69	F	
	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	15.3	5.1	20.4	0.81	D	17.7	5.4	23.1	0.92	E	21.8	7.9	29.7	1.19	F	
	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	12.5	6.0	18.5	0.74	C	14.5	6.2	20.7	0.83	D	17.8	8.7	26.6	1.06	F	
Kettner Blvd	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	12.5	17.2	29.7	1.19	F	14.5	19.2	33.7	1.35	F	17.8	24.5	42.3	1.69	F	
	north of Washington	3-Lane Collector 1-Way	3U	25.0	0.2	7.2	7.4	0.29	A	0.2	7.2	7.4	0.30	A	0.4	4.2	4.6	0.18	A	
	Washington - Sassafras	3-Lane Major 1-Way	3U	25.0	9.0	13.0	22.0	0.88	D	10.5	13.1	23.6	0.94	E	11.0	17.4	28.4	1.14	F	
	Sassafras - Palm	3-Lane Major 1-Way	3U	25.0	9.2	11.0	20.2	0.81	D	10.6	11.9	22.5	0.90	E	11.2	14.2	25.4	1.02	F	
	Palm - Laurel	3-Lane Major 1-Way	3U	25.0	7.6	8.6	16.2	0.65	C	8.8	9.5	18.3	0.73	C	9.0	12.6	21.5	0.86	D	
	Laurel - Hawthorn	3-Lane Major 1-Way	3U	25.0	0.0	7.2	7.2	0.29	A	0.1	7.9	8.0	0.32	A	0.2	11.4	11.7	0.47	B	
	Hawthorn - Grape	3-Lane Major 1-Way	3U	25.0	0.0	14.8	14.8	0.59	C	0.1	16.8	16.9	0.68	C	0.2	21.5	21.8	0.87	D	
	Laurel Street	Harbor - Pacific	4-Lane Major	4U	40.0	22.2	6.3	28.5	0.71	C	25.8	6.7	32.5	0.81	D	28.0	4.3	32.3	0.81	D
	Pacific - Kettner	4-Lane Collector	4D	30.0	17.9	7.2	25.1	0.84	E	21.1	7.8	28.9	0.96	E	22.6	12.1	34.7	1.16	F	
	Kettner - I-5	4-Lane Collector	4D	30.0	10.4	8.5	18.9	0.63	C	12.5	9.6	22.1	0.74	D	14.3	12.9	27.1	0.90	E	
Pacific Highway	Washington - Sassafras	6-Lane Prime	6D	50.0	4.1	22.8	26.9	0.54	B	4.8	27.3	32.1	0.64	C	6.1	19.1	25.1	0.50	B	
	Sassafras - Palm	6-Lane Prime	6D	50.0	6.9	17.5	24.4	0.49	B	8.0	21.0	29.0	0.58	C	9.9	16.3	26.1	0.51	B	
	Palm - Laurel	6-Lane Prime	6D	50.0	6.9	18.1	25.0	0.50	B	8.0	21.7	29.7	0.59	C	9.9	15.4	25.3	0.52	B	
	Laurel - Hawthorn	6-Lane Major	6D	50.0	2.2	19.1	21.3	0.43	B	2.7	22.6	25.3	0.51	B	3.8	23.3	27.1	0.54	B	
	Hawthorn - Grape	6-Lane Major	6D	50.0	4.9	19.6	24.5	0.49	B	5.7	23.2	28.9	0.58	C	7.2	24.1	31.3	0.63	C	
	Palm Street	Pacific - Kettner	2-Lane Collector	2U	8.0	0.0	0.9	0.9	0.11	A	0.0	0.9	0.9	0.11	A	0.0	0.1	0.1	0.01	A
Sassafras Street	Pacific - Kettner	3-Lane Collector	3U	12.0	3.4	8.3	11.7	0.98	E	5.2	9.7	14.9	1.25	F	5.8	6.1	11.9	0.99	E	
	Kettner-India	2-Lane Collector	2U	8.0	1.7	8.5	10.2	1.27	F	2.6	9.7	12.3	1.54	F	2.9	8.0	10.9	1.36	F	
Washington Street	Pacific - Kettner	4-Lane Collector	4U	30.0	3.9	16.5	20.4	0.68	D	4.7	18.6	23.3	0.78	D	6.5	12.7	19.2	0.64	C	
	Kettner - San Diego	5-Lane Collector	5U	30.0	3.6	23.3	26.9	0.90	E	4.3	25.5	29.8	0.99	E	5.6	22.5	28.1	0.94	E	
India Street	Laurel - Palm	2-Lane Collector	2U	8.0	7.4	8.7	16.1	2.01	F	8.7	10.2	18.9	2.36	F	8.8	12.6	21.4	2.68	F	
	Palm - Sassafras	3-Lane Collector	3U	12.0	7.4	13.2	20.6	1.72	F	8.7	15.4	24.0	2.00	F	8.8	16.5	25.3	2.11	F	
	Sassafras - Washington	3-Lane Collector	3U	12.0	5.1	13.5	18.5	1.54	F	6.5	14.6	21.1	1.76	F	7.6	21.5	29.1	2.42	F	
Rosecrans	Barnett - Sport Arena	6-Lane Major	6D	50.0	5.1	40.1	45.2	0.90	E	5.9	42.4	48.3	0.97	E	10.7	33.7	44.5	0.89	D	
	Nimitz Quimby - Barnett	4-lane Major 5-lane Major	4U-5U	40.0 45.0	5.1	35.9	41.1	1.03 0.91	F E	5.9	35.4	41.3	1.03 0.92	F E	10.7	29.0	39.8	0.99 0.88	E-D	
Nimitz	Nimitz - Quimby	4-lane Major	4U	40.0	5.1	35.9	41.1	1.03	F	5.9	35.4	41.3	1.03	F	10.7	29.0	39.8	0.99	E	
	Harbor - Rosecrans	4-lane Major	4U	40.0	9.4	8.7	18.1	0.45	B	10.9	8.5	19.4	0.48	B	17.3	11.7	28.9	0.72	C	

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

Notes:

(1) Does not include traffic on flyover.

MAP = Million Annual Passengers

ADT = Average Daily Traffic

LOS = Level of Service

V/C = volume-to-capacity ratio

Table 5-3.60

2010-2030 Street Segment Impacts –Airport Implementation Plan Alternative (With Parking Structure)

Roadway	Segment	Year 2010					Year 2015					Year 2030				
		No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C	No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C	No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C
North Harbor Drive	West of NTC	0.48	B	0.48	B	0.00	0.56	B	0.55	B	0.00	0.79	C	0.80	C	0.01
	NTC - Spanish Landing	0.51	B	0.51	B	0.00	0.57	B	0.57	B	0.00	0.79	C	0.81	C	0.03
	Spanish Landing - T2 Access	0.43	B	0.44	B	0.01	0.47	B	0.48	B	0.02	0.60	C	0.64	C	0.04
	T2 Access - Harbor Island	0.56	B	0.57	B	0.01	0.63	C	0.64	C	0.01	0.76	C	0.80	C	0.04
	Harbor Island - T1 Access	0.58	C	0.63	C	0.05	0.62	C	0.68	C	0.06	0.69	C	0.79	C	0.10
	T1 Access - Winship	0.76	C	0.66	C	-0.10	0.83	C	0.71	C	-0.11	0.94	E	0.86	D	-0.08
	Winship - Rental Car Rd	0.79	C	0.71	C	-0.09	0.87	D	0.77	C	-0.10	0.97	E	0.89	D	-0.08
	Rental Car Rd - Laurel	1.41	F	1.39	F	-0.01	1.57	F	1.56	F	-0.01	1.73	F	1.79	F	0.06
	Laurel - Hawthorn	0.94	E	0.93	E	-0.01	1.05	F	1.04	F	-0.01	1.22	F	1.26	F	0.04
	Hawthorn - Grape	0.66	C	0.66	C	0.00	0.72	C	0.72	C	0.00	0.82	C	0.85	D	0.03
Grape Street	Harbor - Pacific	0.82	D	0.81	D	-0.01	0.92	E	0.91	E	-0.01	1.13	F	1.17	F	0.03
	Pacific - Kettner	1.16	F	1.16	F	0.00	1.26	F	1.27	F	0.005	1.46	F	1.51	F	0.04
	Kettner - I-5	1.43	F	1.42	F	-0.01	1.52	F	1.52	F	-0.01	1.66	F	1.69	F	0.03
Hawthorn Street	Harbor - Pacific	0.83	D	0.81	D	-0.01	0.94	E	0.92	E	-0.01	1.16	F	1.19	F	0.03
	Pacific - Kettner	0.75	C	0.74	C	-0.01	0.83	D	0.83	D	-0.01	1.03	F	1.06	F	0.03
	Kettner - I-5	1.19	F	1.19	F	-0.01	1.35	F	1.35	F	-0.01	1.66	F	1.69	F	0.03
Kettner Blvd	north of Washington	0.29	A	0.29	A	0.00	0.30	A	0.30	A	0.00	0.18	A	0.18	A	0.00
	Washington - Sassafras	0.88	D	0.88	D	0.00	0.94	E	0.94	E	0.00	1.11	F	1.14	F	0.03
	Sassafras - Palm	0.80	D	0.81	D	0.00	0.897	D	0.901	E	0.004	0.99	E	1.02	F	0.03
	Palm - Laurel	0.65	C	0.65	C	0.00	0.74	C	0.73	C	0.00	0.85	D	0.86	D	0.01
Laurel Street	Laurel - Hawthorn	0.29	A	0.29	A	0.00	0.32	A	0.32	A	0.00	0.47	B	0.47	B	0.00
	Hawthorn - Grape	0.59	C	0.59	C	0.00	0.68	C	0.68	C	0.00	0.87	D	0.87	D	0.00
	Harbor - Pacific	0.72	C	0.71	C	-0.01	0.82	D	0.81	D	-0.01	0.78	D	0.81	D	0.03
	Pacific - Kettner	0.85	E	0.84	E	-0.01	0.97	E	0.96	E	-0.01	1.13	F	1.16	F	0.023
Pacific Highway	Kettner - I-5	0.64	C	0.63	C	-0.01	0.75	D	0.74	D	-0.01	0.90	E	0.90	E	0.01
	Washington - Sassafras	0.54	B	0.54	B	0.00	0.64	C	0.64	C	0.00	0.50	B	0.50	B	0.01
	Sassafras - Palm	0.48	B	0.49	B	0.01	0.57	C	0.58	C	0.01	0.51	B	0.52	B	0.01
	Palm - Laurel	0.49	B	0.50	B	0.01	0.59	C	0.59	C	0.01	0.49	B	0.51	B	0.01
	Laurel - Hawthorn	0.42	B	0.43	B	0.00	0.50	B	0.51	B	0.00	0.54	B	0.54	B	0.01
	Hawthorn - Grape	0.49	B	0.49	B	0.00	0.58	C	0.58	C	0.00	0.62	C	0.63	C	0.01
Palm Street	Pacific - Kettner	0.11	A	0.11	A	0.00	0.11	A	0.11	A	0.00	0.01	A	0.01	A	0.00
	Sassafras Street	0.95	E	0.98	E	0.024	1.14	F	1.25	F	0.102	0.94	E	0.99	E	0.05
	Kettner-India	1.25	F	1.27	F	0.018	1.46	F	1.54	F	0.08	1.32	F	1.36	F	0.04
Washington Street	Pacific - Kettner	0.68	D	0.68	D	0.00	0.78	D	0.78	D	0.00	0.63	C	0.64	C	0.01
	Kettner - San Diego	0.90	E	0.90	E	0.00	0.99	E	0.99	E	0.00	0.93	E	0.94	E	0.01
India Street	Laurel - Palm	2.03	F	2.01	F	-0.02	2.38	F	2.36	F	-0.01	2.64	F	2.68	F	0.04
	Palm - Sassafras	1.73	F	1.72	F	-0.01	2.01	F	2.00	F	-0.01	2.09	F	2.11	F	0.03
	Sassafras - Washington	1.57	F	1.54	F	-0.02	1.79	F	1.76	F	-0.03	2.41	F	2.42	F	0.011
Rosecrans	Barnett - Sport Arena	0.91	E	0.90	E	0.00	0.97	E	0.97	E	0.00	0.88	D	0.89	D	0.01
	Nimitz - Quimby - Barnett	1.03 0.91	F E	1.03 0.91	F E	0.00	1.03 0.92	F E	1.03 0.92	F E	0.00	0.98 0.87	E D	0.99 0.88	E D	0.01
Nimitz	Nimitz - Quimby	1.03	F	1.03	F	0.00	1.03	F	1.03	F	0.00	0.98	E	0.99	E	0.01
	Harbor - Rosecrans	0.46	B	0.45	B	0.00	0.49	B	0.48	B	0.00	0.71	C	0.72	C	0.02

Source: HNTB, 2007.  
Analysis for years 2020 and 2025 presented in Appendix D.

V/C = Volume to capacity ratio  
LOS = Level of service

Legend:  

 LOS E  
 LOS F  
 Significant Impact

v/c ratio of over 0.01 under the Airport Implementation Plan Alternative compared to the No Project Alternative.

- Grape Street between North Harbor Drive and I-5, which operates at LOS F under both the Airport Implementation Plan Alternative and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Airport Implementation Plan Alternative compared to the No Project Alternative.
- Hawthorn Street between North Harbor Drive and I-5, which operates at LOS F under both the Airport Implementation Plan Alternative and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Airport Implementation Plan Alternative compared to the No Project Alternative.
- Kettner Boulevard between Washington Street and Sassafras Street, which operates at LOS F under both the Airport Implementation Plan Alternative and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Airport Implementation Plan Alternative compared to the No Project Alternative.
- Laurel Street between Pacific Highway and Kettner Boulevard, which operates at LOS F under both the Airport Implementation Plan Alternative and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Airport Implementation Plan Alternative compared to the No Project Alternative.
- India Street between Laurel Street and Washington Street, which operates at LOS F under both the Airport Implementation Plan Alternative and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Airport Implementation Plan Alternative compared to the No Project Alternative.

### Intersections

**Tables 5-3.61, 5-3.62, and 5-3.63** show the intersection turning volumes under the Airport Implementation Plan Alternative (With Parking Structure) for analysis year 2010, 2015, and 2030. **Table 5-3.64** shows the resulting intersection operations. Future intersection lane configurations are assumed to remain the same under all alternatives and are shown on ~~Figure 5-3-6~~ **Figure 5.3-5**.

**Table 5-3.65** compares the intersection operations under the Airport Implementation Plan Alternative (With Parking Structure) against the No Project Alternative to identify intersection impacts based on significance criteria identified in Section 5.3.3, *Traffic Impacts and Significance Criteria*, measured by an increase to LOS E or F or an increase in vehicle delay of greater than 2 seconds for streets operating at LOS E and greater than 1 second for streets operating at LOS F under the No Project Alternative. The following intersections would have potentially significant traffic impacts due to the Airport Implementation Plan Alternative (With Parking Structure):

### **Intersections with Significant Traffic Impacts**

#### **Year 2030**

- Hawthorn Street and North Harbor Drive (AM & PM), which operates at LOS F in the AM and LOS E in the PM peak hours under both the Airport Implementation Plan Alternative and No Project Alternative and would experience an increase in delay greater than 1 second under the Airport Implementation Plan Alternative compared to the No Project Alternative.
- Grape Street and Pacific Highway (PM), which operates at LOS E in the PM peak hour under both the Airport Implementation Plan Alternative and No Project Alternative and would experience an increase in delay greater than 2 seconds under the Airport Implementation Plan Alternative compared to the No Project Alternative.
- Grape Street and Kettner Boulevard (PM), which operates at LOS E in the PM peak hour under both the Airport Implementation Plan Alternative and No Project Alternative and would experience an increase in delay greater than 2 seconds under the Airport Implementation Plan Alternative compared to the No Project Alternative.

Table 5-3.61

2010 Intersection Turning Volumes – Total Peak Hour Traffic – Airport Implementation Plan Alternative (With Parking Structure)

Intersection Number			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	547	0	23	11	431	0	7	589	292	1,900
		PM	0	0	0	454	0	56	36	562	0	14	584	765	2,471
			0	0	0	118	0	29	153	599	0	0	921	418	2,238
2	North Harbor Drive / McCain St	AM	0	0	0	421	0	153	32	919	0	0	1,050	151	2,726
		PM	0	0	0	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0	0	0	0
3	North Harbor Drive / Spanish Landing	AM	5	0	18	23	0	101	68	708	4	15	1,522	0	2,464
		PM	7	0	25	23	0	85	56	1,603	18	5	1,159	0	2,981
			41	2	148	19	4	35	32	634	82	241	1,842	0	3,080
4	North Harbor Drive / Harbor Island Drive	AM	153	2	330	21	4	42	27	1,501	122	466	1,284	0	3,952
		PM	0	0	0	310	0	85	134	667	0	0	2,178	0	3,374
			0	0	0	314	0	81	119	1,733	0	0	1,817	0	4,064
5	North Harbor Drive / Winship Lane	AM	53	0	43	35	0	18	23	1,503	67	113	2,571	65	4,491
		PM	74	0	83	56	0	22	20	2,581	74	86	2,142	44	5,182
			13	107	0	0	229	99	85	6	27	0	0	0	566
6	North Harbor Drive / Rental Car Road	AM	23	408	0	0	524	70	77	2	25	0	0	0	1,129
		PM	0	0	0	0	0	38	82	86	0	0	62	1	269
			0	0	0	0	0	55	68	95	0	0	126	1	345
7	Sheraton / Harbor Island Drive	AM	69	494	71	47	545	10	5	67	42	202	133	53	1,738
		PM	63	856	353	125	949	8	13	182	91	165	110	44	2,959
			0	0	0	24	0	4	386	1,093	0	0	1,870	40	3,417
8	Employee Lot / Harbor Island Drive	AM	0	0	0	72	0	11	1,109	1,910	0	0	1,605	105	4,812
		PM	0	286	0	0	1,034	0	0	0	0	81	0	1,893	3,294
			0	583	0	0	2,081	0	0	0	0	133	0	1,053	3,850
9	Sassafras Street / Pacific Highway	AM	0	225	111	821	482	0	0	0	0	0	0	0	1,639
		PM	0	642	268	1,144	1,094	0	0	0	0	0	0	0	3,148
			35	322	86	80	267	349	89	518	2	47	692	61	2,548
10	Laurel Street / North Harbor Drive	AM	111	605	146	139	481	369	471	689	58	51	793	78	3,991
		PM	108	205	0	0	161	52	0	0	0	258	1,854	85	2,723
			122	593	0	0	558	49	0	0	0	147	1,028	83	2,580
11	Hawthorn Street / North Harbor Drive	AM	0	567	161	144	800	0	62	796	32	0	0	0	2,562
		PM	0	663	448	237	543	0	51	1,593	28	0	0	0	3,563
			0	0	0	233	321	544	0	611	45	39	240	0	2,033
12	Grape Street / North Harbor Drive	AM	0	0	0	282	601	577	0	870	79	54	290	0	2,753
		PM	0	0	0	0	154	82	0	0	0	156	2,497	0	2,889
			0	0	0	0	401	72	0	0	0	192	1,378	0	2,043
13	Laurel Street / Pacific Highway	AM	0	0	0	91	462	0	0	1,335	99	0	0	0	1,987
		PM	0	0	0	221	487	0	0	3,108	93	0	0	0	3,909
			65	86	73	0	0	0	42	430	1,055	0	0	0	1,751
14	Hawthorn Street / Pacific Highway	AM	98	187	183	0	0	0	26	532	2,067	0	0	0	3,093
		PM	45	43	0	0	0	0	0	0	0	0	2,455	78	2,621
			36	57	0	0	0	0	0	0	0	0	1,484	61	1,638
15	Grape Street / Pacific Highway	AM	75	108	19	0	0	0	460	343	31	0	219	195	1,450
		PM	84	290	86	0	0	0	655	499	40	0	273	267	2,194
			0	0	0	113	1,250	331	0	50	42	121	84	0	1,991
16	Laurel Street / Kettner Boulevard	AM	0	0	0	186	1,735	257	0	213	99	85	87	0	2,662
		PM	193	790	11	0	0	0	109	24	50	0	33	21	1,231
			179	1,327	31	0	0	0	302	60	110	0	14	17	2,040
17	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	185	32	53	0	64	37	148	154	0	673
		PM	0	0	0	488	49	10	0	223	51	199	80	0	1,100
			65	11	117	26	6	18	22	0	230	312	143	47	997
18	Washington Street / Pacific Highway NB-Ramps (1)	AM	37	25	199	57	55	7	55	14	592	327	207	59	1,634
		PM	0	258	103	321	375	0	354	165	130	0	0	0	1,706
			0	652	157	343	379	0	555	331	155	0	0	0	2,572
19	Washington Street / San Diego Avenue	AM	94	579	0	0	539	536	0	0	0	174	204	7	2,133
		PM	187	1,152	0	0	572	489	0	0	0	185	276	17	2,878
			200	148	220	99	145	61	60	173	143	301	147	86	1,783
20	Rosecrans Street / Pacific Highway	AM	351	287	636	120	139	67	111	459	170	246	304	129	3,019
		PM	16	110	86	39	124	40	148	639	28	110	637	40	2,017
			18	192	109	30	102	30	332	812	33	172	653	53	2,536

Source: HNTB, 2007.

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2	sbl	sbr2	sbr	eb1	ebt	ebr	wbt	wbr2	wbr
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr	eb12	eb1	ebt	wbt	wbr2	wbr

Table 5-3.62

2015 Intersection Turning Volumes – Total Peak Hour Traffic – Airport Implementation Plan Alternative (With Parking Structure)

Intersection Number		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	603	0	22	13	519	0	8	681	341	2,187
		PM	0	0	0	477	0	55	44	677	0	17	674	895	2,839
2	North Harbor Drive / McCain St	AM	0	0	0	136	0	34	185	659	0	0	889	496	2,399
		PM	0	0	0	502	0	186	38	967	0	0	1,078	172	2,943
3	North Harbor Drive / Spanish Landing	AM	5	0	18	23	0	120	81	788	5	16	1,616	0	2,672
		PM	7	0	25	23	0	102	67	1,795	20	6	1,203	0	3,248
4	North Harbor Drive / Harbor Island Drive	AM	42	3	152	19	5	41	38	704	88	243	2,003	0	3,338
		PM	159	2	340	21	5	49	31	1,680	132	470	1,379	0	4,268
5	North Harbor Drive / Winship Lane	AM	0	0	0	359	0	98	148	727	0	0	2,359	0	3,691
		PM	0	0	0	363	0	94	131	1,910	0	0	1,929	0	4,427
6	North Harbor Drive / Rental Car Road	AM	63	0	50	39	0	19	25	1,714	78	133	2,815	74	5,010
		PM	87	0	97	62	0	23	21	2,913	87	100	2,308	50	5,748
7	Sheraton / Harbor Island Drive	AM	13	113	0	0	237	99	85	6	27	0	0	0	580
		PM	23	423	0	0	537	70	77	2	25	0	0	0	1,157
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	95	0	0	69	1	285
		PM	0	0	0	0	0	55	68	104	0	0	136	1	364
9	Sassafras Street / Pacific Highway	AM	78	592	86	56	651	11	5	76	48	248	152	65	2,068
		PM	72	1,027	424	150	1,137	9	15	203	102	202	127	54	3,522
10	Laurel Street / North Harbor Drive	AM	0	0	0	26	0	4	450	1,195	0	0	1,966	39	3,680
		PM	0	0	0	76	0	11	1,175	2,015	0	0	1,682	102	5,061
11	Hawthorn Street / North Harbor Drive	AM	0	315	0	0	1,127	0	0	0	87	0	2,061	3,590	
		PM	0	592	0	0	2,149	0	0	0	145	0	1,161	4,047	
12	Grape Street / North Harbor Drive	AM	0	257	110	875	508	0	0	0	0	0	0	0	1,750
		PM	0	652	261	1,190	1,098	0	0	0	0	0	0	0	3,201
13	Laurel Street / Pacific Highway	AM	41	381	107	97	321	414	102	585	2	52	779	66	2,947
		PM	131	718	175	166	574	438	508	768	62	58	886	85	4,569
14	Hawthorn Street / Pacific Highway	AM	124	245	0	0	190	83	0	0	0	267	1,975	91	2,955
		PM	141	705	0	0	658	61	0	0	0	152	1,111	88	2,916
15	Grape Street / Pacific Highway	AM	0	642	182	170	946	0	70	892	37	0	0	0	2,939
		PM	0	751	504	280	639	0	57	1,749	32	0	0	0	4,012
16	Laurel Street / Kettner Boulevard	AM	0	0	0	261	355	615	0	695	49	46	279	0	2,300
		PM	0	0	0	314	664	649	0	977	86	66	337	0	3,093
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	171	90	0	0	173	2,792	0	3,226	
		PM	0	0	0	0	446	79	0	0	213	1,548	0	2,286	
18	Grape Street / Kettner Boulevard	AM	0	0	0	105	524	0	0	1,433	104	0	0	0	2,166
		PM	0	0	0	255	554	0	0	3,273	98	0	0	0	4,180
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	77	102	87	0	0	0	43	437	1,131	0	0	0	1,877
		PM	117	223	218	0	0	0	26	541	2,164	0	0	0	3,289
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	48	46	0	0	0	0	0	0	0	2,521	77	2,692	
		PM	39	61	0	0	0	0	0	0	0	1,540	60	1,700	
21	Laurel Street / India Street	AM	97	135	23	0	0	0	526	386	50	0	258	231	1,706
		PM	112	362	106	0	0	0	743	560	58	0	323	317	2,581
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	115	1,318	347	0	60	52	139	101	0	2,132
		PM	0	0	0	189	1,804	270	0	249	117	97	102	0	2,828
23	Sassafras Street / India Street	AM	223	919	12	0	0	0	125	28	58	0	34	22	1,421
		PM	208	1,544	36	0	0	0	344	69	126	0	15	18	2,360
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	200	35	57	0	76	42	164	174	0	748
		PM	0	0	0	527	53	12	0	240	56	219	99	0	1,206
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	94	16	155	29	7	20	24	0	258	359	162	53	1,177
		PM	52	36	270	63	60	8	60	15	649	378	234	66	1,891
26	Washington Street / Hancock Street	AM	0	297	120	351	417	0	358	167	134	0	0	0	1,844
		PM	0	741	179	376	423	0	562	335	162	0	0	0	2,778
27	Washington Street / San Diego Avenue	AM	107	637	0	0	564	553	0	0	0	194	225	8	2,288
		PM	208	1,264	0	0	596	504	0	0	0	207	304	19	3,102
28	Rosecrans Street / Pacific Highway	AM	237	177	261	116	170	72	63	183	151	314	153	89	1,986
		PM	418	341	756	141	163	78	119	485	180	257	315	134	3,387
29	Rosecrans Street / Nimitz Boulevard	AM	16	121	99	14	112	15	155	671	30	125	627	40	2,025
		PM	18	204	123	11	91	11	348	852	34	183	643	52	2,570

Source: HNTB, 2007

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2										
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr	eb1	ebt	ebr	wbt	wbr2	wbr	

Table 5-3.63

2030 Intersection Turning Volumes – Total Peak Hour Traffic – Airport Implementation Plan Alternative (With Parking Structure)

Intersection Number		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	836	0	31	16	619	0	11	945	503	2,961
		PM	0	0	0	888	0	75	52	807	0	23	934	1,243	3,822
2	North Harbor Drive / McCain St	AM	0	0	0	155	0	41	217	887	0	0	1,086	572	2,958
		PM	0	0	0	574	0	218	45	1,268	0	0	1,300	199	3,604
3	North Harbor Drive / Spanish Landing	AM	5	0	18	24	0	169	122	1,004	7	21	1,897	0	3,267
		PM	7	0	25	24	0	145	102	2,192	28	7	1,419	0	3,949
4	North Harbor Drive / Harbor Island Drive	AM	46	4	157	19	7	75	73	869	105	268	2,318	0	3,941
		PM	167	3	350	21	7	85	61	2,023	158	529	1,611	0	5,015
5	North Harbor Drive / Winship Lane	AM	0	0	0	389	0	133	187	859	0	0	2,761	0	4,329
		PM	0	0	0	394	0	129	163	2,231	0	0	2,268	0	5,185
6	North Harbor Drive / Rental Car Road	AM	81	0	60	44	0	22	31	2,028	105	157	3,259	82	5,869
		PM	114	0	115	68	0	28	25	3,419	114	119	2,682	56	6,740
7	Sheraton / Harbor Island Drive	AM	13	123	0	0	280	99	85	6	27	0	0	0	633
		PM	23	443	0	0	624	70	77	2	25	0	0	0	1,264
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	96	0	0	71	1	288
		PM	0	0	0	0	0	55	68	105	0	0	138	1	367
9	Sassafras Street / Pacific Highway	AM	95	496	66	39	512	13	7	92	57	135	184	35	1,731
		PM	87	843	328	105	842	11	17	239	120	110	155	29	2,886
10	Laurel Street / North Harbor Drive	AM	0	0	0	17	0	3	496	1,389	0	0	2,405	48	4,358
		PM	0	0	0	49	0	7	1,252	2,249	0	0	2,067	126	5,750
11	Hawthorn Street / North Harbor Drive	AM	0	374	0	0	1,383	0	0	0	0	133	0	2,844	4,734
		PM	0	676	0	0	2,616	0	0	0	0	217	0	1,568	5,077
12	Grape Street / North Harbor Drive	AM	0	307	110	1,033	598	0	0	0	0	0	0	0	2,048
		PM	0	665	255	1,379	1,252	0	0	0	0	0	0	0	3,551
13	Laurel Street / Pacific Highway	AM	42	409	121	72	256	345	115	527	1	82	999	102	3,071
		PM	135	759	188	123	454	359	382	658	40	92	1,205	130	4,525
14	Hawthorn Street / Pacific Highway	AM	152	272	0	0	206	74	0	0	0	376	2,671	134	3,885
		PM	166	746	0	0	695	71	0	0	0	214	1,481	127	3,500
15	Grape Street / Pacific Highway	AM	0	693	184	177	991	0	98	1,143	47	0	0	0	3,333
		PM	0	799	512	290	677	0	83	2,279	42	0	0	0	4,682
16	Laurel Street / Kettner Boulevard	AM	0	0	0	351	469	701	0	924	75	64	374	0	2,958
		PM	0	0	0	418	877	771	0	1,332	133	94	455	0	4,080
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	252	131	0	0	0	216	3,474	0	4,073
		PM	0	0	0	0	653	115	0	0	0	266	1,927	0	2,961
18	Grape Street / Kettner Boulevard	AM	0	0	0	137	673	0	0	1,693	120	0	0	0	2,623
		PM	0	0	0	333	710	0	0	3,818	113	0	0	0	4,974
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	206	272	233	0	0	44	457	1,268	0	0	0	0	2,480
		PM	311	593	580	0	0	27	564	2,350	0	0	0	0	4,425
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	62	59	0	0	0	0	0	0	0	3,107	95	3,323	
		PM	50	78	0	0	0	0	0	0	0	1,902	74	2,104	
21	Laurel Street / India Street	AM	101	96	16	0	0	0	617	517	84	1	341	310	2,083
		PM	125	255	73	0	0	0	897	750	89	0	431	425	3,045
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	242	2,399	699	0	53	49	114	107	0	3,663
		PM	0	0	0	399	3,503	539	0	200	117	80	106	0	4,944
23	Sassafras Street / India Street	AM	249	974	13	0	0	0	117	23	48	0	43	27	1,494
		PM	233	1,642	39	0	0	0	320	57	104	0	18	22	2,435
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	511	90	147	0	115	57	174	197	0	1,291
		PM	0	0	0	1,347	134	28	0	286	72	221	155	0	2,243
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	19	0	71	24	6	17	23	0	277	318	111	36	902
		PM	33	0	85	52	51	6	56	14	635	348	160	45	1,485
26	Washington Street / Hancock Street	AM	0	260	106	311	407	0	208	97	95	0	0	0	1,484
		PM	0	567	144	333	420	0	326	194	122	0	0	0	2,106
27	Washington Street / San Diego Avenue	AM	113	585	0	0	682	665	0	0	0	277	313	12	2,647
		PM	202	1,142	0	0	721	607	0	0	0	300	423	27	3,422
28	Rosecrans Street / Pacific Highway	AM	207	155	230	144	209	88	61	176	143	313	154	88	1,968
		PM	364	297	661	174	201	98	113	464	171	257	315	133	3,248
29	Rosecrans Street / Nimitz Boulevard	AM	20	157	178	39	168	41	107	461	20	218	514	32	1,955
		PM	23	259	211	31	139	31	239	586	24	244	528	43	2,358

Source: HNTB, 2007

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2				ebl	ebt	ebr				
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr	ebl2	ebl	ebt	wbt	wbr2	wbr	



Table 5-3.64

**2010-2030 Peak Hour Intersection Operations – Airport Implementation Plan Alternative  
(With Parking Structure)**

Intersection Number	Intersection	Peak Hour	Year 2010		Year 2015		Year 2030	
			Delay (Sec.)	LOS	Delay (Sec.)	LOS	Delay (Sec.)	LOS
1	North Harbor Drive/ Nimitz Boulevard	AM	20.2	C	20.3	C	21.8	C
		PM	20.6	C	20.3	C	21.7	C
2	North Harbor Drive/ McCain Road	AM	6.8	A	7.3	A	7.8	A
		PM	9.1	A	10.0	A	10.4	B
3	North Harbor Drive/ Spanish Landing	AM	9.3	A	10.0	A	12.3	B
		PM	7.9	A	8.5	A	10.4	B
4	North Harbor Drive/ Harbor Island Drive	AM	18.0	B	17.7	B	18.7	B
		PM	30.4	C	30.8	C	34.2	C
5	North Harbor Drive/ Winship Lane	AM	17.3	B	18.5	B	19.8	B
		PM	14.5	B	15.5	B	16.5	B
6	North Harbor Drive/ Rental Car Road	AM	7.3	A	8.2	A	10.7	B
		PM	8.3	A	9.2	A	11.4	B
7	Sheraton Harbor Island Drive	AM	12.4	B	12.3	B	11.6	B
		PM	7.6	A	7.4	A	6.9	A
8	Employee Lot Harbor Island Drive	AM	9.8	A	9.9	A	9.9	A
		PM	10.1	B	10.1	B	10.2	B
9	Sassafras Street/ Pacific Highway	AM	15.3	B	15.5	B	14.1	B
		PM	15.0	B	17.4	B	14.8	B
10	Laurel Street/ North Harbor Drive	AM	9.1	A	10.0	A	10.8	B
		PM	15.4	B	16.2	B	20.3	C
11	Hawthorn Street/ North Harbor Drive	AM	30.8	C	47.8	D	180.3	F
		PM	23.0	C	24.9	C	61.1	E
12	Grape Street/ North Harbor Drive	AM	8.2	A	8.4	A	8.5	A
		PM	10.9	B	11.0	B	11.0	B
13	Laurel Street/ Pacific Highway	AM	32.1	C	33.7	C	34.0	C
		PM	48.9	D	62.3	E	61.7	E
14	Hawthorn Street/ Pacific Highway	AM	12.5	B	14.1	B	19.3	B
		PM	20.9	C	21.9	C	23.4	C
15	Grape Street/ Pacific Highway	AM	18.5	B	19.1	B	20.3	C
		PM	26.1	C	32.8	C	58.6	E
16	Laurel Street/ Kettner Boulevard	AM	18.8	B	19.5	B	21.9	C
		PM	21.3	C	22.8	C	32.0	C
17	Hawthorn Street/ Kettner Boulevard	AM	5.5	A	6.2	A	13.4	B
		PM	10.9	B	11.2	B	14.2	B
18	Grape Street/ Kettner Boulevard	AM	12.4	B	13.1	B	14.7	B
		PM	16.6	B	22.7	C	80.0	E
19	Grape Street/ I-5 Southbound On-Ramp	AM	11.1	B	10.8	B	15.3	B
		PM	28.0	C	34.6	C	89.6	F
20	Hawthorn Street/ I-5 Northbound Off-Ramp	AM	11.0	B	10.6	B	15.9	B
		PM	11.8	B	12.0	B	11.1	B
21	Laurel Street/ India Street	AM	18.4	B	19.3	B	22.9	C
		PM	21.3	C	22.9	C	22.2	C
22	Sassafras Street/ Kettner Boulevard	AM	8.6	A	9.5	A	9.8	A
		PM	11.6	B	13.1	B	66.8	E
23	Sassafras Street/ India Street	AM	8.2	A	8.3	A	8.1	A
		PM	13.8	B	17.8	B	17.7	B
24	Washington Street/ Pacific Highway SB-Ramps	AM	12.6	B	12.7	B	12.5	B
		PM	14.9	B	15.1	B	17.6	B
25	Washington Street/ Pacific Highway NB-Ramps	AM	33.5	C	46.7	D	31.6	C
		PM	68.5	E	100.5	F	79.8	E
26	Washington Street/ Hancock Street	AM	27.8	C	28.1	C	25.9	C
		PM	30.2	C	30.8	C	28.0	C
27	Washington Street/ San Diego Avenue	AM	12.5	B	13.1	B	14.9	B
		PM	13.6	B	14.1	B	16.8	B
28	Rosecrans Street/ Pacific Highway	AM	36.1	D	36.4	D	37.3	D
		PM	39.1	D	44.8	D	43.0	D
29	Rosecrans Street/ Nimitz Boulevard	AM	21.7	C	21.7	C	27.0	C
		PM	24.9	C	25.2	C	29.1	C

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

LOS = level of service

Table 5-3.65

## 2010-2030 Intersection Impacts – Airport Implementation Plan Alternative (With Parking Structure)

Intersection Number	Intersection	Peak Hour	Year 2010			Year 2015			Year 2030		
			No Proj Delay (Sec.)	No-Project Delay (Sec.)	Diff. Delay (Sec.)	No Proj Delay (Sec.)	No-Project Delay (Sec.)	Diff. Delay (Sec.)	No Proj Delay (Sec.)	No-Project Delay (Sec.)	Diff. Delay (Sec.)
1	North Harbor Drive/ Nimitz Boulevard	AM	20.2	20.2	0.0	20.4	20.3	-0.1	21.7	21.8	0.1
		PM	20.7	20.6	0.1	20.4	20.3	-0.1	21.6	21.7	0.1
2	North Harbor Drive/ McCain Road	AM	6.7	6.8	-0.1	7.2	7.3	0.1	7.6	7.8	0.2
		PM	9.1	9.1	0.0	9.9	10.0	0.1	10.3	10.4	0.1
3	North Harbor Drive/ Spanish Landing	AM	10.1	9.3	0.8	10.9	10.0	-0.9	13.1	12.3	-0.8
		PM	8.7	7.9	0.8	9.3	8.5	-0.8	11.2	10.4	-0.8
4	North Harbor Drive/ Harbor Island Drive	AM	20.4	18.0	2.4	20.4	17.7	-2.7	21.9	18.7	-3.2
		PM	30.8	30.4	0.4	31.4	30.8	-0.6	34.9	34.2	-0.7
5	North Harbor Drive/ Winship Lane	AM	9.9	17.3	-7.4	10.6	18.5	-7.9	11.1	19.8	-8.7
		PM	9.6	14.5	-4.9	10.3	15.5	-5.2	10.7	16.5	-5.8
6	North Harbor Drive/ Rental Car Road	AM	6.7	7.3	-0.6	7.5	8.2	-0.7	9.0	10.7	-1.7
		PM	7.6	8.3	-0.7	8.5	9.2	-0.7	10.0	11.4	-1.4
7	Sheraton Harbor Island Drive	AM	12.4	12.4	0.0	12.3	12.3	0.0	11.6	11.6	0.0
		PM	7.6	7.6	0.0	7.4	7.4	0.0	6.9	6.9	0.0
8	Employee Lot Harbor Island Drive	AM	9.8	9.8	0.0	9.9	9.9	0.0	9.9	9.9	0.0
		PM	10.1	10.1	0.0	10.1	10.1	0.0	10.1	10.2	0.1
9	Sassafras Street/ Pacific Highway	AM	15.3	15.3	0.0	15.4	15.5	0.1	14.0	14.1	0.1
		PM	14.5	15.0	-0.5	16.6	17.4	-0.8	14.1	14.8	-0.7
10	Laurel Street/ North Harbor Drive	AM	9.2	9.1	0.1	10.1	10.0	-0.1	10.5	10.8	-0.3
		PM	15.5	15.4	0.1	16.3	16.2	-0.1	19.4	20.3	-0.9
11	Hawthorn Street/ North Harbor Drive	AM	31.8	30.8	1.0	49.6	47.8	-1.8	173.0	180.3	7.3
		PM	23.2	23.0	0.2	25.2	24.9	-0.3	55.9	61.1	5.2
12	Grape Street/ North Harbor Drive	AM	8.2	8.2	0.0	8.4	8.4	0.0	8.3	8.5	-0.2
		PM	10.9	10.9	0.0	11.0	11.0	0.0	10.9	11.0	-0.1
13	Laurel Street/ Pacific Highway	AM	32.1	32.1	0.0	33.7	33.7	0.0	33.7	34.0	-0.3
		PM	49.0	48.9	0.1	62.4	62.3	-0.1	60.4	61.7	-1.3
14	Hawthorn Street/ Pacific Highway	AM	12.6	12.5	0.1	14.3	14.1	-0.2	18.9	19.3	-0.4
		PM	21.0	20.9	0.1	22.0	21.9	-0.1	23.3	23.4	-0.1
15	Grape Street/ Pacific Highway	AM	18.5	18.5	0.0	19.0	19.1	-0.1	20.2	20.3	-0.1
		PM	26.2	26.1	0.1	32.8	32.8	0.0	56.5	58.6	-2.1
16	Laurel Street/ Kettner Boulevard	AM	18.9	18.8	0.1	19.6	19.5	-0.1	21.9	21.9	0.0
		PM	21.4	21.3	0.1	22.9	22.8	-0.1	31.9	32.0	-0.1
17	Hawthorn Street/ Kettner Boulevard	AM	5.5	5.5	0.0	6.2	6.2	0.0	13.0	13.4	-0.4
		PM	10.9	10.9	0.0	11.3	11.2	-0.1	14.2	14.2	0.0
18	Grape Street/ Kettner Boulevard	AM	12.4	12.4	0.0	13.1	13.1	0.0	14.8	14.7	-0.1
		PM	16.7	16.6	0.1	22.8	22.7	-0.1	77.1	80.0	-2.9
19	Grape Street/ I-5 Southbound On-Ramp	AM	11.1	11.1	0.0	8.9	10.8	-1.9	15.1	15.3	-0.2
		PM	28.6	28.0	0.6	35.2	34.6	-0.6	87.1	89.6	-2.5
20	Hawthorn Street/ I-5 Northbound Off-Ramp	AM	11.1	11.0	0.1	10.6	10.6	0.0	15.3	15.9	-0.6
		PM	11.8	11.8	0.0	12.0	12.0	0.0	11.0	11.1	-0.1
21	Laurel Street/ India Street	AM	18.5	18.4	0.1	19.4	19.3	-0.1	23.0	22.9	-0.1
		PM	21.4	21.3	0.1	22.9	22.9	0.0	32.4	22.2	-10.2
22	Sassafras Street/ Kettner Boulevard	AM	8.3	8.6	-0.3	9.2	9.5	-0.3	9.6	9.8	-0.2
		PM	11.1	11.6	-0.5	12.5	13.1	-0.6	62.5	66.8	-4.3
23	Sassafras Street/ India Street	AM	8.1	8.2	-0.1	8.2	8.3	-0.1	8.0	8.1	-0.1
		PM	13.5	13.8	-0.3	17.3	17.8	-0.5	16.6	17.7	-1.1
24	Washington Street/ Pacific Highway SB-Ramps	AM	12.6	12.6	0.0	12.7	12.7	0.0	12.4	12.5	-0.1
		PM	14.9	14.9	0.0	15.1	15.1	0.0	17.4	17.6	-0.2
25	Washington Street/ Pacific Highway NB-Ramps	AM	33.5	33.5	0.0	46.7	46.7	0.0	31.1	31.6	-0.5
		PM	67.7	68.5	-0.8	107.8	100.5	-7.3	79.3	79.8	-0.5
26	Washington Street/ Hancock Street	AM	27.8	27.8	0.0	28.1	28.1	0.0	25.9	25.9	0.0
		PM	30.2	30.2	0.0	30.8	30.8	0.0	28.0	28.0	0.0
27	Washington Street/ San Diego Avenue	AM	12.5	12.5	0.0	13.1	13.1	0.0	15.0	14.9	-0.1
		PM	13.6	13.6	0.0	14.1	14.1	0.0	16.8	16.8	0.0
28	Rosecrans Street/ Pacific Highway	AM	36.1	36.1	0.0	36.4	36.4	0.0	37.3	37.3	0.0
		PM	39.1	39.1	0.0	44.8	44.8	0.0	42.9	43.0	-0.1
29	Rosecrans Street/ Nimitz Boulevard	AM	21.8	21.7	0.1	21.8	21.7	-0.1	26.8	27.0	-0.2
		PM	25.0	24.9	0.1	25.3	25.2	-0.1	28.9	29.1	-0.2

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

Legend:	
	LOS E
	LOS F
	Significant Impact

- Grape Street and I-5 Southbound On-Ramp (PM), which operates at LOS F in the PM peak hour under both the Airport Implementation Plan Alternative and No Project Alternative and would experience an increase in delay greater than 1 second under the Airport Implementation Plan Alternative compared to the No Project Alternative.
- Sassafras Street and Kettner Boulevard (PM), which operates at LOS E and F in the PM peak hour under both the Airport Implementation Plan Alternative and No Project Alternative and would experience an increase in delay greater than 1 second under the Airport Implementation Plan Alternative compared to the No Project Alternative.

### Freeway Segments

**Table 5-3.66** shows the freeway segment operations for each analysis year under the Airport Implementation Plan Alternative (With Parking Structure). As shown, all freeway segments would operate at LOS D, E or F under the Airport Implementation Plan Alternative (With Parking Structure) during either AM or PM peak hours or both.

**Table 5-3.67** compares the freeway segment densities under the Airport Implementation Plan Alternative (With Parking Structure) against the No Project Alternative to identify freeway segment impacts based on significance criteria identified in Section 5.3.3, *Traffic Impacts and Significance Criteria*, measured by an increase to LOS E or F or an increase in volume to capacity ratio of greater than 0.01 for freeways operating at LOS E and .005 for freeways operating at LOS F under the No Project Alternative. It was assumed that an increase in volume to capacity ratio of 0.01 and 0.005 is equivalent to an increase in density of 1 percent and 0.5 percent, respectively. As shown, none of the freeway segments analyzed would be significantly impacted by the project.

### Freeway Ramps

**Table 5-3.68** summarizes the freeway ramp metering operations for each analysis year under the Airport Implementation Plan Alternative (With Parking Structure). As shown, all freeway ramps in the study area were estimated to accommodate a lower traffic volume than their set meter rates and, therefore, would have no significant traffic impact.

### Railroad Crossings

Forecasts of future train operations were obtained from the San Diego 2030 RTP (Mobility 2030), the 2007 LOSSAN Strategic Business Plan, and the 2000 San Diego International Airport Master Plan Preferred Concept Alternatives Roadway Analysis<sup>47</sup> report. Mobility 2030 projects that the headways for the Coaster Service will decrease from 36 minutes to 20 minutes during peak hours and from 120 minutes to 60 minutes during off-peak hours by 2030. That translates to a 44 percent increase in frequency during peak hours by 2030. The LOSSAN Strategic Business Plan projects that Coaster service would increase from existing 22 trains per day to 54 trains per day in 2025, consistent with the above. The LOSSAN Strategic Business Plan also projects that Amtrak Pacific Surfliner service between Los Angeles and San Diego would increase from existing 22 trips per day in 2005/2006 to 26 trains in 2015 and 32 trains in 2025. Mobility 2030 also projects that headways for the trolley Blue Line service that passes through the study area would decrease from 15 minutes to 7.5 minutes during off-peak hours by 2030. Estimated daily train operations in 2030 include 36 Amtrak trips, 78 Coaster trips, and 384 Trolley trips. For the analysis, freight train operations were estimated to increase to four trains per day.

**Table 5-3.69** summarizes the railroad crossing delay analysis for each analysis year under the Airport Implementation Plan Alternative (with Parking Structure). As shown, delays at all railroad crossings were estimated to be under the VHD threshold for each street segment in 2010, 2015 and 2030. As shown in [Appendix D](#), Washington Street railroad crossings exceeded the threshold of VHD in 2020 and 2025. However, due to shifts in regional background traffic described in Section [5.3.4.5 5.3.5.1, Airport Trip Generation and Background Traffic](#), total traffic on Washington Street in 2030 decreased causing in the VHD to decrease to a level of insignificance.

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<sup>47</sup> Linscott, Law & Greenspan Engineers, San Diego International Airport Master Plan Preferred Concept Alternatives Roadway Analysis, March 3, 2000.

Table 5-3.66

2010-2030 Freeway Segment Operations – Airport Implementation Plan Alternative (With Parking Structure)

SB I-5 Freeway		2010						2015						2030					
		AM			PM			AM			PM			AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
North of I-8	I-8	7,000	34.7	D	8,600	42.7	E	7,200	35.8	E	8,400	41.8	E	7,600	38.1	E	9,200	46.0	F
I-8	Old Town Avenue	7,100	35.4	E	7,400	37.1	E	7,300	36.4	E	7,400	36.9	E	7,600	37.7	E	8,400	42.1	E
Old Town Avenue	Washington Street	5,800	29.2	D	6,200	30.8	D	6,000	29.9	D	6,200	31.1	D	5,600	27.7	D	6,400	31.8	D
Washington Street	Pacific Highway Viaducts	6,200	31.2	D	6,500	32.4	D	6,400	32.1	D	6,600	33.1	D	6,100	30.4	D	7,000	34.8	D
Pacific Highway Viaducts	India Street	7,200	35.8	E	8,200	41.1	E	7,400	36.7	E	8,400	42.0	E	6,700	33.4	D	8,300	41.4	E
India Street	Hawthorn Street	7,300	36.3	E	8,400	42.0	E	7,500	37.4	E	8,400	41.8	E	6,900	34.6	D	8,600	42.8	E
Hawthorn Street	First Avenue	6,100	30.5	D	7,500	37.4	E	6,300	31.4	D	7,400	36.9	E	5,600	28.1	D	7,800	39.0	E
First Avenue	SR 163	6,500	32.3	D	9,300	46.5	F	6,600	33.1	D	9,400	46.9	F	6,100	30.5	D	9,800	49.1	F
SR 163	SR 94	3,700	18.4	C	5,300	26.3	D	3,900	19.4	C	5,400	26.7	D	3,700	18.3	C	5,500	27.4	D
NB I-5 Freeway		2010						2015						2030					
		AM			PM			AM			PM			AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
SR 94	SR 163	10,900	54.4	F	7,700	38.4	E	11,400	56.7	F	7,900	39.5	E	10,700	53.6	F	7,500	37.3	E
SR 163	First Avenue	8,400	41.7	E	7,800	39.0	E	8,600	42.8	E	7,900	39.3	E	8,100	40.5	E	7,700	38.2	E
First Avenue	Hawthorn Street	7,000	35.0	E	6,500	32.2	D	7,100	35.4	E	6,500	32.3	D	6,300	31.5	D	6,200	30.7	D
Hawthorn Street	India Street	7,200	36.0	E	7,700	38.5	E	7,300	36.3	E	7,700	38.6	E	6,400	32.0	D	7,900	39.6	E
India Street	Pacific Highway Viaducts	7,200	35.7	E	7,600	37.7	E	7,200	36.1	E	7,600	37.8	E	6,400	31.7	D	7,200	35.8	E
Pacific Highway Viaducts	Washington Street	5,300	26.4	D	6,500	32.2	D	5,100	25.2	C	6,100	30.6	D	4,400	21.8	C	5,900	29.6	D
Washington Street	Old Town Avenue	6,000	29.8	D	7,100	35.5	E	6,100	30.5	D	7,200	35.7	E	5,600	27.9	D	7,100	35.5	E
Old Town Avenue	I-8	5,900	29.2	D	7,300	36.4	E	6,100	30.2	D	7,400	36.8	E	5,300	26.6	D	7,200	35.8	E
I-8	North of I-8	7,400	36.7	E	7,500	37.2	E	7,400	37.1	E	7,700	38.2	E	7,500	37.5	E	8,600	43.0	E
I-8 Freeway		2010						2015						2030					
		AM			PM			AM			PM			AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
I-5	East	5,800	29.1	D	7,900	39.2	E	5,900	29.4	D	7,800	38.9	E	4,900	24.4	C	7,500	37.2	E
East	I-5	7,100	35.6	E	7,200	36.1	E	7,200	35.7	E	7,600	37.8	E	7,300	36.3	E	7,100	35.4	E

Source: HNTB, 2007.  
 Analysis for years 2020 and 2025 presented in Appendix D.

Notes: vph = vehicles per hour  
 pc/mi/ln = passenger cars per mile per lane  
 LOS = level of service

Table 5-3.67

**2010-2030 Freeway Segment Impacts – Airport Implementation Plan Alternative  
(With Parking Structure)**

AM Peak Hour		Year 2010									Year 2015			Year 2030		
SB I-5 Freeway		No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase			
From	To															
North of I-8	I-8	34.7	34.7	0.0%	35.8	35.8	0.0%	38.0	38.1	0.3%						
I-8	Old Town Avenue	35.4	35.4	0.1%	36.4	36.4	0.1%	37.5	37.7	0.4%						
Old Town Avenue	Washington Street	29.1	29.2	0.1%	29.9	29.9	0.1%	27.6	27.7	0.5%						
Washington Street	Pacific Highway Viaducts	31.2	31.2	0.0%	32.1	32.1	0.0%	30.4	30.4	0.0%						
Pacific Highway Viaducts	India Street	35.8	35.8	0.1%	36.7	36.7	0.1%	33.4	33.4	0.1%						
India Street	Hawthorn Street	36.3	36.3	0.1%	37.4	37.4	0.1%	34.5	34.6	0.1%						
Hawthorn Street	First Avenue	30.5	30.5	0.0%	31.4	31.4	0.0%	28.0	28.1	0.5%						
First Avenue	SR 163	32.3	32.3	0.0%	33.1	33.1	0.0%	30.4	30.5	0.5%						
SR 163	SR 94	18.4	18.4	0.0%	19.4	19.4	0.0%	18.2	18.3	0.8%						
NB I-5 Freeway		No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase						
From	To															
SR 94	SR 163	54.4	54.4	0.0%	56.7	56.7	0.0%	53.4	53.6	0.4%						
SR 163	First Avenue	41.7	41.7	0.0%	42.7	42.8	0.0%	40.3	40.5	0.5%						
First Avenue	Hawthorn Street	35.0	35.0	0.0%	35.4	35.4	0.0%	31.3	31.5	0.7%						
Hawthorn Street	India Street	35.9	36.0	0.1%	36.3	36.3	0.1%	31.9	32.0	0.2%						
India Street	Pacific Highway Viaducts	35.7	35.7	0.0%	36.1	36.1	0.0%	31.7	31.7	0.0%						
Pacific Highway Viaducts	Washington Street	26.4	26.4	0.0%	25.2	25.2	0.0%	21.8	21.8	0.0%						
Washington Street	Old Town Avenue	29.8	29.8	0.1%	30.5	30.5	0.0%	27.8	27.9	0.3%						
Old Town Avenue	I-8	29.2	29.2	0.1%	30.2	30.2	0.0%	26.5	26.6	0.3%						
I-8	North of I-8	36.7	36.7	0.0%	37.1	37.1	0.0%	37.4	37.5	0.2%						
I-8 Freeway		No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase						
From	To															
I-5	East	29.1	29.1	0.0%	29.4	29.4	0.0%	24.4	24.4	0.3%						
East	I-5	35.6	35.6	0.0%	35.7	35.7	0.0%	36.2	36.3	0.2%						
PM Peak Hour		Year 2010			Year 2015			Year 2030								
SB I-5 Freeway		No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase						
From	To															
North of I-8	I-8	42.7	42.7	0.0%	41.8	41.8	0.0%	45.9	46.0	0.2%						
I-8	Old Town Avenue	37.1	37.1	0.1%	36.9	36.9	0.0%	42.0	42.1	0.2%						
Old Town Avenue	Washington Street	30.7	30.8	0.1%	31.1	31.1	0.0%	31.7	31.8	0.3%						
Washington Street	Pacific Highway Viaducts	32.4	32.4	0.0%	33.1	33.1	0.0%	34.8	34.8	0.0%						
Pacific Highway Viaducts	India Street	41.1	41.1	0.2%	41.9	42.0	0.1%	41.3	41.4	0.2%						
India Street	Hawthorn Street	41.9	42.0	0.2%	41.7	41.8	0.1%	42.7	42.8	0.2%						
Hawthorn Street	First Avenue	37.4	37.4	0.0%	36.8	36.9	0.0%	38.8	39.0	0.5%						
First Avenue	SR 163	46.5	46.5	0.0%	46.8	46.9	0.0%	48.9	49.1	0.4%						
SR 163	SR 94	26.3	26.3	0.1%	26.7	26.7	0.1%	27.2	27.4	0.7%						
NB I-5 Freeway		No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase						
From	To															
SR 94	SR 163	38.4	38.4	0.0%	39.5	39.5	0.0%	37.2	37.3	0.4%						
SR 163	First Avenue	39.0	39.0	0.0%	39.3	39.3	0.0%	38.0	38.2	0.4%						
First Avenue	Hawthorn Street	32.2	32.2	0.0%	32.3	32.3	0.0%	30.6	30.7	0.5%						
Hawthorn Street	India Street	38.5	38.5	0.1%	38.5	38.6	0.1%	39.5	39.6	0.1%						
India Street	Pacific Highway Viaducts	37.7	37.7	0.0%	37.8	37.8	0.0%	35.8	35.8	0.0%						
Pacific Highway Viaducts	Washington Street	32.2	32.2	0.0%	30.6	30.6	0.0%	29.6	29.6	0.0%						
Washington Street	Old Town Avenue	35.5	35.5	0.1%	35.7	35.7	0.1%	35.4	35.5	0.4%						
Old Town Avenue	I-8	36.4	36.4	0.1%	36.8	36.8	0.1%	35.7	35.8	0.4%						
I-8	North of I-8	37.2	37.2	0.0%	38.2	38.2	0.0%	42.9	43.0	0.2%						
I-8 Freeway		No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase	No Project (pc/mi/ln)	Project (pc/mi/ln)	Percent Increase						
From	To															
I-5	East	39.2	39.2	0.0%	38.9	38.9	0.0%	37.1	37.2	0.2%						
East	I-5	36.1	36.1	0.0%	37.8	37.8	0.0%	35.4	35.4	0.2%						

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

pc/mi/ln = passenger cars per mile per lane

Legend:

	LOS E
	LOS F
	Significant Impact

Table 5-3.68

**2010-2030 Freeway Ramp Operations – Airport Implementation Plan Alternative (With Parking Structure)**

Location	Peak Hour	2010					2015					2030				
		Demand (veh/hr)	Maximum Meter Rate (veh/hr)	Excess Demand (veh/hr)	Delay (minutes)	Queue (feet)	Demand (veh/hr)	Maximum Meter Rate (veh/hr)	Excess Demand (veh/hr)	Delay (minutes)	Queue (feet)	Demand (veh/hr)	Maximum Meter Rate (veh/hr)	Excess Demand (veh/hr)	Delay (minutes)	Queue (feet)
I-5 NB from San Diego	AM	799	1,992	0	0	0	525	1,992	0	0	0	890	1,992	0	0	0
	PM	871	1,992	0	0	0	505	1,992	0	0	0	707	1,992	0	0	0
I-5 NB from India	AM	766	1,992	0	0	0	1,042	1,992	0	0	0	1,337	1,992	0	0	0
	PM	830	1,992	0	0	0	1,119	1,992	0	0	0	1,674	1,992	0	0	0
I-5 SB from Kettner	AM	107	996	0	0	0	124	996	0	0	0	95	996	0	0	0
	PM	190	996	0	0	0	138	996	0	0	0	182	996	0	0	0
I-5 SB from Washington/Hancock	AM	476	1,140	0	0	0	481	1,140	0	0	0	594	1,140	0	0	0
	PM	276	1,140	0	0	0	289	1,140	0	0	0	477	1,140	0	0	0

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

veh/hr = vehicles per hour

Table 5-3.69

**2010-2030 Railroad Crossing Operations –Airport Implementation Plan Alternative  
(With Parking Structure)**

Crossing	Year 2010				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	20,400	4.76	64	No
Sassafras Street	75	14,400	3.44	23	No
Palm Street	75	900	3.44	0	No
Laurel Street	300	25,100	0.77	1	No
Hawthorn Street	150	18,500	0.77	10	No
Grape Street	300	29,000	0.77	18	No

Crossing	Year 2015				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	23,300	8.53	134	No
Sassafras Street	150	16,600	6.13	49	No
Palm Street	75	900	6.13	0	No
Laurel Street	300	28,900	0.80	1	No
Hawthorn Street	150	20,700	0.80	12	No
Grape Street	300	31,700	0.80	22	No

Crossing	Year 2030				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	19,200	9.95	126	No
Sassafras Street	75	14,600	7.18	51	No
Palm Street	75	100	7.18	0	No
Laurel Street	300	34,700	1.85	0	No
Hawthorn Street	300	26,600	1.85	44	No
Grape Street	300	37,700	1.85	83	No

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

VHD = vehicle-hours of delay

ADT = average daily traffic

## **Transit**

Under the Airport Implementation Plan Alternative no existing or planned transit routes would be modified. Therefore, no adverse impacts would occur to transit operations and no mitigation is required.

## **Parking**

The Airport Implementation Plan Alternative would not remove any parking lots designated for public use. Passenger terminals also are not located close to commercial or residential areas. In addition, the Airport Implementation Plan Alternative would provide additional airport public parking spaces that would address the projected parking shortfall under the No Project Alternative (as previously discussed in Section 5.3.5.4, *No Project Alternative*). This is considered as a favorable parking impact of the Airport Implementation Plan Alternative compared to the No Project Alternative.

The East Terminal Alternative would replace the existing Commuter Terminal public and employee lots (Lot 7 and 8) with a parking structure. The new parking structure was assumed to accommodate displaced parkers from both of these lots.

## **Terminal Curbside**

Currently 6,630 linear feet of curbside is available between all three terminals. In 2015, 7,240 linear feet of curbside is required at Terminals One and Two and the Commuter Terminal to accommodate private and commercial vehicle demand. The No Project Alternative would maintain the existing curbside supply, which would result in a curbside deficit of 610 linear feet. Under the Airport Implementation Plan Alternative approximately 1,000 additional linear feet of curbside would be provided on a second level at Terminal One East and there would be an airport-wide surplus of 380 linear feet in 2015. Therefore, the Airport Implementation Plan Alternative would result in favorable curbside impact compared to the No Project Alternative.

## **On-Airport Traffic Circulation**

Under the Airport Implementation Plan Alternative, new on-airport roadways and curbs would be constructed to serve the new Terminal One East unit terminal and parking structure. It is assumed that primary access to Terminal One East would be provided in the vicinity of Winship Lane, with an access ramp similar to the one currently serving Terminal One from westbound North Harbor Drive. The Terminal One East roadway would have a connection to the existing Terminal One roadway, so that shuttles could go from Terminal One East to Terminal One without exiting to North Harbor Drive.

**Table 5-3.70** shows the on-airport roadway operations for each analysis year under the Airport Implementation Plan Alternative (With Parking Structure). Refer to [Figure 5.3-11](#) for Link ID Key Map. As shown, all terminal roadways would operate at LOS D or better during peak hours under the Airport Implementation Plan Alternative. Therefore, the Airport Implementation Plan Alternative would have no adverse on-airport traffic circulation impacts compared to the No Project Alternative, and no mitigation is required.



Table 5-3.70

2010-2030 On-Airport Roadway Peak Hour Operations – Airport Implementation Plan Alternative (With Parking Structure)

Link ID	Lanes	2010				2015				2030			
		AM	LOS	PM	LOS	AM	LOS	PM	LOS	AM	LOS	PM	LOS
1	2	381	A	315	A	455	A	378	A	520	B	436	A
2	2	315	A	267	A	379	A	324	A	448	A	384	A
3		Link Not Used				Link Not Used				Link Not Used			
4		Link Not Used				Link Not Used				Link Not Used			
5	2	66	A	48	A	76	A	54	A	73	A	52	A
6		Link Not Used				Link Not Used				Link Not Used			
7		Link Not Used				Link Not Used				Link Not Used			
8	3	402	A	341	A	482	A	411	A	596	A	512	A
9		Link Not Used				Link Not Used				Link Not Used			
10		Link Not Used				Link Not Used				Link Not Used			
11	1	161	A	186	A	182	A	211	A	218	A	253	B
12		Link Not Used				Link Not Used				Link Not Used			
13		Link Not Used				Link Not Used				Link Not Used			
14	1	57	A	50	A	65	A	57	A	77	A	67	A
15	4	563	A	527	A	664	A	622	A	814	A	765	A
16	1	12	A	12	A	12	A	12	A	12	A	12	A
17	4	608	A	565	A	717	A	667	A	879	A	820	A
18	2	484	B	457	A	574	B	542	B	686	B	652	B
19		Link Not Used				Link Not Used				Link Not Used			
20		Link Not Used				Link Not Used				Link Not Used			
21		Link Not Used				Link Not Used				Link Not Used			
22		Link Not Used				Link Not Used				Link Not Used			
23		Link Not Used				Link Not Used				Link Not Used			
24		Link Not Used				Link Not Used				Link Not Used			
25		Link Not Used				Link Not Used				Link Not Used			
26	1	40	A	86	A	46	A	99	A	46	A	99	A
27	2	68	A	56	A	81	A	67	A	122	A	102	A
28	3	124	A	108	A	143	A	125	A	193	A	169	A
29		Link Not Used				Link Not Used				Link Not Used			
30	2	552	B	513	B	655	B	609	B	808	C	754	B
31	3	592	A	599	A	701	A	708	B	854	B	853	B
32	1	12	A	8	A	14	A	10	A	17	A	12	A
33	3	580	A	591	A	687	A	698	A	837	B	841	B
34	4	78	A	56	A	90	A	64	A	90	A	64	A
35	2	493	B	517	B	584	B	610	B	688	B	713	B
36	1	87	A	73	A	103	A	88	A	149	A	128	A
37	1	452	C	468	C	539	C	558	C	637	D	653	D
38	1	41	A	48	A	45	A	53	A	51	A	60	A
39		Link Not Used				Link Not Used				Link Not Used			
40	2	180	A	148	A	211	A	175	A	309	A	256	A
41	1	33	A	23	A	39	A	28	A	62	A	44	A
42	2	147	A	124	A	172	A	147	A	247	A	212	A
43	1	34	A	28	A	41	A	33	A	77	A	64	A
44	3	181	A	153	A	213	A	180	A	324	A	276	A
45	1	14	A	12	A	16	A	14	A	20	A	17	A
46	3	195	A	164	A	229	A	194	A	345	A	293	A
47		Link Not Used				Link Not Used				Link Not Used			
48	4	342	A	339	A	395	A	391	A	542	A	529	A
49	2	181	A	153	A	213	A	180	A	324	A	276	A
50	1	20	A	43	A	24	A	51	A	40	A	85	A
51	3	201	A	196	A	237	A	231	A	364	A	361	A
52	2	164	A	160	A	192	A	190	A	279	A	280	A
53	1	38	A	35	A	44	A	42	A	85	A	81	A
54	1	20	A	17	A	24	A	19	A	35	A	28	A
55	1	6	A	5	A	8	A	5	A	15	A	11	A
56	2	39	A	28	A	47	A	33	A	77	A	55	A
57	2	616	A	629	B	731	B	747	B	916	B	933	B
58	2	58	A	67	A	66	A	75	A	101	A	113	A
59		Link Not Used				Link Not Used				Link Not Used			
60	2	464	A	421	A	537	B	488	B	601	B	556	B
61	2	408	A	380	A	470	B	440	A	528	B	504	B
62	1	56	A	40	A	67	A	48	A	73	A	52	A
63	1	134	A	119	A	148	A	131	A	187	A	163	A
64	3	542	A	499	A	618	A	571	A	714	B	667	A
65	3	519	A	503	A	595	A	575	A	691	A	671	A
66	1	147	A	174	A	166	A	197	A	198	A	236	B
67	2	372	A	329	A	429	A	378	A	493	B	435	A
68	1	34	A	74	A	41	A	89	A	47	A	101	A
69	2	395	A	395	A	458	A	458	A	522	B	523	B
70	1	0	A	0	A	0	A	0	A	0	A	0	A
71	1	0	A	0	A	0	A	0	A	0	A	0	A
72	1	11	A	8	A	13	A	9	A	18	A	13	A
73	2	67	A	48	A	80	A	57	A	91	A	65	A
74	2	395	A	395	A	458	A	458	A	522	B	523	B

Source: HNTB, 2007.

NOTE: Please refer to Figure 5.3-11 for link ID key map.

Analysis for years 2020 and 2025 presented in Appendix D.

LOS = Level of service

## **Airport Implementation Plan Alternative (Without Parking Structure)**

For this variation of the East Terminal Alternative, all elements of the Airport Implementation Plan Alternative are the same as described previously in this section (Section ~~5.3.5.4~~ 5.3.5.3), *Airport Implementation Plan Alternative (with Parking Structure)*, except that no parking structure will be constructed.

### **Assumptions**

Except for the parking structure, this scenario shares most of the assumptions used for the Airport Implementation Plan Alternative (With Parking Structure). Assumptions that differ from previous discussion include:

- A surface parking lot will be developed in front of the new Terminal One East Unit Terminal providing approximately 1,000 public parking spaces.
- Excess terminal area parking demand will be served by remote Airport and privately operated parking facilities and alternate modes of transportation.

### **Trip Generation and Terminal Distribution**

Trip generation associated with the Airport Implementation Plan Alternative (Without Parking Structure) is summarized in [Table 5-3.71](#). As shown, total airport trip generation would increase from approximately 94,600 ADT in 2010 to 134,700 ADT in 2030. This corresponds to an increase in air passenger forecast of 19.5 million annual passengers (MAP) in 2010 to 28.2 MAP in 2030. This represents an increase in trip generation of approximately 6,000 ADT or 4.5 percent from the No Project Alternative in 2030. Trips from most airport modes were estimated to increase relative to origin and destination passenger growth. However, schedule driven modes such as public buses, and airport operated inter-terminal, employee and public parking shuttles were estimated to grow at a slower rate as many of these shuttles currently operate with excess capacity to maintain a set schedule. This results in a slight decrease in the trip generation rate from ~~4.86~~ 1.85 to 1.82 in 2010 and 2030, respectively. This has also been demonstrated by a historical downward trend witnessed at SDIA.

### **Traffic Impacts**

Traffic impacts of the Airport Implementation Plan Alternative (Without Parking Structure) would be similar to under the Airport Implementation Plan (With Parking Structure) except for the on-airport (terminal) roadways, street segments and intersections along North Harbor Drive directly serving Terminals One and Two. Specific impact categories are discussed below.

#### **Street Segments**

[Table 5-3.72](#) summarizes the street segment operations for each analysis year under the Airport Implementation Plan Alternative (Without Parking Structure).

Table 5-3.71

**2010-2030 Airport Trip Generation – Airport Implementation Plan Alternative  
(Without Parking Structure)**

Activity	Year			
	2005	2010	2015	2030
<b>Airport Passenger Activity Level</b>				
<b>Million Annual Passengers (MAP)</b>	<b>17.4</b>	<b>19.5</b>	<b>22.8</b>	<b>28.2</b>
Million Annual O&D Passengers	16.7	18.6	21.8	27.0
Daily O&D Passengers	45,830	51,076	59,769	74,199
<b>Airport Trip Generation (1)</b>				
Daily	85,100	94,600	109,500	134,700
In	42,600	47,350	54,800	67,400
Out	42,500	47,250	54,700	67,300
AM Peak Hour	3,180	3,530	4,095	5,065
In	1,760	1,955	2,265	2,785
Out	1,420	1,575	1,830	2,280
PM Peak Hour	3,245	3,620	4,190	5,185
In	1,500	1,675	1,940	2,410
Out	1,745	1,945	2,250	2,775
Trip Rate				
Daily	1.86	1.85	1.83	1.82

O&D = origin and destination

Notes:

(1) Includes terminals and associated facilities, SAN Park lots, rental car facilities on Rental Car Road, Employee Lot 6 on Harbor Island Drive, and north area. Does not include private vehicle trips to private off-airport parking and rental car facilities, but includes shuttle trips between these facilities and the terminals.

Source: HNTB, 2007.

NOTE: [Table 5-3.71](#) inadvertently included years 2020 and 2025 in the 2007 DEIR. The correct table is [shown here](#).

Table 5-3.72

2010-2030 Street Segment Traffic Operations – Airport Implementation Plan Alternative (Without Parking Structure)

Roadway	Segment	Classification	Lanes	LOS E ADT Capacity 1000s	Year 2010					Year 2015					Year 2030				
					SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS	SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS	SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS
North Harbor Drive	West of NTC	6-Lane Prime	6D	60.0	11.0	17.7	28.7	0.48	B	12.7	20.4	33.1	0.55	B	19.5	28.5	48.0	0.80	C
	NTC - Spanish Landing	6-Lane Prime	6D	60.0	15.7	15.1	30.8	0.51	B	18.0	16.3	34.3	0.57	B	25.5	23.3	48.8	0.81	C
	Spanish Landing - T2 Access	6-Lane Prime	6D	60.0	11.5	14.9	26.4	0.44	B	12.8	16.2	29.0	0.48	B	17.7	20.7	38.3	0.64	C
	T2 Access - Harbor Island	6-Lane Prime	4+3	65.0	22.1	15.0	37.1	0.57	B	25.5	16.3	41.8	0.64	C	32.3	19.8	52.1	0.80	C
	Harbor Island - T1 Access	6-Lane Prime	3+4	65.0	22.9	18.3	41.2	0.63	C	26.0	18.4	44.4	0.68	C	30.7	21.1	51.8	0.80	C
	T1 Access - Winship	6-Lane Prime	5+3	70.0	27.8	18.3	46.1	0.66	C	31.8	18.3	50.1	0.72	C	39.0	21.1	60.1	0.86	D
	Winship - Flyover Merge (1)	6-Lane Prime	4+4	70.0	31.0	18.4	49.4	0.71	C	35.5	18.4	53.9	0.77	C	41.5	20.9	62.4	0.89	D
	Rental Car Rd - Laurel	6-Lane Prime	6D	60.0	62.6	20.8	83.4	1.39	F	72.6	20.7	93.3	1.55	F	85.1	21.7	106.7	1.78	F
	Laurel - Hawthorn	6-Lane Prime	6D	60.0	40.5	15.2	55.7	0.93	E	46.8	15.4	62.2	1.04	F	57.2	18.2	75.4	1.26	F
	Hawthorn - Grape	6-Lane Prime	6D	60.0	25.4	14.0	39.4	0.66	C	29.4	13.4	42.8	0.71	C	36.0	14.8	50.9	0.85	D
Grape Street	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	13.5	6.7	20.2	0.81	D	15.7	7.1	22.8	0.91	E	19.4	9.7	29.1	1.16	F
	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	12.6	16.4	29.0	1.16	F	14.5	17.1	31.6	1.27	F	17.8	19.8	37.5	1.50	F
	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	12.1	23.3	35.4	1.42	F	14.1	23.7	37.8	1.51	F	17.4	24.7	42.1	1.68	F
Hawthorn Street	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	15.2	5.1	20.3	0.81	D	17.7	5.4	23.1	0.92	E	21.7	7.9	29.6	1.18	F
	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	12.4	6.0	18.4	0.74	C	14.4	6.2	20.6	0.83	D	17.7	8.7	26.5	1.06	F
	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	12.4	17.2	29.6	1.18	F	14.4	19.2	33.6	1.35	F	17.7	24.5	42.2	1.69	F
Kettner Blvd	north of Washington	3-Lane Collector 1-Way	3U	25.0	0.2	7.2	7.4	0.29	A	0.2	7.2	7.4	0.30	A	0.4	4.2	4.6	0.18	A
	Washington - Sassafras	3-Lane Major 1-Way	3U	25.0	9.0	13.0	22.0	0.88	D	10.5	13.1	23.6	0.94	E	11.0	17.4	28.4	1.14	F
	Sassafras - Palm	3-Lane Major 1-Way	3U	25.0	9.2	11.0	20.2	0.81	D	10.6	11.9	22.5	0.90	E	11.2	14.2	25.4	1.02	F
	Palm - Laurel	3-Lane Major 1-Way	3U	25.0	7.5	8.6	16.2	0.65	C	8.8	9.5	18.2	0.73	C	9.0	12.6	21.5	0.86	D
	Laurel - Hawthorn	3-Lane Major 1-Way	3U	25.0	0.0	7.2	7.2	0.29	A	0.1	7.9	8.0	0.32	A	0.3	11.4	11.7	0.47	B
Laurel Street	Hawthorn - Grape	3-Lane Major 1-Way	3U	25.0	0.0	14.8	14.8	0.59	C	0.1	16.8	16.9	0.68	C	0.3	21.5	21.8	0.87	D
	Harbor - Pacific	4-Lane Major	4U	40.0	22.1	6.3	28.4	0.71	C	25.8	6.7	32.5	0.81	D	27.9	4.3	32.2	0.81	D
	Pacific - Kettner	4-Lane Collector	4D	30.0	17.9	7.2	25.1	0.84	E	21.0	7.8	28.8	0.96	E	22.6	12.1	34.7	1.16	F
Pacific Highway	Kettner - I-5	4-Lane Collector	4D	30.0	10.4	8.5	18.9	0.63	C	12.5	9.6	22.1	0.74	D	14.4	12.9	27.3	0.91	E
	Washington - Sassafras	6-Lane Prime	6D	50.0	4.1	22.8	26.9	0.54	B	4.8	27.3	32.1	0.64	C	6.0	19.1	25.1	0.50	B
	Sassafras - Palm	6-Lane Prime	6D	50.0	7.0	17.5	24.5	0.49	B	8.1	21.0	29.1	0.58	C	9.9	16.3	26.1	0.52	B
	Palm - Laurel	6-Lane Prime	6D	50.0	7.0	18.1	25.1	0.50	B	8.1	21.7	29.8	0.60	C	9.9	15.4	25.3	0.51	B
	Laurel - Hawthorn	6-Lane Major	6D	50.0	2.3	19.1	21.4	0.43	B	2.8	22.6	25.4	0.51	B	3.9	23.3	27.2	0.54	B
Palm Street	Hawthorn - Grape	6-Lane Major	6D	50.0	4.9	19.6	24.5	0.49	B	5.8	23.2	29.0	0.58	C	7.3	24.1	31.4	0.63	C
	Pacific - Kettner	2-Lane Collector	2U	8.0	0.0	0.9	0.9	0.11	A	0.0	0.9	0.9	0.11	A	0.0	0.1	0.1	0.01	A
	Sassafras Street	3-Lane Collector	3U	12.0	3.5	8.3	11.8	0.98	E	4.4	9.7	14.1	1.17	F	4.9	6.1	11.0	0.91	E
Washington Street	Kettner-India	2-Lane Collector	2U	8.0	1.7	8.5	10.2	1.27	F	2.2	9.7	11.9	1.49	F	2.4	8.0	10.4	1.30	F
	Pacific - Kettner	4-Lane Collector	4U	30.0	3.9	16.5	20.4	0.68	D	4.7	18.6	23.3	0.78	D	6.4	12.7	19.2	0.64	C
	Kettner - San Diego	5-Lane Collector	5D	30.0	3.6	23.3	26.9	0.90	E	4.3	25.5	29.8	0.99	E	5.6	22.5	28.1	0.94	E
India Street	Laurel - Palm	2-Lane Collector	2U	8.0	7.4	8.7	16.1	2.01	F	8.6	10.2	18.9	2.36	F	8.8	12.6	21.4	2.68	F
	Palm - Sassafras	3-Lane Collector	3U	12.0	7.4	13.2	20.6	1.72	F	8.6	15.4	24.0	2.00	F	8.8	16.5	25.3	2.11	F
	Sassafras - Washington	3-Lane Collector	3U	12.0	5.0	13.5	18.5	1.54	F	6.4	14.6	21.1	1.76	F	7.5	21.5	29.0	2.42	F
Rosecrans	Barnett - Sport Arena	6-lane Major	6D	50.0	5.1	40.1	45.2	0.90	E	5.9	42.4	48.3	0.97	E	10.7	33.7	44.4	0.89	D
	Nimitz Quimby - Barnett	4-lane Major 5-lane Major	4U-5U	40.0 45.0	5.1	35.9	41.0	1.03 0.91	F-E	5.9	35.4	41.3	1.03 0.92	F-E	10.7	29.0	39.7	0.99 0.88	E-D
	Nimitz - Quimby	4-lane Major	4U	40.0	5.1	35.9	41.0	1.03	F	5.9	35.4	41.3	1.03	F	10.7	29.0	39.7	0.99	E
Nimitz	Harbor - Rosecrans	4-lane Major	4U	40.0	9.4	8.7	18.1	0.45	B	10.8	8.5	19.3	0.48	B	17.1	11.7	28.8	0.72	C

Source: HNTB, 2007.  
Analysis for years 2020 and 2025 presented in Appendix D.

Notes:  
(1) Does not include traffic on flyover.

MAP = Million Annual Passengers  
ADT = Average Daily Traffic  
LOS = Level of Service  
V/C = volume-to-capacity ratio

**Table 5-3.73** compares the street segment volume to capacity (v/c) ratios under the Airport Implementation Plan Alternative (Without Parking Structure) against the No Project Alternative to identify traffic impacts based on significance criteria identified in Section 5.3.3, *Traffic Impacts and Significance Criteria*, measured by an increase to LOS E or F or an increase in vehicle delay of greater than 2 seconds for streets operating at LOS E and greater than 1 second for streets operating at LOS F under the No Project Alternative. The following intersections would have potentially significant traffic impacts due to the project:

### **Street Segments with Significant Traffic Impacts**

#### **Year 2010**

- Sassafras Street between Pacific Highway and India Street, which operates at LOS E and F under both the Airport Implementation Plan Alternative (without Parking Structure) and No Project Alternative and experience an increase in the v/c ratio of over 0.01 under the Airport Implementation Plan Alternative (without Parking Structure) compared to the No Project Alternative.
- Sassafras Street between Kettner Boulevard and India Street.

#### **Year 2015**

- All locations identified in Year 2010
- Kettner Boulevard between Sassafras Street and Palm Street, which increased from LOS D under No Project to LOS E with Project.

#### **Year 2030**

- All locations identified in Year 2015
- North Harbor Drive between Rental Car Road and Hawthorn Street, which operates at LOS F under both the Airport Implementation Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Airport Implementation Plan (without Parking Structure) compared to the No Project Alternative.
- Grape Street between North Harbor Drive and I-5, which operates at LOS F under both the Airport Implementation Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Airport Implementation Plan (without Parking Structure) compared to the No Project Alternative.
- Hawthorn Street between North Harbor Drive and I-5, which operates at LOS F under both the Airport Implementation Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Airport Implementation Plan (without Parking Structure) compared to the No Project Alternative.
- Kettner Boulevard between Washington Street and Sassafras Street, which operates at LOS E and F under both the Airport Implementation Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Airport Implementation Plan (without Parking Structure) compared to the No Project Alternative.
- Laurel Street between Pacific Highway to Kettner Street, which operates at LOS F under both the Airport Implementation Plan and No Project Alternative and experiences an increase in v/c ratio of over 0.01 under the Airport Implementation Plan (without Parking Structure) compared to the No Project Alternative.
- India Street between Laurel Street and Washington Street.

#### **Intersections**

**Tables 5-3.74, 5-3.75, and 5-3.76** show the intersection turning volumes under the Implementation Plan Alternative (Without Parking Structure) for analysis years 2010, 2015, and 2030. **Table 5-3.77** shows the resulting intersection operations. Future intersection lane configurations are assumed to remain the same under all alternatives and are shown on ~~Figure 5.3-6~~ **Figure 5.3-5**.

Table 5-3.73

2010-2030 Street Segment Impacts – Airport Implementation Plan Alternative (Without Parking Structure)

Roadway	Segment	Year 2010					Year 2015					Year 2030				
		No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C	No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C	No Proj V/C	No Proj LOS	Proj V/C	Proj LOS	Diff V/C
North Harbor Drive	West of NTC	0.48	B	0.48	B	0.00	0.56	B	0.55	B	0.00	0.79	C	0.80	C	0.01
	NTC - Spanish Landing	0.51	B	0.51	B	0.00	0.57	B	0.57	B	0.00	0.79	C	0.81	C	0.03
	Spanish Landing - T2 Access	0.43	B	0.44	B	0.01	0.47	B	0.48	B	0.02	0.60	C	0.64	C	0.04
	T2 Access - Harbor Island	0.56	B	0.57	B	0.01	0.63	C	0.64	C	0.01	0.76	C	0.80	C	0.04
	Harbor Island - T1 Access	0.58	C	0.63	C	0.05	0.62	C	0.68	C	0.06	0.69	C	0.80	C	0.10
	T1 Access - Winship	0.76	C	0.66	C	-0.10	0.83	C	0.72	C	-0.11	0.94	E	0.86	D	-0.08
	Winship - Rental Car Rd	0.79	C	0.71	C	-0.09	0.87	D	0.77	C	-0.10	0.97	E	0.89	D	-0.08
	Rental Car Rd - Laurel	1.41	F	1.39	F	-0.02	1.57	F	1.55	F	-0.02	1.73	F	1.78	F	0.05
	Laurel - Hawthorn	0.94	E	0.93	E	-0.01	1.05	F	1.04	F	-0.01	1.22	F	1.26	F	0.04
	Hawthorn - Grape	0.66	C	0.66	C	-0.01	0.72	C	0.71	C	-0.01	0.82	C	0.85	D	0.02
Grape Street	Harbor - Pacific	0.82	D	0.81	D	-0.01	0.92	E	0.91	E	-0.01	1.13	F	1.16	F	0.03
	Pacific - Kettner	1.16	F	1.16	F	0.00	1.26	F	1.27	F	0.00	1.46	F	1.50	F	0.04
	Kettner - I-5	1.43	F	1.42	F	-0.01	1.52	F	1.51	F	-0.01	1.66	F	1.68	F	0.02
Hawthorn Street	Harbor - Pacific	0.83	D	0.81	D	-0.01	0.94	E	0.92	E	-0.01	1.16	F	1.18	F	0.03
	Pacific - Kettner	0.75	C	0.74	C	-0.01	0.83	D	0.83	D	-0.01	1.03	F	1.06	F	0.03
	Kettner - I-5	1.19	F	1.18	F	-0.01	1.35	F	1.35	F	-0.01	1.66	F	1.69	F	0.02
Kettner Blvd	north of Washington	0.29	A	0.29	A	0.00	0.30	A	0.30	A	0.00	0.18	A	0.18	A	0.00
	Washington - Sassafras	0.88	D	0.88	D	0.00	0.94	E	0.94	E	0.00	1.11	F	1.14	F	0.03
	Sassafras - Palm	0.80	D	0.81	D	0.00	0.90	D	0.90	E	0.00	0.99	E	1.02	F	0.03
	Palm - Laurel	0.65	C	0.65	C	-0.01	0.74	C	0.73	C	-0.01	0.85	D	0.86	D	0.01
	Laurel - Hawthorn	0.29	A	0.29	A	0.00	0.32	A	0.32	A	0.00	0.47	B	0.47	B	0.00
Laurel Street	Hawthorn - Grape	0.59	C	0.59	C	0.00	0.68	C	0.68	C	0.00	0.87	D	0.87	D	0.00
	Harbor - Pacific	0.72	C	0.71	C	-0.01	0.82	D	0.81	D	-0.01	0.78	D	0.81	D	0.03
	Pacific - Kettner	0.85	E	0.84	E	-0.01	0.97	E	0.96	E	-0.01	1.13	F	1.16	F	0.02
	Kettner - I-5	0.64	C	0.63	C	-0.01	0.75	D	0.74	D	-0.01	0.90	E	0.91	E	0.01
	Pacific Highway	Washington - Sassafras	0.54	B	0.54	B	0.00	0.64	C	0.64	C	0.00	0.50	B	0.50	B
Palm Street	Sassafras - Palm	0.48	B	0.49	B	0.01	0.57	C	0.58	C	0.01	0.51	B	0.52	B	0.02
	Palm - Laurel	0.49	B	0.50	B	0.01	0.59	C	0.60	C	0.01	0.49	B	0.51	B	0.02
	Laurel - Hawthorn	0.42	B	0.43	B	0.01	0.50	B	0.51	B	0.01	0.54	B	0.54	B	0.01
	Hawthorn - Grape	0.49	B	0.49	B	0.00	0.58	C	0.58	C	0.00	0.62	C	0.63	C	0.01
	Pacific - Kettner	0.11	A	0.11	A	0.00	0.11	A	0.11	A	0.00	0.01	A	0.01	A	0.00
Sassafras Street	Pacific - Kettner	0.95	E	0.98	E	0.03	1.14	F	1.17	F	0.03	0.94	E	1.00	E	0.06
	Kettner-India	1.25	F	1.27	F	0.02	1.46	F	1.49	F	0.02	1.32	F	1.37	F	0.04
	Washington Street	0.68	D	0.68	D	0.00	0.78	D	0.78	D	0.00	0.63	C	0.64	C	0.01
India Street	Kettner - San Diego	0.90	E	0.90	E	0.00	0.99	E	0.99	E	0.00	0.93	E	0.94	E	0.01
	Laurel - Palm	2.03	F	2.01	F	-0.02	2.38	F	2.36	F	-0.02	2.64	F	2.68	F	0.04
	Palm - Sassafras	1.73	F	1.72	F	-0.01	2.01	F	2.00	F	-0.01	2.09	F	2.11	F	0.02
	Sassafras - Washington	1.57	F	1.54	F	-0.03	1.79	F	1.76	F	-0.04	2.41	F	2.417	F	0.006
Rosecrans	Barnett - Sport Arena	0.91	E	0.90	E	0.00	0.97	E	0.97	E	0.00	0.88	D	0.89	D	0.01
	Nimitz - Quimby - Barnett	1.03 0.91	F-E	1.03 0.91	F-E	0.00	1.03 0.92	F-E	1.03 0.92	F-E	0.00	0.98 0.87	E-D	0.99 0.88	E-D	0.01
	Nimitz - Quimby	1.03	F	1.03	F	0.00	1.03	F	1.03	F	0.00	0.98	E	0.99	E	0.01
Nimitz	Harbor - Rosecrans	0.46	B	0.45	B	0.00	0.49	B	0.48	B	0.00	0.71	C	0.72	C	0.01

Source: HNTB, 2007.  
Analysis for years 2020 and 2025 presented in Appendix D.

V/C = Volume to capacity ratio  
LOS = Level of service

Legend:  

 LOS E  
 LOS F  
 Significant Impact

Table 5-3.74

2010 Intersection Turning Volumes – Total Peak Hour Traffic – Airport Implementation Plan Alternative (Without Parking Structure)

Intersection Number			NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	546	0	23	11	431	0	7	589	291	1,898
		PM	0	0	0	454	0	56	36	562	0	14	584	764	2,470
2	North Harbor Drive / McCain St	AM	0	0	0	119	0	29	154	598	0	0	920	420	2,240
		PM	0	0	0	424	0	154	33	918	0	0	1,049	151	2,729
3	North Harbor Drive / Spanish Landing	AM	5	0	18	23	0	101	68	707	4	15	1,524	0	2,465
		PM	7	0	25	23	0	85	56	1,604	18	5	1,159	0	2,982
4	North Harbor Drive / Harbor Island Drive	AM	41	2	148	19	4	36	32	633	82	241	1,846	0	3,084
		PM	153	2	330	21	4	43	27	1,502	122	466	1,285	0	3,955
5	North Harbor Drive / Winship Lane	AM	0	0	0	305	0	84	132	669	0	0	2,184	0	3,374
		PM	0	0	0	301	0	79	117	1,736	0	0	1,821	0	4,054
6	North Harbor Drive / Rental Car Road	AM	53	0	43	35	0	18	24	1,500	67	113	2,566	66	4,485
		PM	74	0	83	57	0	22	20	2,577	74	86	2,138	44	5,175
7	Sheraton / Harbor Island Drive	AM	13	107	0	0	229	99	85	6	27	0	0	0	566
		PM	23	408	0	0	524	70	77	2	25	0	0	0	1,129
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	86	0	0	62	1	269
		PM	0	0	0	0	0	55	68	95	0	0	126	1	345
9	Sassafras Street / Pacific Highway	AM	70	494	71	47	545	10	5	68	43	202	136	53	1,744
		PM	63	856	353	125	949	8	13	186	93	165	112	44	2,967
10	Laurel Street / North Harbor Drive	AM	0	0	0	24	0	4	385	1,090	0	0	1,867	40	3,410
		PM	0	0	0	72	0	11	1,108	1,907	0	0	1,602	105	4,805
11	Hawthorn Street / North Harbor Drive	AM	0	284	0	0	1,031	0	0	0	0	81	0	0	1,892
		PM	0	582	0	0	2,078	0	0	0	0	133	0	0	3,844
12	Grape Street / North Harbor Drive	AM	0	223	111	819	481	0	0	0	0	0	0	0	1,634
		PM	0	641	268	1,142	1,092	0	0	0	0	0	0	0	3,143
13	Laurel Street / Pacific Highway	AM	35	323	86	80	267	349	89	517	2	47	690	61	2,546
		PM	111	606	146	139	483	369	471	688	58	51	793	78	3,993
14	Hawthorn Street / Pacific Highway	AM	108	206	0	0	162	52	0	0	0	258	1,852	85	2,723
		PM	122	594	0	0	560	49	0	0	0	147	1,026	83	2,581
15	Grape Street / Pacific Highway	AM	0	569	161	144	800	0	62	795	32	0	0	0	2,563
		PM	0	664	448	237	544	0	51	1,591	28	0	0	0	3,563
16	Laurel Street / Kettner Boulevard	AM	0	0	0	233	321	543	0	610	45	39	240	0	2,031
		PM	0	0	0	282	601	575	0	870	79	54	291	0	2,752
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	154	82	0	0	0	156	2,495	0	2,887
		PM	0	0	0	0	401	72	0	0	0	192	1,376	0	2,041
18	Grape Street / Kettner Boulevard	AM	0	0	0	91	462	0	0	1,333	99	0	0	0	1,985
		PM	0	0	0	221	487	0	0	3,106	94	0	0	0	3,908
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	65	86	73	0	0	0	42	430	1,053	0	0	0	1,749
		PM	98	187	183	0	0	0	26	532	2,065	0	0	0	3,091
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	45	43	0	0	0	0	0	0	0	0	2,454	78	2,620
		PM	36	57	0	0	0	0	0	0	0	0	1,482	61	1,636
21	Laurel Street / India Street	AM	75	108	19	0	0	0	459	343	31	0	219	195	1,449
		PM	85	290	86	0	0	0	654	499	41	0	273	267	2,195
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	113	1,249	332	0	51	43	121	84	0	1,993
		PM	0	0	0	186	1,734	258	0	213	100	85	87	0	2,663
23	Sassafras Street / India Street	AM	194	789	11	0	0	0	110	24	50	0	33	21	1,232
		PM	180	1,326	31	0	0	0	304	60	110	0	14	17	2,042
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	185	32	53	0	64	37	148	154	0	673
		PM	0	0	0	488	49	10	0	223	51	199	80	0	1,100
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	65	11	117	26	6	18	22	0	230	312	143	47	997
		PM	37	25	199	57	55	7	55	14	592	327	207	59	1,635
26	Washington Street / Hancock Street	AM	0	258	103	321	375	0	354	165	130	0	0	0	1,706
		PM	0	652	157	343	379	0	555	331	155	0	0	0	2,572
27	Washington Street / San Diego Avenue	AM	94	579	0	0	539	536	0	0	0	174	204	7	2,133
		PM	187	1,152	0	0	571	489	0	0	0	185	276	17	2,877
28	Rosecrans Street / Pacific Highway	AM	200	148	220	99	145	61	60	173	143	301	147	86	1,783
		PM	351	287	636	120	139	67	111	459	170	246	304	129	3,019
29	Rosecrans Street / Nimitz Boulevard	AM	16	110	85	39	124	40	148	639	28	109	637	40	2,015
		PM	18	192	109	30	102	30	332	812	33	172	653	53	2,536

Source: HNTB, 2007.

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2					eb1	ebt	ebr				
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr		eb12	eb1	ebt	wbt	wbr2	wbr	

Table 5-3.75

2015 Intersection Turning Volumes – Total Peak Hour Traffic – Airport Implementation Plan Alternative (Without Parking Structure)

Intersection Number		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	601	0	22	13	519	0	8	681	340	2,184
		PM	0	0	0	476	0	55	44	677	0	17	674	893	2,836
2	North Harbor Drive / McCain St	AM	0	0	0	138	0	35	186	657	0	0	888	500	2,404
		PM	0	0	0	506	0	187	39	965	0	0	1,076	175	2,948
3	North Harbor Drive / Spanish Landing	AM	5	0	18	23	0	120	81	787	5	16	1,619	0	2,674
		PM	7	0	25	23	0	102	68	1,797	20	6	1,204	0	3,252
4	North Harbor Drive / Harbor Island Drive	AM	43	2	152	19	5	41	38	703	88	243	2,009	0	3,343
		PM	159	2	340	21	5	49	31	1,682	132	470	1,383	0	4,274
5	North Harbor Drive / Winship Lane	AM	0	0	0	352	0	97	145	729	0	0	2,364	0	3,687
		PM	0	0	0	347	0	91	129	1,915	0	0	1,935	0	4,417
6	North Harbor Drive / Rental Car Road	AM	63	0	50	39	0	19	25	1,711	78	133	2,806	75	4,999
		PM	87	0	97	63	0	23	21	2,903	87	100	2,303	50	5,734
7	Sheraton / Harbor Island Drive	AM	13	113	0	0	0	237	99	85	6	27	0	0	580
		PM	23	423	0	0	0	537	70	77	2	25	0	0	1,157
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	95	0	0	69	1	285
		PM	0	0	0	0	0	55	68	104	0	0	136	1	364
9	Sassafras Street / Pacific Highway	AM	80	591	86	56	651	11	6	79	49	248	156	65	2,078
		PM	73	1,027	424	150	1,136	9	15	207	104	202	131	54	3,532
10	Laurel Street / North Harbor Drive	AM	0	0	0	26	0	4	450	1,191	0	0	1,960	39	3,670
		PM	0	0	0	76	0	11	1,172	2,008	0	0	1,678	102	5,047
11	Hawthorn Street / North Harbor Drive	AM	0	312	0	0	1,123	0	0	0	0	87	0	2,058	3,580
		PM	0	590	0	0	2,142	0	0	0	0	145	0	1,160	4,037
12	Grape Street / North Harbor Drive	AM	0	254	110	873	506	0	0	0	0	0	0	0	1,743
		PM	0	650	261	1,186	1,096	0	0	0	0	0	0	0	3,193
13	Laurel Street / Pacific Highway	AM	41	382	108	97	322	414	102	584	2	52	777	66	2,947
		PM	131	719	176	166	576	438	507	766	62	59	885	85	4,570
14	Hawthorn Street / Pacific Highway	AM	125	247	0	0	191	63	0	0	0	267	1,971	92	2,956
		PM	142	706	0	0	660	61	0	0	0	152	1,109	89	2,919
15	Grape Street / Pacific Highway	AM	0	644	182	170	947	0	70	890	37	0	0	0	2,940
		PM	0	753	504	280	641	0	57	1,745	32	0	0	0	4,012
16	Laurel Street / Kettner Boulevard	AM	0	0	0	262	355	612	0	696	49	46	280	0	2,300
		PM	0	0	0	314	664	648	0	975	86	66	337	0	3,090
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	171	90	0	0	0	173	2,789	0	3,223
		PM	0	0	0	0	446	79	0	0	0	213	1,546	0	2,284
18	Grape Street / Kettner Boulevard	AM	0	0	0	105	524	0	0	1,431	104	0	0	0	2,164
		PM	0	0	0	256	554	0	0	3,269	99	0	0	0	4,178
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	77	102	87	0	0	0	43	437	1,129	0	0	0	1,875
		PM	117	223	218	0	0	0	26	541	2,161	0	0	0	3,286
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	48	46	0	0	0	0	0	0	0	0	2,518	77	2,689
		PM	39	61	0	0	0	0	0	0	0	0	1,538	60	1,698
21	Laurel Street / India Street	AM	98	135	23	0	0	0	525	386	53	0	258	231	1,709
		PM	113	362	106	0	0	0	740	559	59	0	323	317	2,579
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	115	1,316	348	0	60	53	139	102	0	2,133
		PM	0	0	0	189	1,803	270	0	250	118	97	103	0	2,830
23	Sassafras Street / India Street	AM	226	918	12	0	0	0	126	28	58	0	34	22	1,424
		PM	210	1,542	36	0	0	0	346	69	126	0	15	18	2,362
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	200	35	57	0	76	42	163	174	0	747
		PM	0	0	0	527	53	12	0	240	56	219	99	0	1,206
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	94	16	155	29	7	20	24	0	258	359	162	53	1,177
		PM	52	36	270	63	60	8	60	15	649	378	234	66	1,891
26	Washington Street / Hancock Street	AM	0	297	120	352	417	0	358	167	134	0	0	0	1,845
		PM	0	741	179	376	423	0	562	335	162	0	0	0	2,778
27	Washington Street / San Diego Avenue	AM	107	637	0	0	564	553	0	0	0	194	225	8	2,288
		PM	208	1,264	0	0	596	504	0	0	0	207	304	19	3,102
28	Rosecrans Street / Pacific Highway	AM	237	177	261	116	170	72	63	183	151	314	153	89	1,986
		PM	418	341	756	141	163	78	119	485	180	257	315	134	3,387
29	Rosecrans Street / Nimitz Boulevard	AM	16	121	99	14	112	15	155	671	30	124	627	40	2,024
		PM	18	203	122	11	91	11	348	852	34	183	643	52	2,568

Source: HNTB, 2007.

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2				ebl	ebt	ebr				
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr	ebl2	ebl	ebt	wbt	wbr2	wbr	



Table 5-3.76

2030 Intersection Turning Volumes – Total Peak Hour Traffic – Airport Implementation Plan Alternative (Without Parking Structure)

Intersection Number		AM	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	833	0	31	16	619	0	11	945	502	2,957
		PM	0	0	0	686	0	75	52	807	0	23	934	1,239	3,816
2	North Harbor Drive / McCain St	AM	0	0	0	158	0	41	219	883	0	0	1,084	577	2,962
		PM	0	0	0	580	0	219	46	1,265	0	0	1,295	203	3,608
3	North Harbor Drive / Spanish Landing	AM	5	0	18	24	0	170	123	1,001	7	21	1,901	0	3,270
		PM	7	0	25	24	0	145	103	2,195	28	7	1,417	0	3,951
4	North Harbor Drive / Harbor Island Drive	AM	46	4	157	19	7	74	71	868	105	268	2,326	0	3,945
		PM	167	3	350	21	7	83	59	2,027	159	529	1,614	0	5,019
5	North Harbor Drive / Winship Lane	AM	0	0	0	381	0	131	182	862	0	0	2,764	0	4,320
		PM	0	0	0	375	0	124	160	2,238	0	0	2,270	0	5,167
6	North Harbor Drive / Rental Car Road	AM	81	0	60	44	0	22	31	2,024	105	157	3,247	83	5,854
		PM	114	0	115	69	0	28	25	3,404	114	119	2,675	56	6,719
7	Sheraton / Harbor Island Drive	AM	13	123	0	0	280	99	85	6	27	0	0	0	633
		PM	23	443	0	0	624	70	77	2	25	0	0	0	1,264
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	96	0	0	71	1	288
		PM	0	0	0	0	0	55	68	105	0	0	137	1	366
9	Sassafras Street / Pacific Highway	AM	96	486	66	39	511	14	7	93	57	135	187	35	1,736
		PM	88	842	328	105	841	11	17	242	122	110	158	29	2,893
10	Laurel Street / North Harbor Drive	AM	0	0	0	17	0	3	497	1,384	0	0	2,396	48	4,345
		PM	0	0	0	49	0	7	1,250	2,237	0	0	2,060	126	5,729
11	Hawthorn Street / North Harbor Drive	AM	0	370	0	0	1,378	0	0	0	0	133	0	2,839	4,720
		PM	0	674	0	0	2,604	0	0	0	0	218	0	1,564	5,060
12	Grape Street / North Harbor Drive	AM	0	303	111	1,030	596	0	0	0	0	0	0	0	2,040
		PM	0	663	256	1,372	1,248	0	0	0	0	0	0	0	3,539
13	Laurel Street / Pacific Highway	AM	42	410	124	72	257	344	114	528	1	82	998	102	3,074
		PM	135	760	190	123	456	359	381	656	40	93	1,205	130	4,528
14	Hawthorn Street / Pacific Highway	AM	152	274	0	0	207	74	0	0	0	376	2,665	136	3,884
		PM	166	748	0	0	696	72	0	0	0	214	1,477	128	3,501
15	Grape Street / Pacific Highway	AM	0	694	184	177	991	0	99	1,141	48	0	0	0	3,334
		PM	0	800	512	290	678	0	84	2,272	42	0	0	0	4,678
16	Laurel Street / Kettner Boulevard	AM	0	0	0	352	469	698	0	928	75	65	376	0	2,963
		PM	0	0	0	420	877	769	0	1,333	133	96	458	0	4,086
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	253	131	0	0	0	216	3,470	0	4,070
		PM	0	0	0	0	654	115	0	0	0	266	1,924	0	2,959
18	Grape Street / Kettner Boulevard	AM	0	0	0	138	673	0	0	1,691	120	0	0	0	2,622
		PM	0	0	0	335	710	0	0	3,811	113	0	0	0	4,969
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	206	272	233	0	0	0	44	457	1,266	0	0	0	2,478
		PM	311	593	580	0	0	0	27	564	2,345	0	0	0	4,420
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	62	59	0	0	0	0	0	0	0	0	3,103	95	3,319
		PM	50	78	0	0	0	0	0	0	0	0	1,899	74	2,101
21	Laurel Street / India Street	AM	105	98	16	0	0	0	616	517	91	1	341	310	2,095
		PM	130	257	73	0	0	0	894	749	94	1	431	425	3,054
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	242	2,398	700	0	54	49	114	107	0	3,664
		PM	0	0	0	399	3,502	539	0	200	117	80	107	0	4,944
23	Sassafras Street / India Street	AM	251	974	13	0	0	0	118	23	48	0	43	27	1,497
		PM	234	1,640	39	0	0	0	321	57	104	0	18	22	2,435
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	511	90	147	0	115	57	173	197	0	1,290
		PM	0	0	0	1,347	134	28	0	286	72	220	155	0	2,242
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	19	0	70	24	6	17	23	0	277	318	111	36	901
		PM	33	0	84	52	51	6	56	14	635	348	160	45	1,484
26	Washington Street / Hancock Street	AM	0	260	106	311	407	0	208	97	95	0	0	0	1,484
		PM	0	567	144	333	420	0	326	194	122	0	0	0	2,106
27	Washington Street / San Diego Avenue	AM	113	584	0	0	682	665	0	0	0	277	313	12	2,646
		PM	202	1,141	0	0	721	607	0	0	0	300	423	28	3,422
28	Rosecrans Street / Pacific Highway	AM	207	155	230	144	209	88	61	176	143	312	154	88	1,967
		PM	364	297	661	174	201	98	113	464	171	257	315	133	3,248
29	Rosecrans Street / Nimitz Boulevard	AM	20	156	178	39	167	41	107	461	20	216	514	32	1,951
		PM	23	257	209	31	138	31	239	586	24	243	528	43	2,352

Source: HNTB, 2007.

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2					eb1	ebt	ebr	wbt	wbr2	wbr
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr		eb12	eb1	ebt			

Table 5-3.77

**2010-2030 Peak Hour Intersection Operations – Airport Implementation Plan Alternative  
(Without Parking Structure)**

Intersection Number	Intersection	Peak Hour	Year 2010		Year 2015		Year 2030	
			Delay (Sec.)	LOS	Delay (Sec.)	LOS	Delay (Sec.)	LOS
1	North Harbor Drive/ Nimitz Boulevard	AM	20.3	C	20.3	C	21.8	C
		PM	20.6	C	20.3	C	21.7	C
2	North Harbor Drive/ McCain Road	AM	6.8	A	7.4	A	7.9	A
		PM	9.2	A	10.0	A	10.5	B
3	North Harbor Drive/ Spanish Landing	AM	9.3	A	10.0	A	12.3	B
		PM	7.9	A	8.5	A	10.4	B
4	North Harbor Drive/ Harbor Island Drive	AM	18.0	B	17.7	B	18.6	B
		PM	30.4	C	30.8	C	34.2	C
5	North Harbor Drive/ Winship Lane	AM	17.0	B	18.1	B	19.4	B
		PM	14.0	B	15.0	B	15.9	B
6	North Harbor Drive/ Rental Car Road	AM	7.3	A	8.2	A	10.7	B
		PM	8.4	A	9.3	A	11.4	B
7	Sheraton Harbor Island Drive	AM	12.4	B	12.3	B	11.6	B
		PM	7.6	A	7.4	A	6.9	A
8	Employee Lot Harbor Island Drive	AM	9.8	A	9.9	A	9.9	A
		PM	10.1	B	10.1	B	10.2	B
9	Sassafras Street/ Pacific Highway	AM	15.3	B	15.5	B	14.2	B
		PM	15.1	B	17.5	B	14.8	B
10	Laurel Street/ North Harbor Drive	AM	9.1	A	10.0	A	10.8	B
		PM	15.4	B	16.1	B	20.1	C
11	Hawthorn Street/ North Harbor Drive	AM	30.7	C	47.3	D	179.2	F
		PM	23.0	C	24.9	C	60.0	E
12	Grape Street/ North Harbor Drive	AM	8.2	A	8.4	A	8.5	A
		PM	10.9	B	11.0	B	11.0	B
13	Laurel Street/ Pacific Highway	AM	32.1	C	33.7	C	33.9	C
		PM	48.9	D	62.1	E	61.7	E
14	Hawthorn Street/ Pacific Highway	AM	12.5	B	14.1	B	19.3	B
		PM	20.9	C	21.9	C	23.4	C
15	Grape Street/ Pacific Highway	AM	18.5	B	19.1	B	20.3	C
		PM	26.1	C	32.7	C	58.2	E
16	Laurel Street/ Kettner Boulevard	AM	18.8	B	19.5	B	22.0	E
		PM	21.2	C	22.8	C	32.2	E
17	Hawthorn Street/ Kettner Boulevard	AM	5.5	A	6.2	A	13.4	E
		PM	10.9	B	11.2	B	14.2	E
18	Grape Street/ Kettner Boulevard	AM	12.4	B	13.1	B	14.7	E
		PM	16.6	B	22.7	C	79.6	E
19	Grape Street/ I-5 Southbound On-Ramp	AM	11.1	B	10.8	B	15.3	E
		PM	27.9	C	34.5	C	89.1	E
20	Hawthorn Street/ I-5 Northbound Off-Ramp	AM	11.0	B	10.6	B	15.8	E
		PM	11.8	B	12.0	B	11.1	E
21	Laurel Street/ India Street	AM	18.4	B	19.3	B	23.1	E
		PM	21.3	C	22.9	C	32.3	E
22	Sassafras Street/ Kettner Boulevard	AM	8.7	A	9.6	A	9.8	A
		PM	11.7	B	13.2	B	66.7	E
23	Sassafras Street/ India Street	AM	8.3	A	8.4	A	8.1	E
		PM	13.8	B	17.9	B	17.7	E
24	Washington Street/ Pacific Highway SB-Ramps	AM	12.6	B	12.7	B	12.5	E
		PM	14.9	B	15.1	B	17.6	E
25	Washington Street/ Pacific Highway NB-Ramps	AM	33.5	C	46.7	D	31.6	E
		PM	68.5	E	100.5	F	79.8	E
26	Washington Street/ Hancock Street	AM	27.8	C	28.1	C	25.9	E
		PM	30.2	C	30.8	C	28.0	E
27	Washington Street/ San Diego Avenue	AM	12.5	B	13.1	B	14.9	E
		PM	13.6	B	14.1	B	16.8	E
28	Rosecrans Street/ Pacific Highway	AM	36.1	D	36.4	D	37.3	E
		PM	39.1	D	44.8	D	43.0	E
29	Rosecrans Street/ Nimitz Boulevard	AM	21.7	C	21.6	C	27.0	E
		PM	24.9	C	25.1	C	29.1	E

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

LOS = level of service

**Table 5-3.78** compares the intersection delay under the Airport Implementation Plan Alternative (Without Parking Structure) against the No Project Alternative to identify intersection impacts based on significance criteria identified in Section 5.3.3, *Traffic Impacts and Significance Criteria*, measured by an increase to LOS E or F or an increase in vehicle delay of greater than 2 seconds for intersections operating at LOS E and greater than 1 second for intersections operating at LOS F under the No Project Alternative. The following intersections would have potentially significant traffic impacts due to the project:

### **Intersections with Significant Traffic Impacts**

#### **Year 2030**

- Hawthorn Street and North Harbor Drive (AM & PM), which operates at LOS E or F in the AM and PM peak hours under both the Airport Implementation Plan Alternative (without Parking Structure) and No Project Alternative and would experience an increase in delay greater than 1 second under the Airport Implementation Plan Alternative (without Parking Structure) compared to the No Project Alternative.
- Grape Street and Kettner Boulevard (PM), which operates at LOS E in the PM peak hour under both the Airport Implementation Plan Alternative (without Parking Structure) and No Project Alternative and would experience an increase in delay greater than 2 seconds under the Airport Implementation Plan Alternative (without Parking Structure) compared to the No Project Alternative.
- Grape Street and I-5 Southbound On-Ramp (PM), which operates at F in the PM peak hours under both the Airport Implementation Plan Alternative (without Parking Structure) and No Project Alternative and would experience an increase in delay greater than 1 second under the Airport Implementation Plan Alternative (without Parking Structure) compared to the No Project Alternative.
- Sassafras Street and Kettner Boulevard (PM), which operates at LOS E and F in the PM peak hour under both the Airport Implementation Plan Alternative (without Parking Structure) and No Project Alternative and would experience an increase in delay greater than 1 second under the Airport Implementation Plan Alternative (without Parking Structure) compared to the No Project Alternative.

#### **Freeway Segments**

The traffic forecasts on freeway segments for the Implementation Plan Alternative (Without Parking Structure) would be the same as for the Implementation Plan Alternative (With Parking Structure). Therefore, operations of freeway segments in the study area would be the same for the Implementation Plan (With or Without Parking Structure). As discussed in Section ~~5.3.5.4~~ 5.3.5.3, the Implementation Plan Alternative would not have any significant freeway impacts.

#### **Freeway Ramps**

The traffic forecasts on freeway ramps for the Airport Implementation Plan Alternative (Without Parking Structure) would be the same as for the Airport Implementation Plan Alternative (With Parking Structure). Therefore, ramp operations would be the same under the Airport Implementation Plan Alternative with and without parking structure. As discussed in Section 5.3.5.4, the Airport Implementation Plan Alternative would not have any significant freeway ramp impacts.

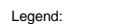

Table 5-3.78

**2010-2030 Intersection Impacts – Airport Implementation Plan Alternative  
(Without Parking Structure)**

Intersection Number	Intersection	Peak Hour	Year 2010			Year 2015			Year 2030		
			No Proj Delay (Sec.)	No-Project Delay (Sec.)	Diff. Delay (Sec.)	No Proj Delay (Sec.)	No-Project Delay (Sec.)	Diff. Delay (Sec.)	No Proj Delay (Sec.)	No-Project Delay (Sec.)	Diff. Delay (Sec.)
1	North Harbor Drive/ Nimitz Boulevard	AM	20.2	20.3	-0.1	20.4	20.3	-0.1	21.7	21.8	0.1
		PM	20.7	20.6	0.1	20.4	20.3	-0.1	21.6	21.7	0.1
2	North Harbor Drive/ McCain Road	AM	6.7	6.8	-0.1	7.2	7.4	0.2	7.6	7.9	0.3
		PM	9.1	9.2	-0.1	9.9	10.0	0.1	10.3	10.5	0.2
3	North Harbor Drive/ Spanish Landing	AM	10.1	9.3	0.8	10.9	10.0	-0.9	13.1	12.3	-0.8
		PM	8.7	7.9	0.8	9.3	8.5	-0.8	11.2	10.4	-0.8
4	North Harbor Drive/ Harbor Island Drive	AM	20.4	18.0	2.4	20.4	17.7	-2.7	21.9	18.6	-3.3
		PM	30.8	30.4	0.4	31.4	30.8	-0.6	34.9	34.2	-0.7
5	North Harbor Drive/ Winship Lane	AM	9.9	17.0	-7.1	10.6	18.1	-7.5	11.1	19.4	-8.3
		PM	9.6	14.0	-4.4	10.3	15.0	-4.7	10.7	15.9	-5.2
6	North Harbor Drive/ Rental Car Road	AM	6.7	7.3	-0.6	7.5	8.2	-0.7	9.0	10.7	-1.7
		PM	7.6	8.4	-0.8	8.5	9.3	-0.8	10.0	11.4	-1.4
7	Sheraton Harbor Island Drive	AM	12.4	12.4	0.0	12.3	12.3	0.0	11.6	11.6	0.0
		PM	7.6	7.6	0.0	7.4	7.4	0.0	6.9	6.9	0.0
8	Employee Lot Harbor Island Drive	AM	9.8	9.8	0.0	9.9	9.9	0.0	9.9	9.9	0.0
		PM	10.1	10.1	0.0	10.1	10.1	0.0	10.1	10.2	0.1
9	Sassafras Street/ Pacific Highway	AM	15.3	15.3	0.0	15.4	15.5	-0.1	14.0	14.2	0.2
		PM	14.5	15.1	-0.6	16.6	17.5	-0.9	14.1	14.8	0.7
10	Laurel Street/ North Harbor Drive	AM	9.2	9.1	0.1	10.1	10.0	-0.1	10.5	10.8	0.3
		PM	15.5	15.4	0.1	16.3	16.1	-0.2	19.4	20.1	0.7
11	Hawthorn Street/ North Harbor Drive	AM	31.8	30.7	1.1	49.6	47.3	-2.3	173.0	179.2	6.2
		PM	23.2	23.0	0.2	25.2	24.9	-0.3	55.9	60.0	4.1
12	Grape Street/ North Harbor Drive	AM	8.2	8.2	0.0	8.4	8.4	0.0	8.3	8.5	0.2
		PM	10.9	10.9	0.0	11.0	11.0	0.0	10.9	11.0	0.1
13	Laurel Street/ Pacific Highway	AM	32.1	32.1	0.0	33.7	33.7	0.0	33.7	33.9	0.2
		PM	49.0	48.9	0.1	62.4	62.1	-0.3	60.4	61.7	1.3
14	Hawthorn Street/ Pacific Highway	AM	12.6	12.5	0.1	14.3	14.1	-0.2	18.9	19.3	0.4
		PM	21.0	20.9	0.1	22.0	21.9	-0.1	23.3	23.4	0.1
15	Grape Street/ Pacific Highway	AM	18.5	18.5	0.0	19.0	19.1	-0.1	20.2	20.3	0.1
		PM	26.2	26.1	0.1	32.8	32.7	-0.1	58.5	58.2	1.7
16	Laurel Street/ Kettner Boulevard	AM	18.9	18.8	0.1	19.6	19.5	-0.1	21.9	22.0	0.1
		PM	21.4	21.2	0.2	22.9	22.8	-0.1	31.9	32.2	0.3
17	Hawthorn Street/ Kettner Boulevard	AM	5.5	5.5	0.0	6.2	6.2	0.0	13.0	13.4	0.4
		PM	10.9	10.9	0.0	11.3	11.2	-0.1	14.2	14.2	0.0
18	Grape Street/ Kettner Boulevard	AM	12.4	12.4	0.0	13.1	13.1	0.0	14.8	14.7	-0.1
		PM	16.7	16.6	0.1	22.8	22.7	-0.1	77.1	79.6	2.5
19	Grape Street/ I-5 Southbound On-Ramp	AM	11.1	11.1	0.0	8.9	10.8	1.9	15.1	15.3	0.2
		PM	28.6	27.9	0.7	35.2	34.5	-0.7	87.1	89.1	2.0
20	Hawthorn Street/ I-5 Northbound Off-Ramp	AM	11.1	11.0	0.1	10.6	10.6	0.0	15.3	15.8	0.5
		PM	11.8	11.8	0.0	12.0	12.0	0.0	11.0	11.1	0.1
21	Laurel Street/ India Street	AM	18.5	18.4	0.1	19.4	19.3	-0.1	23.0	23.1	0.1
		PM	21.4	21.3	0.1	22.9	22.9	0.0	32.4	32.3	-0.1
22	Sassafras Street/ Kettner Boulevard	AM	8.3	8.7	-0.4	9.2	9.6	-0.4	9.6	9.8	0.2
		PM	11.1	11.7	-0.6	12.5	13.2	-0.7	62.5	66.7	4.2
23	Sassafras Street/ India Street	AM	8.1	8.3	-0.2	8.2	8.4	-0.2	8.0	8.1	0.1
		PM	13.5	13.8	-0.3	17.3	17.9	-0.6	16.6	17.7	1.1
24	Washington Street/ Pacific Highway SB-Ramps	AM	12.6	12.6	0.0	12.7	12.7	0.0	12.4	12.5	0.1
		PM	14.9	14.9	0.0	15.1	15.1	0.0	17.4	17.6	0.2
25	Washington Street/ Pacific Highway NB-Ramps	AM	33.5	33.5	0.0	46.7	46.7	0.0	31.1	31.6	0.5
		PM	67.7	68.5	-0.8	107.8	100.5	-7.3	79.3	79.8	0.5
26	Washington Street/ Hancock Street	AM	27.8	27.8	0.0	28.1	28.1	0.0	25.9	25.9	0.0
		PM	30.2	30.2	0.0	30.8	30.8	0.0	28.0	28.0	0.0
27	Washington Street/ San Diego Avenue	AM	12.5	12.5	0.0	13.1	13.1	0.0	15.0	14.9	-0.1
		PM	13.6	13.6	0.0	14.1	14.1	0.0	16.8	16.8	0.0
28	Rosecrans Street/ Pacific Highway	AM	36.1	36.1	0.0	36.4	36.4	0.0	37.3	37.3	0.0
		PM	39.1	39.1	0.0	44.8	44.8	0.0	42.9	43.0	0.1
29	Rosecrans Street/ Nimitz Boulevard	AM	21.8	21.7	0.1	21.8	21.6	-0.2	26.8	27.0	0.2
		PM	25.0	24.9	0.1	25.3	25.1	-0.2	28.9	29.1	0.2

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

	LOS E
	LOS F
	Significant Impact

## **Railroad Crossings**

Forecasts of future train operations were obtained from the San Diego 2030 RTP (Mobility 2030), the 2007 LOSSAN Strategic Business Plan, and the 2000 [San Diego International Airport Master Plan Preferred Concept Alternatives Roadway Analysis](#)<sup>48</sup> report. Mobility 2030 projects that the headways for the Coaster Service will decrease from 36 minutes to 20 minutes during peak hours and from 120 minutes to 60 minutes during off-peak hours by 2030. That translates to a 44% increase in frequency during peak hours by 2030. The LOSSAN Strategic Business Plan projects that Coaster service would increase from existing 22 trains per day to 54 trains per day in 2025, consistent with the above. The LOSSAN Strategic Business Plan also projects that Amtrak Pacific Surfliner service between Los Angeles and San Diego would increase from existing 22 trips per day in 2005/2006 to 26 trains in 2015 and 32 trains in 2025. Mobility 2030 also projects that headways for the trolley Blue Line service that passes through the study area would decrease from 15 minutes to 7.5 minutes during off-peak hours by 2030. Estimated daily train operations in 2030 include 36 Amtrak trips, 78 Coaster trips, and 384 Trolley trips. For the analysis, freight train operations were estimated to increase to 4 trains per day.

**Table 5-3.79** summarizes the railroad crossing delay analysis for each analysis year under the Airport Implementation Plan Alternative. As shown, delays at all railroad crossings were estimated to be under the VHD threshold for each street segment in 2010, 2015 and 2030. As shown in [Appendix D](#), Washington Street railroad crossings exceeded the threshold of VHD in 2020 and 2025. However, due to shifts in regional background traffic described in [Section 5.3.4.5](#) [5.3.5.1](#), *Airport Trip Generation and Background Traffic*, total traffic on Washington Street in 2030 decreased causing in the VHD to decrease to a level of insignificance.

## **Transit**

Under the Airport Implementation Plan Alternative no existing or planned transit routes would be modified. Therefore, no adverse impacts would occur to transit operations and no mitigation is required.

## **Parking**

The Airport Implementation Plan Alternative (Without Parking Structure) would not remove any parking lots designated for public use. Passenger terminals also are not located close to commercial or residential areas. In addition, the Airport Implementation Plan Alternative (Without Parking Structure) would provide 500 additional airport public parking spaces at SAN Park Pacific Highway. However, demand for terminal area parking (8,400 spaces in 2015 and 10,500 spaces in 2030, as documented in the AMP facility requirements) would continue to exceed the supply of 6,880 (4,085 plus 2,795 additional spaces in an expanded surface lot adjacent to the new unit terminal and west of Terminal 2 West) under the Airport Implementation Plan Alternative (Without Parking Structure), resulting in a deficiency of 1,520 spaces in 2015 and 3,620 in 2030.

## **Terminal Curbside**

Currently 6,630 linear feet of curbside is available between all three terminals. In 2015, 7,240 linear feet of curbside is required at Terminals One and Two and the Commuter Terminal to accommodate private and commercial vehicle demand. The No Project Alternative would maintain the existing curbside supply, which would result in a curbside deficit of 610 linear feet. Under the Airport Implementation Plan Alternative (Without Parking Structure) approximately 1,000 additional linear feet of curbside would be provided on a second level at Terminal One East and there would be an airport-wide surplus of 380 linear feet in 2015. Therefore, the Airport Implementation Plan Alternative would result in favorable curbside impact compared to the No Project Alternative.

## **On-Airport Traffic Circulation**

**Table 5-3.80** shows total peak hour traffic volumes and LOS on terminal roadways under the Airport Implementation Plan Alternative (Without Parking Structure). Refer to [Figure 5.3-12](#) for Link ID Key Map.

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<sup>48</sup> Linscott, Law & Greenspan Engineers, [San Diego International Airport Master Plan Preferred Concept Alternatives Roadway Analysis](#), March 3, 2000.

As shown, all terminal roadways would operate at LOS D or better during peak hours under the Implementation Plan Alternative. Therefore, the Airport Implementation Plan Alternative (Without Parking Structure) would have no adverse on-airport traffic circulation impacts compared to the No Project Alternative, and no mitigation is required.

Table 5-3.79

**2010-2030 Railroad Crossing Operations – Airport Implementation Plan Alternative (Without Parking Structure)**

Crossing	Year 2010				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	20,400	4.76	64	No
Sassafras Street	75	14,500	3.44	24	No
Palm Street	75	900	3.44	0	No
Laurel Street	300	25,100	0.77	1	No
Hawthorn Street	150	18,400	0.77	10	No
Grape Street	300	29,000	0.77	18	No

Crossing	Year 2015				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	23,300	8.53	134	No
Sassafras Street	150	16,800	6.13	50	No
Palm Street	75	900	6.13	0	No
Laurel Street	300	28,800	0.80	1	No
Hawthorn Street	150	20,600	0.80	12	No
Grape Street	300	31,600	0.80	22	No

Crossing	Year 2030				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	19,200	9.95	126	No
Sassafras Street	75	14,700	7.18	51	No
Palm Street	75	100	7.18	0	No
Laurel Street	300	34,700	1.85	0	No
Hawthorn Street	300	26,500	1.85	44	No
Grape Street	300	37,500	1.85	83	No

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

VHD = vehicle-hours of delay

ADT = average daily traffic

Table 5-3.80

**2010-2030 On-Airport Roadway Peak Hour Operations – Airport Implementation Plan Alternative (Without Parking Structure)**

Link ID	Lanes	2010				2015				2030			
		AM	LOS	PM	LOS	AM	LOS	PM	LOS	AM	LOS	PM	LOS
1	2	384	A	317	A	459	A	381	A	525	B	439	A
2	2	315	A	267	A	380	A	324	A	450	A	386	A
3		Link Not Used				Link Not Used				Link Not Used			
4		Link Not Used				Link Not Used				Link Not Used			
5	2	69	A	49	A	79	A	57	A	75	A	54	A
6		Link Not Used				Link Not Used				Link Not Used			
7		Link Not Used				Link Not Used				Link Not Used			
8	3	402	A	341	A	483	A	412	A	599	A	514	A
9		Link Not Used				Link Not Used				Link Not Used			
10		Link Not Used				Link Not Used				Link Not Used			
11	1	161	A	187	A	183	A	211	A	220	A	255	B
12		Link Not Used				Link Not Used				Link Not Used			
13		Link Not Used				Link Not Used				Link Not Used			
14	1	57	A	50	A	65	A	57	A	77	A	67	A
15	4	563	A	528	A	666	A	623	A	819	A	769	A
16	1	12	A	12	A	12	A	12	A	12	A	12	A
17	4	608	A	566	A	719	A	668	A	884	A	824	A
18	2	484	B	458	A	576	B	543	B	691	B	656	B
19		Link Not Used				Link Not Used				Link Not Used			
20		Link Not Used				Link Not Used				Link Not Used			
21		Link Not Used				Link Not Used				Link Not Used			
22		Link Not Used				Link Not Used				Link Not Used			
23		Link Not Used				Link Not Used				Link Not Used			
24		Link Not Used				Link Not Used				Link Not Used			
25		Link Not Used				Link Not Used				Link Not Used			
26	1	41	A	89	A	48	A	103	A	47	A	102	A
27	2	68	A	56	A	81	A	68	A	123	A	103	A
28	3	124	A	108	A	143	A	125	A	194	A	169	A
29		Link Not Used				Link Not Used				Link Not Used			
30	2	552	B	514	B	657	B	611	B	814	C	759	B
31	3	593	A	603	A	705	B	713	B	860	B	860	B
32	1	12	A	9	A	14	A	10	A	18	A	12	A
33	3	581	A	594	A	691	A	703	B	842	B	848	B
34	4	81	A	58	A	93	A	67	A	93	A	66	A
35	2	494	B	521	B	588	B	615	B	693	B	720	B
36	1	87	A	73	A	104	A	88	A	150	A	128	A
37	1	453	C	472	C	542	C	562	C	642	D	659	D
38	1	41	A	49	A	45	A	53	A	51	A	61	A
39		Link Not Used				Link Not Used				Link Not Used			
40	2	180	A	149	A	209	A	173	A	301	A	251	A
41	1	34	A	24	A	37	A	26	A	53	A	38	A
42	2	147	A	124	A	172	A	147	A	248	A	213	A
43	1	35	A	28	A	40	A	33	A	75	A	62	A
44	3	181	A	153	A	212	A	180	A	323	A	275	A
45	1	14	A	12	A	16	A	14	A	20	A	17	A
46	3	195	A	164	A	228	A	194	A	343	A	293	A
47		Link Not Used				Link Not Used				Link Not Used			
48	4	342	A	340	A	395	A	391	A	543	A	530	A
49	2	181	A	153	A	212	A	180	A	323	A	275	A
50	1	21	A	45	A	22	A	48	A	34	A	73	A
51	3	202	A	198	A	234	A	228	A	357	A	348	A
52	2	164	A	162	A	190	A	187	A	275	A	271	A
53	1	38	A	36	A	44	A	41	A	82	A	77	A
54	1	20	A	17	A	23	A	19	A	33	A	26	A
55	1	6	A	5	A	7	A	5	A	13	A	9	A
56	2	40	A	29	A	44	A	31	A	66	A	47	A
57	2	617	A	634	B	733	B	749	B	917	B	930	B
58	2	59	A	68	A	66	A	75	A	100	A	112	A
59		Link Not Used				Link Not Used				Link Not Used			
60	2	454	A	413	A	523	B	478	B	586	B	547	B
61	2	408	A	381	A	471	B	441	A	532	B	507	B
62	1	45	A	32	A	52	A	37	A	54	A	39	A
63	1	132	A	117	A	145	A	129	A	182	A	160	A
64	3	540	A	498	A	616	A	570	A	714	B	668	A
65	3	517	A	502	A	593	A	574	A	691	A	672	A
66	1	147	A	175	A	167	A	197	A	200	A	238	B
67	2	370	A	327	A	426	A	377	A	491	B	434	A
68	1	27	A	59	A	32	A	68	A	35	A	75	A
69	2	388	A	380	A	449	A	438	A	512	B	499	B
70	1	0	A	0	A	0	A	0	A	0	A	0	A
71	1	0	A	0	A	0	A	0	A	0	A	0	A
72	1	9	A	6	A	10	A	7	A	14	A	10	A
73	2	54	A	38	A	62	A	44	A	68	A	49	A
74	2	388	A	380	A	449	A	438	A	512	B	499	B

Source: HNTB, 2007.

NOTE: Please refer to Figure 5.3-12 for link ID key map.

Analysis for years 2020 and 2025 presented in Appendix D.

LOS = Level of service

### 5.3.5.4 No Project Alternative

The potential impact of the No Project Alternative is described within this section.

#### Assumptions

- The No Project Alternative assumes that no Airport Land Use Plan would be developed and no projects beyond those currently included in the Airport's Capital Improvement Program (CIP) Project list would be constructed. Forecast passenger activity would be accommodated in the existing terminal and landside facilities.
- Transportation projects included in the CIP include intersection improvements at North Harbor Drive and Winship Lane. This project will improve access in and out of the Commuter Terminal at the intersection of Winship Lane and North Harbor Drive by creating an additional right hand lane to turn onto North Harbor Drive.
- An additional project under the Liberty Station Development is assumed by 2010. This project consists of signalizing the North Harbor Drive and McCain Road intersection, allowing inbound and outbound left turn movements. Currently, the intersection is unsignalized with right-in / right-out movements only.
- No additional parking would be constructed in the terminal area. As a result parking demand would continue to exceed supply within the terminal area maintaining existing constrained parking conditions. It is assumed that a portion of passengers wishing to park in the terminal area would still enter off of North Harbor Drive searching for a parking space before utilizing other remote parking facilities. Other passengers would change travel modes, and convert to curbside trips either by taxi, private vehicle or in parking shuttles from remote parking facilities.

#### Trip Generation and Terminal Distribution

**Table 5-3.81** summarizes the daily and peak hour trip generation associated with future airport passenger activity under the No Project Alternative. As shown, total airport trip generation would increase from approximately ~~94,450~~ 94,500 ADT in 2010 to ~~428,740~~ 128,750 ADT in 2030. This represents a reduction in trip generation of approximately 6,300 ADT or 4.7 percent from the Airport Implementation Plan in 2030. Trips from most airport modes were estimated to increase relative to origin and destination passenger growth. However, schedule driven modes such as public buses, and airport operated inter-terminal, employee and public parking shuttles were estimated to grow at a slower rate as many of these shuttles currently operate with excess capacity to maintain a set schedule. This results in a slight decrease in the trip generation rate from ~~4.86~~ 1.85 to 1.82 in 2010 and 2030, respectively. This has also been demonstrated by a historical downward trend witnessed at SDIA.

The distribution of passengers (and traffic) among terminals would differ among the alternatives, as shown in **Table 5-3.82**. Under existing conditions, the distribution of SDIA passengers among the terminals is approximately 55 percent at Terminal One, 40 percent at Terminal Two (East and West), and 5 percent at the Commuter Terminal. Under the No Project Alternative, the passenger split would be approximately 50 percent, 45 percent, and 5 percent at Terminal One, Terminal Two (East and West), and the Commuter Terminal, respectively, in 2015.

The change in passenger distribution between terminals would result in redistribution of traffic at the terminal access driveways along North Harbor Drive. However, as shown in **Table 5-3.82**, the change in passenger distribution would not affect the traffic pattern outside of the airport which is assumed to be the same for all alternatives.

#### Traffic Impacts

Impacts to traffic operations on streets, intersections, freeways and freeway ramps relating to the No Project Alternative are summarized below and discussed in detail in **Appendix D.2, Traffic Impacts and Significance**.

#### Street Segments

**Table 5-3.83** summarizes the street segment operations for 2010-2030 under the No Project Alternative.



Table 5-3.81

**2010-2030 Airport Trip Generation – No Project Alternative**

Activity	Year			
	2005	2010	2015	2030
<b>Airport Passenger Activity Level</b>				
Million Annual Passengers (MAP)	17.4	19.5	22.8	26.9
Million Annual O&D Passengers	16.7	18.6	21.8	25.7
Daily O&D Passengers	45,830	51,076	59,768	70,793
<b>Airport Trip Generation (1)</b>				
Daily	85,100	94,500	109,350	128,750
In	42,600	47,300	54,750	64,400
Out	42,500	47,200	54,600	64,350
AM Peak Hour	3,180	3,530	4,090	4,850
In	1,760	1,955	2,260	2,665
Out	1,420	1,575	1,830	2,185
PM Peak Hour	3,245	3,610	4,185	4,965
In	1,500	1,670	1,940	2,310
Out	1,745	1,940	2,245	2,655
<b>Trip Rate</b>				
Daily	1.86	1.85	1.83	1.82

O&amp;D = origin and destination

Notes:

(1) Includes terminals and associated facilities, SAN Park lots, rental car facilities on Rental Car Road, Employee Lot 6 on Harbor Island Drive, and north area. Does not include private vehicle trips to private off-airport parking and rental car facilities, but includes shuttle trips between these facilities and the terminals.

Source: HNTB, 2007.

Table 5-3.82

**2010-2030 Terminal Passenger Distribution – No Project Alternative**

Scenario/Year	Terminal 1	Terminal 1 East *	Terminal 2 East	Terminal 2 West	Commuter Terminal	Total
Existing						
2005	54%	0%	15%	26%	5%	100%
No Project Alternative						
2010	52%	0%	25%	19%	5%	100%
2015	51%	0%	27%	18%	4%	100%
2030	53%	0%	24%	21%	3%	100%

Source: HNTB, 2007.

\* New unit terminal under Airport Implementation Project Alternative.

Table 5-3.83

2010-2030 Street Segment Operations – No Project Alternative

Roadway	Segment	Classification	Lanes	LOS E ADT Capacity 1000s	Year 2010					Year 2015					Year 2030				
					SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS	SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS	SDIA ADT 1000s	Non-SDIA ADT 1000s	Total ADT 1000s	V/C	LOS
North Harbor Drive	West of NTC	6-Lane Prime	6D	60.0	11.2	17.7	28.9	0.48	B	12.9	20.4	33.3	0.56	B	18.8	28.5	47.3	0.79	C
	NTC - Spanish Landing	6-Lane Prime	6D	60.0	15.7	15.1	30.8	0.51	B	17.8	16.3	34.1	0.57	B	23.9	23.3	47.2	0.79	C
Spanish Landing - T2 Access	T2 Access - Harbor Island	6-Lane Prime	6D	60.0	10.7	14.9	25.6	0.43	B	11.8	16.2	28.0	0.47	B	15.4	20.7	36.1	0.60	C
	Harbor Island - T1 Access	6-Lane Prime	3+4	65.0	19.6	18.3	37.9	0.58	C	22.0	18.4	40.4	0.62	C	24.0	21.1	45.1	0.69	C
T1 Access - Winship	Winship - Flyover Merge (1)	6-Lane Prime	5+3	70.0	35.0	18.3	53.3	0.76	C	39.6	18.3	57.9	0.83	C	44.5	21.1	65.6	0.94	E
	Rental Car Rd - Laurel	6-Lane Prime	4+4	70.0	37.0	18.4	55.4	0.79	C	42.6	18.4	61.0	0.87	D	47.0	20.9	67.9	0.97	E
Laurel - Hawthorn	Hawthorn - Grape	6-Lane Prime	6D	60.0	63.6	20.8	84.4	1.41	F	73.6	20.7	94.3	1.57	F	81.9	21.7	103.6	1.73	F
	Hawthorn - Grape	6-Lane Prime	6D	60.0	41.1	15.2	56.3	0.94	E	47.5	15.4	62.9	1.05	F	55.0	18.2	73.3	1.22	F
Grape Street	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	13.7	6.7	20.4	0.82	D	15.9	7.1	23.0	0.92	E	18.7	9.7	28.4	1.13	F
	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	12.5	16.4	28.9	1.16	F	14.5	17.1	31.6	1.26	F	16.8	19.8	36.6	1.46	F
Hawthorn Street	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	12.4	23.3	35.7	1.43	F	14.4	23.7	38.1	1.52	F	16.8	24.7	41.5	1.66	F
	Harbor - Pacific	3-Lane Major 1-Way	3U	25.0	15.6	5.1	20.7	0.83	D	18.0	5.4	23.4	0.94	E	21.0	7.9	28.9	1.16	F
Kettner Blvd	Pacific - Kettner	3-Lane Major 1-Way	3U	25.0	12.6	6.0	18.6	0.75	C	14.7	6.2	20.9	0.83	D	17.1	8.7	25.9	1.03	F
	Kettner - I-5	3-Lane Major 1-Way	3U	25.0	12.6	17.2	29.8	1.19	F	14.7	19.2	33.9	1.35	F	17.1	24.5	41.6	1.66	F
Kettner - I-5	north of Washington	3-Lane Collector 1-Way	3U	25.0	0.2	7.2	7.4	0.29	A	0.2	7.2	7.4	0.30	A	0.4	4.2	4.6	0.18	A
	Washington - Sassafras	3-Lane Major 1-Way	3U	25.0	8.9	13.0	21.9	0.88	D	10.4	13.1	23.5	0.94	E	10.4	17.4	27.8	1.11	F
Laurel Street	Sassafras - Palm	3-Lane Major 1-Way	3U	25.0	9.0	11.0	20.0	0.80	D	10.5	11.9	22.4	0.90	D	10.5	14.2	24.8	0.99	E
	Palm - Laurel	3-Lane Major 1-Way	3U	25.0	7.7	8.6	16.3	0.65	C	8.9	9.5	18.4	0.74	C	8.7	12.6	21.2	0.85	D
Pacific Highway	Laurel - Hawthorn	3-Lane Major 1-Way	3U	25.0	0.0	7.2	7.2	0.29	A	0.1	7.9	8.0	0.32	A	0.3	11.4	11.7	0.47	B
	Hawthorn - Grape	3-Lane Major 1-Way	3U	25.0	0.0	14.8	14.8	0.59	C	0.1	16.8	16.9	0.68	C	0.3	21.5	21.8	0.87	D
Pacific Highway	Harbor - Pacific	4-Lane Major	4U	40.0	22.5	6.3	28.8	0.72	C	26.1	6.7	32.8	0.82	D	26.9	4.3	31.2	0.78	D
	Pacific - Kettner	4-Lane Collector	4D	30.0	18.2	7.2	25.4	0.85	E	21.4	7.8	29.2	0.97	E	21.9	12.1	34.0	1.13	F
Pacific Highway	Kettner - I-5	4-Lane Collector	4D	30.0	10.6	8.5	19.1	0.64	C	12.8	9.6	22.4	0.75	D	14.1	12.9	27.0	0.90	E
	Washington - Sassafras	6-Lane Prime	6D	50.0	4.1	22.8	26.9	0.54	B	4.8	27.3	32.1	0.64	C	5.8	19.1	24.8	0.50	B
Pacific Highway	Sassafras - Palm	6-Lane Prime	6D	50.0	6.6	17.5	24.1	0.48	B	7.7	21.0	28.7	0.57	C	9.1	16.3	25.4	0.51	B
	Palm - Laurel	6-Lane Prime	6D	50.0	6.6	18.1	24.7	0.49	B	7.7	21.7	29.4	0.59	C	9.1	15.4	24.6	0.49	B
Pacific Highway	Laurel - Hawthorn	6-Lane Major	6D	50.0	2.0	19.1	21.1	0.42	B	2.5	22.6	25.1	0.50	B	3.5	23.3	26.8	0.54	B
	Hawthorn - Grape	6-Lane Major	6D	50.0	4.7	19.6	24.3	0.49	B	5.6	23.2	28.8	0.58	C	6.8	24.1	30.9	0.62	C
Pacific Highway	Pacific - Kettner	2-Lane Collector	2U	8.0	0.0	0.9	0.9	0.11	A	0.0	0.9	0.9	0.11	A	0.0	0.1	0.1	0.01	A
	Sassafras Street	Pacific - Kettner	3U	12.0	3.1	8.3	11.4	0.95	E	4.0	9.7	13.7	1.14	F	5.2	6.1	11.3	0.94	E
Pacific Highway	Kettner-India	2-Lane Collector	2U	8.0	1.6	8.5	10.0	1.25	F	2.0	9.7	11.7	1.46	F	2.6	8.0	10.6	1.32	F
	Pacific - Kettner	4-Lane Collector	4U	30.0	3.9	16.5	20.4	0.68	D	4.7	18.6	23.3	0.78	D	6.2	12.7	18.9	0.63	C
India Street	Kettner - San Diego	5-Lane Collector	5D	30.0	3.6	23.3	26.9	0.90	E	4.2	25.5	29.7	0.99	E	5.3	22.5	27.9	0.93	E
	Laurel - Palm	2-Lane Collector	2U	8.0	7.5	8.7	16.2	2.03	F	8.8	10.2	19.0	2.38	F	8.5	12.6	21.1	2.64	F
Rosecrans Street	Palm - Sassafras	3-Lane Collector	3U	12.0	7.5	13.2	20.8	1.73	F	8.8	15.4	24.1	2.01	F	8.5	16.5	25.0	2.09	F
	Sassafras - Washington	3-Lane Collector	3U	12.0	5.4	13.5	18.8	1.57	F	6.9	14.6	21.5	1.79	F	7.4	21.5	28.9	2.41	F
Nimitz Boulevard	Barnett - Sport Arena	6-lane Major	6D	50.0	5.2	40.1	45.3	0.91	E	6.0	42.4	48.4	0.97	E	10.3	33.7	44.0	0.88	D
	Nimitz - Quimby	4-lane Major 5-lane Major	4U-5U	40.0 45.0	5.2	35.9	41.1	1.03-0.91	F-E	6.0	35.4	41.4	1.03-0.92	F-E	10.3	29.0	39.3	0.98-0.87	E-D
Nimitz Boulevard	Nimitz - Quimby	4-lane Major	4U	40.0	5.2	35.9	41.1	0.91	E	6.0	35.4	41.4	1.03	F	10.3	29.0	39.3	0.98	E
	Harbor - Rosecrans	4-lane Major	4U	40.0	9.5	8.7	18.3	0.46	B	11.0	8.5	19.5	0.49	B	16.6	11.7	28.3	0.71	C

Source: HNTB, 2007.  
Analysis for years 2020 and 2025 presented in Appendix D.

(1) Does not include traffic on flyover.  
MAP - Million Annual Passengers  
ADT - Average Daily Traffic  
LOS - Level of Service

## **Intersections**

Tables 5-3.84, 5-3.85, and 5-3.86 show the intersection turning volumes under the No Project Alternative. Table 5-3.87 summarizes the intersection operations for each analysis year under the No Project Alternative. Intersection configurations were assumed to be the same as existing conditions except for the following changes:

- North Harbor Drive and McCain Road is currently an unsignalized intersection with right-in / right-out movements only. In 2010 as part of the Liberty Station Development, this intersection is assumed to be signalized, allowing left turn movements inbound and outbound.
- In 2010, the intersection of North Harbor Drive and Winship Lane would be improved as part of the SDIA CIP to provide exclusive right turn lanes on both inbound and outbound approaches.

These changes were assumed in future year analysis for all alternatives.

## **Freeway Segments**

Table 5-3.88 summarizes the mainline freeway operations for each analysis year under the No Project Alternative. As shown, all I-5 freeway segments analyzed are projected to exceed Caltrans target of LOS C in 2010 to 2030.

## **Freeway Ramp Operations**

Table 5-3.89 summarizes the freeway ramp operations for each analysis year under the No Project Alternative. As shown, all study freeway ramps were estimated to accommodate a lower traffic volume than their set meter rates and, therefore, would have no adverse traffic impact.

## **Railroad Crossings**

Forecasts of future train operations were obtained from the San Diego 2030 RTP (Mobility 2030), the 2007 LOSSAN Strategic Business Plan, and the 2000 San Diego International Airport Master Plan Preferred Concept Alternatives Roadway Analysis<sup>49</sup> report. Mobility 2030 projects that the headways for the Coaster Service will decrease from 36 minutes to 20 minutes during peak hours and from 120 minutes to 60 minutes during off-peak hours by 2030. That translates to a 44 percent increase in frequency during peak hours by 2030. The LOSSAN Strategic Business Plan projects that Coaster service would increase from existing 22 trains per day to 54 trains per day in 2025, consistent with the above. The LOSSAN Strategic Business Plan also projects that Amtrak Pacific Surfliner service between Los Angeles and San Diego would increase from existing 22 trips per day in 2005/2006 to 26 trains in 2015 and 32 trains in 2025. Mobility 2030 also projects that headways for the trolley Blue Line service that passes through the study area would decrease from 15 minutes to 7.5 minutes during off-peak hours by 2030. Estimated daily train operations in 2030 include 36 Amtrak trips, 78 Coaster trips, and 384 Trolley trips. For the analysis, freight train operations were estimated to increase to four trains per day.

Table 5-3.90 summarizes the railroad crossing delay analysis for each analysis year under the No Project Alternative. As shown, delays at all railroad crossings were estimated to be under the VHD threshold for each street segment in 2010, 2015 and 2030. As shown in Appendix D, Washington Street railroad crossings exceeded the threshold of VHD in 2020 and 2025. However, due to shifts in regional background traffic described in Section 5.3.4.5 5.3.5.1, *Airport Trip Generation and Background Traffic*, total traffic on Washington Street in 2030 decreased causing in the VHD to decrease to a level of insignificance.

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<sup>49</sup> Linscott, Law & Greenspan Engineers, San Diego International Airport Master Plan Preferred Concept Alternatives Roadway Analysis, March 3, 2000.

Table 5-3.84

2010 Intersection Turning Volumes – Total Peak Hour Traffic – No Project Alternative

Intersection Number		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	551	0	23	11	431	0	7	589	294	1,906
		PM	0	0	0	457	0	56	36	562	0	14	584	769	2,478
2	North Harbor Drive / McCain St	AM	0	0	0	103	0	31	156	600	0	0	922	433	2,245
		PM	0	0	0	419	0	156	34	920	0	0	1,051	162	2,742
3	North Harbor Drive / Spanish Landing	AM	5	0	18	23	0	124	70	692	4	15	1,515	0	2,466
		PM	7	0	25	23	0	105	58	1,600	18	5	1,152	0	2,993
4	North Harbor Drive / Harbor Island Drive	AM	41	5	144	19	7	80	79	571	82	238	1,805	0	3,071
		PM	153	4	327	21	7	85	66	1,459	123	463	1,244	0	3,952
5	North Harbor Drive / Winship Lane	AM	0	0	0	86	0	168	68	667	0	0	2,463	241	3,693
		PM	0	0	0	105	0	198	62	1,744	0	0	2,050	228	4,387
6	North Harbor Drive / Rental Car Road	AM	53	0	43	10	0	14	16	1,541	67	113	2,637	19	4,513
		PM	74	0	83	22	0	16	15	2,637	74	86	2,188	14	5,209
7	Sheraton / Harbor Island Drive	AM	13	107	0	0	229	99	85	6	27	0	0	0	566
		PM	23	408	0	0	523	70	77	2	25	0	0	0	1,128
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	86	0	0	62	1	269
		PM	0	0	0	0	0	55	68	95	0	0	126	1	345
9	Sassafras Street / Pacific Highway	AM	60	495	71	47	546	8	4	56	37	202	111	53	1,690
		PM	56	857	353	125	950	7	11	157	81	165	94	44	2,900
10	Laurel Street / North Harbor Drive	AM	0	0	0	24	0	4	391	1,100	0	0	1,881	40	3,440
		PM	0	0	0	72	0	11	1,117	1,924	0	0	1,615	105	4,844
11	Hawthorn Street / North Harbor Drive	AM	0	284	0	0	1,041	0	0	0	0	81	0	1,907	3,313
		PM	0	582	0	0	2,095	0	0	0	0	134	0	1,064	3,875
12	Grape Street / North Harbor Drive	AM	0	223	111	826	484	0	0	0	0	0	0	0	1,644
		PM	0	641	268	1,154	1,097	0	0	0	0	0	0	0	3,160
13	Laurel Street / Pacific Highway	AM	35	315	88	80	263	349	88	523	2	48	698	60	2,549
		PM	111	600	147	138	474	369	471	696	58	52	799	77	3,992
14	Hawthorn Street / Pacific Highway	AM	115	199	0	0	157	52	0	0	0	258	1,861	86	2,728
		PM	127	588	0	0	551	50	0	0	0	147	1,034	83	2,580
15	Grape Street / Pacific Highway	AM	0	567	161	144	796	0	62	793	40	0	0	0	2,563
		PM	0	663	448	237	535	0	51	1,595	36	0	0	0	3,565
16	Laurel Street / Kettner Boulevard	AM	0	0	0	235	321	548	0	618	45	40	242	0	2,049
		PM	0	0	0	283	601	580	0	878	79	56	293	0	2,770
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	155	82	0	0	0	156	2,505	0	2,898
		PM	0	0	0	0	402	72	0	0	0	192	1,384	0	2,050
18	Grape Street / Kettner Boulevard	AM	0	0	0	92	462	0	0	1,339	91	0	0	0	1,984
		PM	0	0	0	223	487	0	0	3,116	87	0	0	0	3,913
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	65	86	73	0	0	0	42	430	1,060	0	0	0	1,756
		PM	98	187	183	0	0	0	26	532	2,077	0	0	0	3,103
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	45	43	0	0	0	0	0	0	0	0	2,464	78	2,630
		PM	36	57	0	0	0	0	0	0	0	0	1,490	61	1,644
21	Laurel Street / India Street	AM	78	109	19	0	0	0	463	343	37	0	218	195	1,462
		PM	88	292	86	0	0	0	660	499	44	0	273	267	2,209
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	113	1,256	328	0	48	40	121	80	0	1,986
		PM	0	0	0	186	1,739	255	0	208	95	85	84	0	2,652
23	Sassafras Street / India Street	AM	182	793	11	0	0	0	104	24	50	0	33	21	1,218
		PM	171	1,334	31	0	0	0	290	60	110	0	14	17	2,027
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	185	32	53	0	64	37	147	154	0	672
		PM	0	0	0	488	49	10	0	223	51	198	80	0	1,099
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	65	11	117	26	6	18	22	0	230	312	143	47	997
		PM	37	25	198	57	55	7	55	14	592	326	207	59	1,632
26	Washington Street / Hancock Street	AM	0	258	103	321	375	0	354	165	130	0	0	0	1,706
		PM	0	651	157	343	379	0	555	331	155	0	0	0	2,571
27	Washington Street / San Diego Avenue	AM	94	579	0	0	538	536	0	0	0	174	204	7	2,132
		PM	187	1,152	0	0	571	489	0	0	0	185	276	17	2,877
28	Rosecrans Street / Pacific Highway	AM	200	148	220	99	145	61	60	173	143	301	147	86	1,783
		PM	351	287	635	120	139	67	111	459	170	246	304	129	3,018
29	Rosecrans Street / Nimitz Boulevard	AM	16	111	87	39	127	40	148	639	28	111	637	40	2,023
		PM	18	194	111	30	104	30	332	812	33	173	653	53	2,543

Source:HNTB, 2007.

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2				ebl	ebt	ebr				
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr	ebl2	ebl	ebt	wbt	wbr2	wbr	

Table 5-3.85

2015 Intersection Turning Volumes – Total Peak Hour Traffic – No Project Alternative

Intersection Number		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	607	0	22	13	519	0	8	681	343	2,193
		PM	0	0	0	480	0	55	44	677	0	17	674	899	2,846
2	North Harbor Drive / McCain St	AM	0	0	0	117	0	36	188	660	0	0	890	511	2,402
		PM	0	0	0	497	0	189	40	968	0	0	1,079	183	2,956
3	North Harbor Drive / Spanish Landing	AM	5	0	18	24	0	148	82	769	5	16	1,604	0	2,671
		PM	7	0	25	24	0	125	69	1,789	20	6	1,191	0	3,256
4	North Harbor Drive / Harbor Island Drive	AM	43	6	149	19	8	91	90	633	88	240	1,950	0	3,317
		PM	159	5	337	21	8	95	75	1,630	132	467	1,329	0	4,258
5	North Harbor Drive / Winship Lane	AM	0	0	0	106	0	192	75	725	0	0	2,668	295	4,061
		PM	0	0	0	140	0	229	67	1,921	0	0	2,185	275	4,817
6	North Harbor Drive / Rental Car Road	AM	63	0	50	10	0	14	16	1,755	78	133	2,886	19	5,024
		PM	87	0	97	22	0	16	15	2,973	87	100	2,358	14	5,769
7	Sheraton / Harbor Island Drive	AM	13	113	0	0	237	99	85	6	27	0	0	0	580
		PM	23	423	0	0	537	70	77	2	25	0	0	0	1,157
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	95	0	0	69	1	285
		PM	0	0	0	0	0	55	68	104	0	0	136	1	364
9	Sassafras Street / Pacific Highway	AM	70	592	86	56	652	9	5	65	43	248	130	65	2,021
		PM	65	1,028	424	150	1,137	8	13	178	92	202	112	54	3,463
10	Laurel Street / North Harbor Drive	AM	0	0	0	26	0	4	455	1,202	0	0	1,976	39	3,702
		PM	0	0	0	76	0	11	1,182	2,027	0	0	1,691	102	5,089
11	Hawthorn Street / North Harbor Drive	AM	0	311	0	0	1,134	0	0	0	0	88	0	2,075	3,608
		PM	0	589	0	0	2,161	0	0	0	0	146	0	1,173	4,069
12	Grape Street / North Harbor Drive	AM	0	253	110	879	510	0	0	0	0	0	0	0	1,752
		PM	0	649	262	1,199	1,101	0	0	0	0	0	0	0	3,211
13	Laurel Street / Pacific Highway	AM	41	374	110	96	317	415	101	590	2	53	785	65	2,949
		PM	131	713	178	165	566	438	508	775	62	59	892	84	4,571
14	Hawthorn Street / Pacific Highway	AM	132	239	0	0	187	64	0	0	0	267	1,981	93	2,963
		PM	147	701	0	0	650	62	0	0	0	152	1,116	90	2,918
15	Grape Street / Pacific Highway	AM	0	643	182	170	943	0	70	887	46	0	0	0	2,941
		PM	0	753	504	280	632	0	58	1,749	42	0	0	0	4,018
16	Laurel Street / Kettner Boulevard	AM	0	0	0	263	355	619	0	703	49	47	281	0	2,317
		PM	0	0	0	315	664	653	0	985	86	68	340	0	3,111
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	172	90	0	0	0	173	2,800	0	3,235
		PM	0	0	0	0	448	79	0	0	0	213	1,555	0	2,295
18	Grape Street / Kettner Boulevard	AM	0	0	0	106	524	0	0	1,437	94	0	0	0	2,161
		PM	0	0	0	257	554	0	0	3,280	91	0	0	0	4,182
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	77	102	87	0	0	0	43	437	1,136	0	0	0	1,882
		PM	117	223	218	0	0	0	26	541	2,173	0	0	0	3,298
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	48	46	0	0	0	0	0	0	0	0	2,529	77	2,700
		PM	39	61	0	0	0	0	0	0	0	0	1,547	60	1,707
21	Laurel Street / India Street	AM	100	136	23	0	0	0	528	386	57	0	258	231	1,719
		PM	117	364	106	0	0	0	747	559	64	0	323	317	2,597
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	115	1,323	343	0	58	50	139	97	0	2,125
		PM	0	0	0	189	1,809	267	0	245	113	97	100	0	2,820
23	Sassafras Street / India Street	AM	212	922	12	0	0	0	119	28	58	0	34	22	1,407
		PM	200	1,550	36	0	0	0	332	69	126	0	15	18	2,346
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	200	35	57	0	76	42	163	174	0	747
		PM	0	0	0	527	53	12	0	240	56	219	99	0	1,206
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	94	16	155	29	7	20	24	0	258	359	162	53	1,177
		PM	52	36	269	63	60	8	60	15	649	378	234	66	1,890
26	Washington Street / Hancock Street	AM	0	296	120	352	417	0	358	167	134	0	0	0	1,844
		PM	0	741	179	376	423	0	562	335	162	0	0	0	2,778
27	Washington Street / San Diego Avenue	AM	107	637	0	0	564	553	0	0	0	194	225	8	2,288
		PM	208	1,263	0	0	596	504	0	0	0	207	304	19	3,101
28	Rosecrans Street / Pacific Highway	AM	237	177	261	116	170	72	63	183	151	314	153	89	1,986
		PM	418	341	756	141	163	78	119	485	180	257	315	134	3,387
29	Rosecrans Street / Nimitz Boulevard	AM	16	123	100	14	115	15	155	671	30	126	627	40	2,032
		PM	18	206	125	11	93	11	348	852	34	184	643	52	2,577

Source: HNTB, 2007.

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2	sbl	sbr2	sbr	eb1	ebt	ebr	wbt	wbr2	wbr
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr				eb1	eb1	ebt			

Table 5-3.86

2030 Intersection Turning Volumes – Total Peak Hour Traffic – No Project Alternative

Intersection Number		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Total	
1	North Harbor Drive / Nimitz Blvd	AM	0	0	0	822	0	31	16	616	0	11	943	492	2,931
		PM	0	0	0	677	0	75	52	805	0	23	932	1,231	3,795
2	North Harbor Drive / McCain St	AM	0	0	0	129	0	42	220	869	0	0	1,072	581	2,913
		PM	0	0	0	561	0	221	48	1,254	0	0	1,282	203	3,569
3	North Harbor Drive / Spanish Landing	AM	5	0	18	24	0	196	119	961	7	21	1,866	0	3,217
		PM	7	0	25	24	0	167	100	2,166	28	7	1,384	0	3,908
4	North Harbor Drive / Harbor Island Drive	AM	46	7	153	19	10	139	138	762	105	264	2,213	0	3,856
		PM	167	6	346	21	10	141	116	1,941	159	525	1,514	0	4,946
5	North Harbor Drive / Winship Lane	AM	0	0	0	102	0	224	85	848	0	0	3,030	321	4,610
		PM	0	0	0	139	0	270	74	2,234	0	0	2,493	307	5,517
6	North Harbor Drive / Rental Car Road	AM	77	0	57	10	0	14	17	2,009	100	150	3,259	18	5,711
		PM	109	0	110	21	0	17	15	3,407	109	113	2,674	14	6,589
7	Sheraton / Harbor Island Drive	AM	13	122	0	0	279	99	85	6	27	0	0	0	631
		PM	23	442	0	0	623	70	77	2	25	0	0	0	1,262
8	Employee Lot / Harbor Island Drive	AM	0	0	0	0	0	38	82	95	0	0	70	1	286
		PM	0	0	0	0	0	55	68	104	0	0	137	1	365
9	Sassafras Street / Pacific Highway	AM	81	493	66	39	508	11	6	77	50	135	154	35	1,655
		PM	77	840	328	105	838	10	15	206	106	110	133	29	2,797
10	Laurel Street / North Harbor Drive	AM	0	0	0	17	0	3	479	1,350	0	0	2,355	48	4,252
		PM	0	0	0	49	0	7	1,233	2,205	0	0	2,028	126	5,648
11	Hawthorn Street / North Harbor Drive	AM	0	355	0	0	1,344	0	0	0	0	134	0	2,814	4,647
		PM	0	662	0	0	2,572	0	0	0	0	219	0	1,544	4,997
12	Grape Street / North Harbor Drive	AM	0	288	111	1,007	585	0	0	0	0	0	0	0	1,991
		PM	0	651	256	1,353	1,236	0	0	0	0	0	0	0	3,496
13	Laurel Street / Pacific Highway	AM	42	399	126	71	251	339	109	515	1	83	983	101	3,020
		PM	135	752	192	122	444	354	377	644	40	94	1,193	129	4,476
14	Hawthorn Street / Pacific Highway	AM	152	264	0	0	202	75	0	0	0	376	2,641	137	3,847
		PM	166	740	0	0	684	73	0	0	0	214	1,458	129	3,464
15	Grape Street / Pacific Highway	AM	0	684	184	177	986	0	99	1,108	57	0	0	0	3,295
		PM	0	792	512	290	667	0	84	2,243	52	0	0	0	4,640
16	Laurel Street / Kettner Boulevard	AM	0	0	0	354	469	686	0	917	75	65	373	0	2,939
		PM	0	0	0	421	877	759	0	1,321	133	98	456	0	4,065
17	Hawthorn Street / Kettner Boulevard	AM	0	0	0	0	254	131	0	0	0	216	3,447	0	4,048
		PM	0	0	0	0	656	115	0	0	0	266	1,906	0	2,943
18	Grape Street / Kettner Boulevard	AM	0	0	0	139	673	0	0	1,669	108	0	0	0	2,589
		PM	0	0	0	337	711	0	0	3,791	103	0	0	0	4,942
19	Grape Street / I-5 Southbound On-Ramp (1)	AM	206	272	233	0	0	0	44	457	1,246	0	0	0	2,458
		PM	311	593	580	0	0	0	27	564	2,327	0	0	0	4,402
20	Hawthorn Street / I-5 Northbound Off-Ramp	AM	62	59	0	0	0	0	0	0	0	0	3,080	95	3,296
		PM	50	78	0	0	0	0	0	0	0	0	1,881	74	2,083
21	Laurel Street / India Street	AM	105	98	16	0	0	0	606	515	94	1	338	310	2,083
		PM	132	259	73	0	0	0	884	747	96	1	429	425	3,046
22	Sassafras Street / Kettner Boulevard	AM	0	0	0	242	2,387	692	0	50	45	114	99	0	3,629
		PM	0	0	0	399	3,493	533	0	191	108	80	100	0	4,904
23	Sassafras Street / India Street	AM	235	964	13	0	0	0	110	23	48	0	43	27	1,463
		PM	222	1,632	39	0	0	0	303	57	104	0	18	22	2,397
24	Washington Street / Pacific Highway SB-Ramps	AM	0	0	0	511	90	147	0	115	57	169	197	0	1,286
		PM	0	0	0	1,347	134	28	0	286	72	217	155	0	2,239
25	Washington Street / Pacific Highway NB-Ramps (1)	AM	19	0	67	24	6	17	23	0	277	313	111	36	893
		PM	33	0	80	52	51	6	56	14	635	344	160	45	1,476
26	Washington Street / Hancock Street	AM	0	256	106	312	402	0	208	97	95	0	0	0	1,476
		PM	0	562	144	333	416	0	326	194	122	0	0	0	2,097
27	Washington Street / San Diego Avenue	AM	113	581	0	0	677	665	0	0	0	277	313	12	2,638
		PM	202	1,137	0	0	718	607	0	0	0	300	423	28	3,415
28	Rosecrans Street / Pacific Highway	AM	207	155	229	144	209	88	61	176	143	312	154	88	1,966
		PM	364	297	660	174	201	98	113	464	171	256	315	133	3,246
29	Rosecrans Street / Nimitz Boulevard	AM	20	153	171	39	165	41	107	461	20	209	514	32	1,932
		PM	23	255	203	31	136	31	239	586	24	237	528	43	2,336

Source: HNTB, 2007.

Note:

(1) The numbers above for the following 5-leg intersections represent the volumes for the following movements. "2" represents the 5th leg / on-ramp.

19	Grape Street / I-5 Southbound On-Ramp	nbt	nbr	nbr2					ebl	ebt	ebr	wbt	wbr2	wbr
25	Washington Street / Pacific Highway NB-Ramps	nbl+nbl2	nbt	nbr	sbl	sbr2	sbr		ebl2	ebl	ebt	wbt	wbr2	wbr

Table 5-3.87

## 2010-2030 Peak Hour Intersection Operations – No Project Alternative

Intersection Number	Intersection	Peak Hour	Year 2010		Year 2015		Year 2030	
			Delay (Sec.)	LOS	Delay (Sec.)	LOS	Delay (Sec.)	LOS
1	North Harbor Drive/ Nimitz Boulevard	AM	20.2	C	20.4	C	21.7	C
		PM	20.7	C	20.4	C	21.6	C
2	North Harbor Drive/ McCain Road	AM	6.7	A	7.2	A	7.6	A
		PM	9.1	A	9.9	A	10.3	B
3	North Harbor Drive/ Spanish Landing	AM	10.1	B	10.9	B	13.1	B
		PM	8.7	A	9.3	A	11.2	B
4	North Harbor Drive/ Harbor Island Drive	AM	20.4	C	20.4	C	21.9	C
		PM	30.8	C	31.4	C	34.9	C
5	North Harbor Drive/ Winship Lane	AM	9.9	A	10.6	B	11.1	B
		PM	9.6	A	10.3	B	10.7	B
6	North Harbor Drive/ Rental Car Road	AM	6.7	A	7.5	A	9.0	A
		PM	7.6	A	8.5	A	10.0	A
7	Sheraton Harbor Island Drive	AM	12.4	B	12.3	B	11.6	B
		PM	7.6	A	7.4	A	6.9	A
8	Employee Lot Harbor Island Drive	AM	9.8	A	9.9	A	9.9	A
		PM	10.1	B	10.1	B	10.1	B
9	Sassafras Street/ Pacific Highway	AM	15.3	B	15.4	B	14.0	B
		PM	14.5	B	16.6	B	14.1	B
10	Laurel Street/ North Harbor Drive	AM	9.2	A	10.1	B	10.5	B
		PM	15.5	B	16.3	B	19.4	B
11	Hawthorn Street/ North Harbor Drive	AM	31.8	C	49.6	D	173.0	F
		PM	23.2	C	25.2	C	55.9	E
12	Grape Street/ North Harbor Drive	AM	8.2	A	8.4	A	8.3	A
		PM	10.9	B	11.0	B	10.9	B
13	Laurel Street/ Pacific Highway	AM	32.1	C	33.7	C	33.7	C
		PM	49.0	D	62.4	E	60.4	E
14	Hawthorn Street/ Pacific Highway	AM	12.6	B	14.3	B	18.9	B
		PM	21.0	C	22.0	C	23.3	C
15	Grape Street/ Pacific Highway	AM	18.5	B	19.0	B	20.2	C
		PM	26.2	C	32.8	C	56.5	E
16	Laurel Street/ Kettner Boulevard	AM	18.9	B	19.6	B	21.9	C
		PM	21.4	C	22.9	C	31.9	C
17	Hawthorn Street/ Kettner Boulevard	AM	5.5	A	6.2	A	13.0	B
		PM	10.9	B	11.3	B	14.2	B
18	Grape Street/ Kettner Boulevard	AM	12.4	B	13.1	B	14.8	B
		PM	16.7	B	22.8	C	77.1	E
19	Grape Street/ I-5 Southbound On-Ramp	AM	11.1	B	8.9	A	15.1	B
		PM	28.6	C	35.2	D	87.1	F
20	Hawthorn Street/ I-5 Northbound Off-Ramp	AM	11.1	B	10.6	B	15.3	B
		PM	11.8	B	12.0	B	11.0	B
21	Laurel Street/ India Street	AM	18.5	B	19.4	B	23.0	C
		PM	21.4	C	22.9	C	32.4	C
22	Sassafras Street/ Kettner Boulevard	AM	8.3	A	9.2	A	9.6	A
		PM	11.1	B	12.5	B	62.5	E
23	Sassafras Street/ India Street	AM	8.1	A	8.2	A	8.0	A
		PM	13.5	B	17.3	B	16.6	B
24	Washington Street/ Pacific Highway SB-Ramps	AM	12.6	B	12.7	B	12.4	B
		PM	14.9	B	15.1	B	17.4	B
25	Washington Street/ Pacific Highway NB-Ramps	AM	33.5	C	46.7	D	31.1	C
		PM	67.7	E	107.8	F	79.3	E
26	Washington Street/ Hancock Street	AM	27.8	C	28.1	C	25.9	C
		PM	30.2	C	30.8	C	28.0	C
27	Washington Street/ San Diego Avenue	AM	12.5	B	13.1	B	15.0	B
		PM	13.6	B	14.1	B	16.8	B
28	Rosecrans Street/ Pacific Highway	AM	36.1	D	36.4	D	37.3	D
		PM	39.1	D	44.8	D	42.9	D
29	Rosecrans Street/ Nimitz Boulevard	AM	21.8	C	21.8	C	26.8	C
		PM	25.0	C	25.3	C	28.9	C

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

LOS = level of service

Table 5-3.88

2010-2030 Freeway Segment Operations - No Project Alternative

SB I-5 Freeway		2010						2015						2030					
		AM			PM			AM			PM			AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
North of I-8	I-8	7,000	34.7	D	8,600	42.7	E	7,200	35.8	E	8,400	41.8	E	7,600	38.0	E	9,200	45.9	F
I-8	Old Town Avenue	7,100	35.4	E	7,400	37.1	E	7,300	36.4	E	7,400	36.9	E	7,500	37.5	E	8,400	42.0	E
Old Town Avenue	Washington Street	5,800	29.1	D	6,200	30.7	D	6,000	29.9	D	6,200	31.1	D	5,500	27.6	D	6,400	31.7	D
Washington Street	Pacific Highway Viaducts	6,200	31.2	D	6,500	32.4	D	6,400	32.1	D	6,600	33.1	D	6,100	30.4	D	7,000	34.8	D
Pacific Highway Viaducts	India Street	7,200	35.8	E	8,200	41.1	E	7,300	36.7	E	8,400	41.9	E	6,700	33.4	D	8,300	41.3	E
India Street	Hawthorn Street	7,300	36.3	E	8,400	41.9	E	7,500	37.4	E	8,400	41.7	E	6,900	34.5	D	8,600	42.7	E
Hawthorn Street	First Avenue	6,100	30.5	D	7,500	37.4	E	6,300	31.4	D	7,400	36.8	E	5,600	28.0	D	7,800	38.8	E
First Avenue	SR 163	6,500	32.3	D	9,300	46.5	F	6,600	33.1	D	9,400	46.8	F	6,100	30.4	D	9,800	48.9	F
SR 163	SR 94	3,700	18.4	C	5,300	26.3	D	3,900	19.4	C	5,400	26.7	D	3,600	18.2	C	5,500	27.2	D
NB I-5 Freeway		2010						2015						2030					
		AM			PM			AM			PM			AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
SR 94	SR 163	10,900	54.4	F	7,700	38.4	E	11,400	56.7	F	7,900	39.5	E	10,700	53.4	F	7,500	37.2	E
SR 163	First Avenue	8,400	41.7	E	7,800	39.0	E	8,600	42.7	E	7,900	39.3	E	8,100	40.3	E	7,600	38.0	E
First Avenue	Hawthorn Street	7,000	35.0	D	6,500	32.2	D	7,100	35.4	E	6,500	32.3	D	6,300	31.3	D	6,100	30.6	D
Hawthorn Street	India Street	7,200	35.9	E	7,700	38.5	E	7,300	36.3	E	7,700	38.5	E	6,400	31.9	D	7,900	39.5	E
India Street	Pacific Highway Viaducts	7,200	35.7	E	7,600	37.7	E	7,200	36.1	E	7,600	37.8	E	6,400	31.7	D	7,200	35.8	E
Pacific Highway Viaducts	Washington Street	5,300	26.4	D	6,500	32.2	D	5,100	25.2	C	6,100	30.6	D	4,400	21.8	C	5,900	29.6	D
Washington Street	Old Town Avenue	6,000	29.8	D	7,100	35.5	E	6,100	30.5	D	7,200	35.7	E	5,600	27.8	D	7,100	35.4	E
Old Town Avenue	I-8	5,900	29.2	D	7,300	36.4	E	6,100	30.2	D	7,400	36.8	E	5,300	26.5	D	7,200	35.7	E
I-8	North of I-8	7,400	36.7	E	7,500	37.2	E	7,400	37.1	E	7,700	38.2	E	7,500	37.4	E	8,600	42.9	E
I-8 Freeway		2010						2015						2030					
		AM			PM			AM			PM			AM			PM		
From	To	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS	Volume (vph)	Density (pc/mi/ln)	LOS
I-5	East	5,800	29.1	D	7,900	39.2	E	5,900	29.4	D	7,800	38.9	E	4,900	24.4	C	7,400	37.1	E
East	I-5	7,100	35.6	E	7,200	36.1	E	7,200	35.7	E	7,600	37.8	E	7,300	36.2	E	7,100	35.4	E

Source: HNTB, 2007

Analysis for years 2020 and 2025 presented in Appendix D.

Notes: vph = vehicles per hour  
 pc/mi/ln = passenger cars per mile per lane  
 LOS = level of service



Table 5-3.89

**2010-2030 Freeway Ramp Operations – No Project Alternative**

Location	Peak Hour	2010					2015					2030				
		Demand (veh/hr)	Maximum Meter Rate (veh/hr)	Excess Demand (veh/hr)	Delay (minutes)	Queue (feet)	Demand (veh/hr)	Maximum Meter Rate (veh/hr)	Excess Demand (veh/hr)	Delay (minutes)	Queue (feet)	Demand (veh/hr)	Maximum Meter Rate (veh/hr)	Excess Demand (veh/hr)	Delay (minutes)	Queue (feet)
I-5 NB from San Diego	AM	799	1,992	0	0	0	525	1,992	0	0	0	890	1,992	0	0	0
	PM	871	1,992	0	0	0	505	1,992	0	0	0	707	1,992	0	0	0
I-5 NB from India	AM	763	1,992	0	0	0	1,039	1,992	0	0	0	1,319	1,992	0	0	0
	PM	824	1,992	0	0	0	1,113	1,992	0	0	0	1,648	1,992	0	0	0
I-5 SB from Kettner	AM	101	996	0	0	0	119	996	0	0	0	87	996	0	0	0
	PM	178	996	0	0	0	125	996	0	0	0	165	996	0	0	0
I-5 SB from Washington/Hancock	AM	476	1,140	0	0	0	481	1,140	0	0	0	594	1,140	0	0	0
	PM	276	1,140	0	0	0	289	1,140	0	0	0	477	1,140	0	0	0

Source: HNTB, 2007.

Analysis for years 2020 and 2025 presented in Appendix D.

veh/hr = vehicles per hour

Table 5-3.90

**2010-2030 Railroad Crossing Vehicle-Hour Delay – No Project Alternative**

Crossing	Year 2010				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	20,400	4.76	64	No
Sassafras Street	75	13,500	3.44	22	No
Palm Street	75	900	3.44	0	No
Laurel Street	300	25,400	0.77	1	No
Hawthorn Street	150	18,600	0.77	10	No
Grape Street	300	28,900	0.77	18	No

Crossing	Year 2015				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	23,300	8.53	134	No
Sassafras Street	150	15,700	6.13	46	No
Palm Street	75	900	6.13	0	No
Laurel Street	300	29,200	0.80	1	No
Hawthorn Street	150	20,900	0.80	13	No
Grape Street	300	31,600	0.80	22	No

Crossing	Year 2030				
	VHD Threshold	ADT Volume	Total gate down time per day (hours)	VHD	Exceeds VHD Limit
Washington Street	150	18,900	9.95	124	No
Sassafras Street	75	13,300	7.18	45	No
Palm Street	75	100	7.18	0	No
Laurel Street	300	34,000	1.85	0	No
Hawthorn Street	300	25,900	1.85	42	No
Grape Street	300	36,600	1.85	78	No

Source: HNTB, 2007

Analysis for years 2020 and 2025 presented in Appendix D.

VHD = vehicle-hours of delay

ADT = average daily traffic

## **Transit**

Under the No Project Alternative no existing or planned transit routes would be modified. Therefore, no adverse impacts would occur to transit operations.

## **Parking**

The No Project Alternative would not remove any parking lots designated for public use. Passenger terminals also are not located close to commercial or residential areas. However, as documented in the AMP facility requirements the demand for terminal area parking spaces (8,400 in 2015 and 10,500 in 2030) will continue to exceed the supply of 4,085 spaces, resulting in a deficit of approximately 4,300 spaces in 2015 and 6,400 in 2030.

## **Terminal Curbside**

7,250 linear feet of curbside is required at Terminals One and Two and the Commuter Terminal to accommodate private and commercial vehicle demand in 2015. Currently 6,630 linear feet of curbside is available between all three terminals. Under the No Project Alternative no new curbside would be provided and there would be an airport-wide deficiency of 620 linear feet in 2015.

## **On-Airport Traffic Circulation**

**Table 5-3.91** shows the on-airport roadway peak hour traffic volumes and operation (see **Figure 5.3-11** **Figure 5.3-13** for Link ID Key Map) for each analysis year under the No Project Alternative. As shown, all terminal roadways would operate at acceptable LOS D or better during peak hours under the No Project Alternative.

Volumes and LOS shown represent throughput capacity of the on-Airport roadways but do not represent specific curbside operations.

Table 5-3.91

2010-2030 On-Airport Roadway Peak Hour Operations – No Project Alternative

Link ID	Lanes	2010				2015				2030			
		AM	LOS	PM	LOS	AM	LOS	PM	LOS	AM	LOS	PM	LOS
1	2	396	A	326	A	464	A	386	A	512	B	430	A
2	2	319	A	272	A	388	A	332	A	439	A	378	A
3		Link Not Used				Link Not Used				Link Not Used			
4		Link Not Used				Link Not Used				Link Not Used			
5	2	76	A	54	A	76	A	54	A	73	A	52	A
6		Link Not Used				Link Not Used				Link Not Used			
7		Link Not Used				Link Not Used				Link Not Used			
8	3	407	A	347	A	494	A	422	A	585	A	503	A
9		Link Not Used				Link Not Used				Link Not Used			
10		Link Not Used				Link Not Used				Link Not Used			
11	1	185	A	206	A	210	A	234	A	244	B	274	B
12		Link Not Used				Link Not Used				Link Not Used			
13		Link Not Used				Link Not Used				Link Not Used			
14	1	79	A	69	A	91	A	79	A	105	A	91	A
15	4	593	A	553	A	704	A	656	A	829	A	777	A
16	1	12	A	12	A	12	A	12	A	12	A	12	A
17	4	660	A	610	A	783	A	723	A	922	A	856	A
18	2	513	B	482	B	611	B	574	B	703	B	665	B
19		Link Not Used				Link Not Used				Link Not Used			
20		Link Not Used				Link Not Used				Link Not Used			
21		Link Not Used				Link Not Used				Link Not Used			
22		Link Not Used				Link Not Used				Link Not Used			
23		Link Not Used				Link Not Used				Link Not Used			
24		Link Not Used				Link Not Used				Link Not Used			
25		Link Not Used				Link Not Used				Link Not Used			
26	1	46	A	99	A	46	A	99	A	46	A	99	A
27	2	70	A	58	A	82	A	69	A	119	A	100	A
28	3	147	A	128	A	171	A	149	A	219	A	191	A
29		Link Not Used				Link Not Used				Link Not Used			
30	2	583	B	540	B	693	B	643	B	822	C	765	B
31	3	629	A	639	A	740	B	742	B	868	B	865	B
32	1	14	A	10	A	13	A	10	A	17	A	12	A
33	3	615	A	629	A	727	B	732	B	851	B	853	B
34	4	90	A	64	A	89	A	64	A	90	A	64	A
35	2	527	B	554	B	621	B	642	B	705	B	727	B
36	1	88	A	75	A	106	A	90	A	146	A	125	A
37	1	463	C	486	C	550	C	568	C	625	D	642	D
38	1	64	A	69	A	71	A	74	A	80	A	85	A
39		Link Not Used				Link Not Used				Link Not Used			
40	2	589	B	541	B	670	B	618	B	777	B	724	B
41	1	68	A	49	A	68	A	48	A	65	A	46	A
42	2	521	B	492	B	602	B	570	B	712	B	677	B
43	1	84	A	70	A	96	A	80	A	145	A	122	A
44	3	605	A	562	A	698	A	650	A	857	B	800	B
45	1	36	A	30	A	42	A	35	A	49	A	42	A
46		Link Not Used				Link Not Used				Link Not Used			
47		Link Not Used				Link Not Used				Link Not Used			
48	4	641	A	592	A	740	A	685	A	906	A	842	A
49	2	456	A	386	A	530	B	451	A	662	B	568	B
50	1	42	A	90	A	41	A	89	A	41	A	89	A
51	3	498	A	476	A	571	A	540	A	703	B	657	A
52	2	407	A	392	A	468	A	446	A	550	B	516	B
53	1	91	A	84	A	103	A	95	A	153	A	140	A
54	1	49	A	39	A	55	A	44	A	65	A	54	A
55	1	13	A	9	A	13	A	9	A	16	A	12	A
56	4	81	A	58	A	81	A	57	A	81	A	58	A
57	2	870	B	877	B	1,018	B	1,014	B	1,175	C	1,159	C
58	2	106	A	114	A	119	A	124	A	168	A	172	A

Source: HNTB, 2007

NOTE: Please refer to Figure 5.3-13 for link ID key map.  
 Analysis for years 2020 and 2025 presented in Appendix D.

LOS = Level of service

### 5.3.6 Construction Impacts

The Proposed Project (Preferred Alternative) or the Airport Implementation Plan Alternative (East Terminal) ~~Alternative~~ would create construction impacts to traffic and circulation from increases in traffic volumes on project area roadways. These impacts would be considered less-than-significant due to their temporary nature. But in order to minimize disruption to travelers and neighbors, SDIA has committed to the following two activities in order to mitigate construction activities on the surrounding environment. These activities are expected to further ameliorate less-than-significant impacts and will be included in the Mitigation, Monitoring and Reporting Program as additional actions taken by the SDCRAA.

Establish a Construction Coordination Office within the Ground Transportation Department. This office would operate during the life of the Proposed Project (Preferred Alternative) construction period to coordinate deliveries, monitor traffic conditions, advise motorists about detours, congested areas, and alternative parking areas, and monitor and enforce delivery times and routes. SDIA will periodically analyze traffic conditions on designated routes during construction to evaluate and optimize the transportation system during the construction period.

This office will undertake a variety of duties, including but not limited to:

- Inform motorists about detours, alternative parking, and congestion by use of static or changeable message signs, media announcements, airport website, airport information roadway radio station, etc;
- Work with police to enforce delivery times and routes, including specified truck routes;
- Establish staging areas;
- Coordinate with emergency response agencies to maintain emergency access and response times;
- Coordinate Caltrans, and city roadway projects with SDIA projects so as to minimize impacts to travel;
- Monitor and coordinate deliveries;
- Establish detour routes;
- Work with neighbors to address their concerns regarding construction activity traffic;

Analyze traffic conditions to determine the need for additional traffic controls, communication, signal modifications, lane restriping, rerouting, etc.

Require Orientation for Construction Personnel. All construction personnel will be required through contractual means to participate in an SDIA project specific orientation that includes where to park, where staging areas are located, construction policies, delivery routes, detours, airport construction area driving protocol, etc., in addition to airport safety and security issues training.

There would be a temporary and unavoidable increase in traffic volumes on project area roadways during construction of the Proposed Project (Preferred Alternative) due to traffic generated by trucks hauling materials and equipment, and construction workers commuting to and from SDIA. Construction worker and truck trips were estimated by the San Diego International Airport Program Study Construction Schedule Estimation.<sup>50</sup> Equipment, crews and activity durations were provided in a conceptual schedule to show how the SDCRAA would most likely complete project elements and the program in the required sequence to maintain an operating airport. This construction schedule was produced for this EIR primarily to analyze impacts to air quality from construction activities, but is also used also to analyze impacts to traffic and circulation.

The critical issue relating to project construction involves maintenance of traffic in the immediate construction zone, and handling the additional traffic related to transportation of construction materials and crews. No construction traffic would be expected to use residential streets to access SDIA.

<sup>50</sup> SDIA, Airport Program Study, *DEIR Construction Schedule Used for Air Quality Analysis*, January 2006.

Construction workers would be expected to generate few peak hour trips because their work shifts typically start before the morning peak and end before the evening peak. All workers would be expected to park on-site at SDIA. Construction-related truck trips that would occur while the peak numbers of employees are present would be minimal, with construction materials and equipment being hauled during off-peak hours. There would be some circumstances, for instance when concrete pours are being made to construct the parking structure, there would be up to one truck every seven minutes from 7:00 a.m. to 4:00 p.m., or eight to nine truck trips per hour during the a.m. peak hour. Because these impacts are temporary, no significant impacts are anticipated and no mitigation measures are required. It should be noted, however, that the contractor will prepare a traffic control plan as part of construction contract in order to ensure that construction worker and truck trip are minimized during a.m. peak hours and will not use residential streets to access SDIA.

Because construction is a short-term activity and would be expected to follow plans and rules that minimize affects, no significant impacts to traffic and circulation are expected.

### **5.3.7 Cumulative Impacts**

All traffic analysis presented in this section was conducted using data from the Regional Transportation Model maintained by SANDAG (excluding airport traffic). SANDAG provided existing and forecast traffic for 2005, 2010, and 2015. This “background” traffic was added to forecasts of SDIA generated traffic associated with the Airport and specific projects alternatives. SANDAG traffic forecasts include traffic associated with all approved plans and projects incorporated in SANDAG’s model.

Traffic forecasts for future years include traffic associated with approved plans/projects included in SANDAG’s Series 10 forecasts including but not limited to:

- Naval Training Center/Liberty Station Precise Plan/EIR (January 2000/September 2001)
- North Embarcadero Visionary Plan Final EIR (April 2000)

The Series 10 forecast does not include the following projects, which had not been accepted by the San Diego City Council at the time of the model run. However, the Series 10 forecasts assumed development at these locations based on General Plan Zoning that is assumed to be similar or more intense than land uses assumed in the following EIRs:

- Old Police Headquarters and Park Project Draft EIR (July 2005) or Final EIR (February 2006)
- Centre City Development Corporation (CCDC) Master Plan Draft EIR (July 2005) or Final EIR (January 2006)
- Woodfin Suites Hotel and Port Master Plan Amendment Project Draft EIR (March 2006)

Since SANDAG forecasts account for all approved plans and projects within the region, all traffic estimates used in the study account for cumulative traffic. Therefore, traffic impacts presented in this study represent cumulative impacts anticipated in the study area under each alternative. In addition the implementation of the Airport Land Use Plan describe a maximum development scenario accommodating regional growth at SDIA and represent a worst case development impact scenario for SDIA. Mitigation measures for these impacts are presented in Section 5.3.8, *Mitigation Measures*.

### **5.3.8 Mitigation Measures/Other Improvements**

All significant impacts resulting from implementation of the Proposed Project that includes the Proposed Airport Implementation Plan and Proposed Airport Land Use Plan, and the East Terminal Alternative that includes the Airport Implementation Plan Alternative, and Proposed Airport Land Use Plan are identified in previous sections. For each significant impact, mitigation measures are provided below.

All alternatives, including the ~~No Project Alternative~~, would result in potentially significant impacts to traffic and circulation by 2030. The future airport uses under the Proposed Airport Land Use Plan describe a maximum development scenario accommodating regional growth at SDIA and represent a worst case development impact scenario. This analysis is provided to inform the public and agencies responsible for transportation and circulation facilities of the effects of accommodating regional growth. Future projects developed under the Proposed Airport Land Use Plan and not included in the Proposed Airport Implementation Plan will be 1) evaluated to ensure consistency with the adopted Proposed Airport Land

Use Plan and 2) reviewed at a project-level to determine if any significant impacts to traffic and circulation may occur and incorporate the mitigation measures required by the Proposed Airport Land Use Plan. Implementation of any proposed mitigation measures will require coordination between the SDCRAA and the agency responsible for the transportation facilities (i.e. the City of San Diego for city-dedicated streets) in order to mitigate any significant impacts.

Roadway segments, intersections and arterial roadways in the project area are within the responsibility and jurisdiction of the City and not the SDCRAA. Freeway ramps and operations in the project area are within the responsibility and jurisdiction of Caltrans and not the SDCRAA. Although the SDCRAA does not have the authority to impose mitigation measures affecting transportation and circulation facilities within the responsibility and jurisdiction of another public agency, SDCRAA would coordinate with the City and Caltrans in implementing necessary mitigation measures and recommends that the following mitigation measures ~~be considered as results of future regional growth to mitigate the Proposed Project's traffic impacts.~~ While the Airport Authority operates under strict provisions required by certain FAA grant assurances that restrict the use of airport funds outside of the airport boundaries, the FAA has indicated that they are willing to consider whether or not the use of airport revenue may be permitted for funding certain off-airport transportation mitigation measures that provide direct access to the airport. However, the FAA's determination will not be known until a final, approved mitigation package is available for discussion with the FAA.

The mitigation measures identified below would reduce traffic impacts to a level of less than significant. However, the roadway segments, intersection, arterial roadways, and freeway ramps and operations are within the legal authority, responsibility and jurisdiction of the City or Caltrans, not SDCRAA. As such, SDCRAA lacks the legal authority to ensure that these other agencies will implement the mitigation measures necessary to render the traffic impacts less than significant. Thus, if these agencies do not implement the mitigation measures identified and adopted by SDCRAA, it is possible that the traffic impacts of the Project will remain significant after Project implementation.

As described in Section 5.3.3, *Traffic Impacts and Significance Criteria*, significance criteria used to determine potentially significant impacts for freeway segments and metered on-ramps, street/roadway segments, intersections and parking were derived from the City of San Diego Development Services Department's CEQA Significance Determination Thresholds guidelines dated January 2007; significance criteria for railroad crossings were derived from the California Utilities Commission, and best practice management was used to determine significance criteria for transit, parking, terminal curbsides and on-airport roadways. ~~Mitigation measures are proposed in this section for each potentially significant impact. Per Section O, *Transportation/Circulation and Parking*, of the City of San Diego's CEQA Significance Determination Thresholds dated January 2007 (described in Section 5.3.3, *Traffic Impacts and Significance Criteria*, of this DEIR FEIR), mitigation measures have been identified to (1) restore/and maintain the traffic facility to an acceptable Level of Service defined by the City of San Diego to be LOS D or better and (2) mitigate the project's direct significant and/or cumulatively considerable traffic impacts. In many cases these proposed mitigation measures are the same. Per Section O, *Transportation/Circulation and Parking*, of the City of San Diego's CEQA Significance Determination Thresholds dated January 2007, traffic mitigation measures are required to reduce the project's direct significant and/or cumulatively considerable traffic impacts. Where the Proposed Project causes a significant traffic impact, as defined under the CEQA Significance Determination Thresholds, the following identifies mitigation measures which reduce that level below the applicable threshold. In addition, while not required by CEQA or San Diego's significance guidelines, as a matter of policy, the EIR identifies other traffic improvement measures aimed at restoring traffic caused by general regional growth to LOS D or better. These improvement measures are identified for informational purposes only. Sometimes the mitigation measure aimed at reducing the Project's direct or cumulative impact to less than significant also achieves the effect of restoring traffic to acceptable levels (defined by San Diego as LOS D or better); however, in other instances, additional traffic improvement measures are identified to restore traffic caused by regional growth to acceptable levels (defined by San Diego as LOS D or better). While mitigation measures reduce all impacts of the Proposed Project to a level of less than significant, in some instances, no practicable traffic improvements were identified to restore traffic caused by general regional growth to LOS D or better. In such instances, because the traffic is not caused by the Proposed Project, but rather by general regional growth, this is not considered a significant and unavoidable impact.~~

The sections that follow differentiate between measures which are "mitigation" required under CEQA

because they reduce a Project impact, and “other improvements” which are aimed at reducing traffic caused by regional growth and restoring traffic to acceptable levels (defined as LOS D). Measures which are aimed at reducing the impact of the Proposed Project are labeled “Mitigation” and the verb “to mitigate” is used. Measures which are aimed at going beyond mitigation required by CEQA and restoring traffic caused by general regional growth to LOS D or better are referred to as “Other Improvements” and the term “mitigation” is not used.

### **5.3.8.1 Street Segments**

Any potentially significant impacts to street segments in the study area resulting from implementation of each alternative compared to the No Project Alternative are identified below along with potential mitigation measures. Subsequent to implementation of any required mitigation a peak hour roadway analysis would be conducted as part of a mitigation feasibility study to determine the feasibility, effectiveness and implementation details of specific mitigation including direction of lanes to be added. Street segments in the study area are within the jurisdiction of the City of San Diego.

#### **Proposed Airport Implementation Plan (With Parking Structure)**

The following mitigation ~~described below is~~ were identified to mitigate potentially significant Project impacts for street segments and to restore traffic conditions to No Project levels with potentially significant traffic impacts. In addition, as requested by the city of San Diego, ~~W~~ where mitigation to No Project ~~remain below LOS D conditions and acceptable LOS conditions (defined by the City of San Diego to be LOS D) differs,~~ separate ~~mitigation measures~~ potential improvements are identified. Operations after implementation of proposed mitigation compared to No Project conditions is shown on [Tables 5-3.92 and 5-3.93](#) and, if necessary, additional ~~mitigation~~ potential improvements to LOS D or better conditions is shown on [Tables 5-3.94 and 5-3.95](#) for informational purposes.

#### **Year 2010**

- **Sassafras Street between Pacific Highway and Kettner Boulevard:**
  - Mitigation: Provide one additional eastbound travel lane for a total of two westbound and two eastbound travel lanes to mitigate to No Project conditions.
  - Other Improvements: This improvement will also ~~mitigate~~ improve the segment to an acceptable level of service C through 2030.
- **Sassafras Street between Kettner Boulevard and India Street:**
  - Mitigation: Provide one additional eastbound travel lane for a total of one westbound and two eastbound travel lanes to mitigate to No Project conditions.
  - Other Improvements: Provide one additional eastbound and one additional westbound travel lane for a total of two westbound and two eastbound to ~~mitigate~~ improve the segment to LOS B through 2030.

Sassafras Street provides a major east-west connection between Pacific Highway and Kettner Boulevard with direct access to southbound I-5 and India Street with direct access to northbound I-5. Sassafras has limited total capacity with three lanes and capacity of 12,000 ADT between Pacific Highway and Kettner Boulevard and only two lanes and a capacity of 8,000 ADT between Kettner Boulevard and India Street. Under existing conditions the segment between Pacific Highway and Kettner Boulevard has 9,700 ADT and operates at LOS D and the segment between Kettner Boulevard and India Street has 9,400 ADT (1,400 ADT over capacity) and operates at LOS F.

Once the segment of Sassafras Street between Pacific Highway and India Street is operating at LOS F as it is under both the existing and 2010 and beyond No Project conditions it only requires 80 additional daily vehicle trips from the project to trigger a significant impact. Similarly once the segment of Sassafras Street between Pacific Highway and Kettner Boulevard is operating at LOS E as it is under the 2010 and beyond No Project conditions it only requires 240 additional daily vehicle trips from the project to trigger a significant impact.



Table 5-3.92

**Street Segment Operations with Mitigation (2010 and 2015) - Mitigate to No Project Condition  
Airport Implementation Plan (with Parking Structure)**

Roadway	Segment		Year 2010		Year 2015	
			V/C	LOS	V/C	LOS
Kettner Blvd	Sassafras - Palm	No Project	<del>0.89</del>	D	0.897	D
		Project - No Mitigation	<del>0.84</del>	D	0.901	E
		Project - With Mitigation	0.67	D	0.751	D
Sassafras Street	Pacific - Kettner	No Project	0.95	E	1.14	F
		Project - No Mitigation	0.97	E	1.17	F
		Project - With Mitigation	0.39	B	0.47	C
	Kettner-India	No Project	1.25	F	1.46	F
		Project - No Mitigation	1.27	F	1.48	F
		Project - With Mitigation	0.85	E	0.99	E

Source: HNTB, 2007.

Table 5-3.93

**Street Segment Operations with Mitigation (2030) - Mitigate to No Project Condition  
Airport Implementation Plan (with Parking Structure)**

Roadway	Segment		Year 2030	
			V/C	LOS
North Harbor Drive	T1 Access - Winship	No Project	0.94	E
		Project - No Mitigation	1.01	F
		Project - With Mitigation	0.94	E
	Winship - Rental Car Rd	No Project	0.97	E
		Project - No Mitigation	1.03	F
		Project - With Mitigation	0.96	E
	Rental Car Rd - Laurel	No Project	1.73	F
		Project - No Mitigation	1.79	F
		Project - With Mitigation	1.65	F
	Laurel - Hawthorn	No Project	1.22	F
		Project - No Mitigation	1.27	F
		Project - With Mitigation	1.17	F
Grape Street	Harbor - Pacific	No Project	1.13	F
		Project - No Mitigation	1.17	F
		Project - With Mitigation	0.97	E
	Pacific - Kettner	No Project	1.46	F
		Project - No Mitigation	1.50	F
		Project - With Mitigation	1.25	F
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation	1.69	F
		Project - With Mitigation	1.41	F
Hawthorn Street	Harbor - Pacific	No Project	1.16	F
		Project - No Mitigation	1.20	F
		Project - With Mitigation	1.00	E
	Pacific - Kettner	No Project	1.03	F
		Project - No Mitigation	1.06	F
		Project - With Mitigation	0.89	E
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation	1.69	F
		Project - With Mitigation	1.41	F
Kettner Blvd	Washington - Sassafras	No Project	1.11	F
		Project - No Mitigation	1.14	F
		Project - With Mitigation	0.95	E
	Sassafras - Palm	No Project	0.99	E
		Project - No Mitigation	1.02	F
		Project - With Mitigation	0.85	E
Laurel Street	Pacific - Kettner	No Project	1.13	F
		Project - No Mitigation	1.15	F
		Project - With Mitigation	0.87	D
Sassafras Street	Pacific - Kettner	No Project	0.94	E
		Project - No Mitigation	0.99	E
		Project - With Mitigation	0.40	B
	Kettner-India	No Project	1.32	F
		Project - No Mitigation	1.36	F
		Project - With Mitigation	0.91	E
India Street	Laurel - Palm	No Project	2.64	F
		Project - No Mitigation	2.68	F
		Project - With Mitigation	1.79	F
	Palm - Sassafras	No Project	2.09	F
		Project - No Mitigation	2.11	F
		Project - With Mitigation	0.84	E
	Sassafras - Washington	No Project	2.41	F
		Project - No Mitigation	2.42	F
		Project - With Mitigation	0.97	E

Source: HNTB, 2007.

Table 5-3.94

**Mitigate Improve to LOS D Condition (2010 and 2015)  
Airport Implementation Plan (with Parking Structure)**

*Mitigation-Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Roadway	Segment		Year 2010		Year 2015	
			V/C	LOS	V/C	LOS
Kettner Blvd	Sassafras - Palm	No Project	0.80	D	0.90	D
		Project - No Mitigation Improvement	0.84	D	0.90	E
		Project - With Mitigation Improvement	0.67	D	0.75	D
Sassafras Street	Pacific - Kettner	No Project	0.95	E	1.14	F
		Project - No Mitigation Improvement	0.97	E	1.17	F
		Project - With Mitigation Improvement	0.39	B	0.47	C
	Kettner-India	No Project	1.25	F	1.46	F
		Project - No Mitigation Improvement	1.27	F	1.48	F
		Project - With Mitigation Improvement	0.34	B	0.40	B

Source: HNTB, 2007.

Table 5-3.95

**Mitigate Improve to LOS D Condition (2030)**  
**Airport Implementation Plan (with Parking Structure)**

*Mitigation Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Roadway	Segment		Year 2030	
			V/C	LOS
North Harbor Drive	T1 Access - Winship	No Project	0.94	E
		Project - No Mitigation Improvement	1.01	F
		Project - With Mitigation Improvement	0.88	D
	Winship - Rental Car Rd	No Project	0.97	E
		Project - No Mitigation Improvement	1.03	F
		Project - With Mitigation Improvement	0.90	D
	Rental Car Rd - Laurel	No Project	1.73	F
		Project - No Mitigation Improvement	1.79	F
		Project - With Mitigation Improvement	1.34	F
	Laurel - Hawthorn	No Project	1.22	F
		Project - No Mitigation Improvement	1.27	F
		Project - With Mitigation Improvement	0.95	E
Grape Street	Harbor - Pacific	No Project	1.13	F
		Project - No Mitigation Improvement	1.17	F
		Project - With Mitigation Improvement	0.73	C
	Pacific - Kettner	No Project	1.46	F
		Project - No Mitigation Improvement	1.50	F
		Project - With Mitigation Improvement	0.83	D
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation Improvement	1.69	F
		Project - With Mitigation Improvement	0.84	D
Hawthorn Street	Harbor - Pacific	No Project	1.16	F
		Project - No Mitigation Improvement	1.20	F
		Project - With Mitigation Improvement	0.75	C
	Pacific - Kettner	No Project	1.03	F
		Project - No Mitigation Improvement	1.06	F
		Project - With Mitigation Improvement	0.67	C
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation Improvement	1.69	F
		Project - With Mitigation Improvement	0.85	D
Kettner Blvd	Washington - Sassafras	No Project	1.11	F
		Project - No Mitigation Improvement	1.14	F
		Project - With Mitigation Improvement	0.71	C
	Sassafras - Palm	No Project	0.99	E
		Project - No Mitigation Improvement	1.02	F
		Project - With Mitigation Improvement	0.64	C
Laurel Street	Pacific - Kettner	No Project	1.13	F
		Project - No Mitigation Improvement	1.15	F
		Project - With Mitigation Improvement	0.87	D
Sassafras Street	Pacific - Kettner	No Project	0.94	E
		Project - No Mitigation Improvement	0.99	E
		Project - With Mitigation Improvement	0.40	B
	Kettner-India	No Project	1.32	F
		Project - No Mitigation Improvement	1.36	F
		Project - With Mitigation Improvement	0.36	B
India Street	Laurel - Palm	No Project	2.64	F
		Project - No Mitigation Improvement	2.68	F
		Project - With Mitigation Improvement	0.71	D
	Palm - Sassafras	No Project	2.09	F
		Project - No Mitigation Improvement	2.11	F
		Project - With Mitigation Improvement	0.63	C
	Sassafras - Washington	No Project	2.41	F
		Project - No Mitigation Improvement	2.42	F
		Project - With Mitigation Improvement	0.73	C

Source: HNTB, 2007.

## Year 2015

- All mitigation identified in Year 2010
- Mitigation: Kettner Boulevard between Sassafras Street and Palm Street which increased from LOS D under No Project to LOS E with Project: Provide one additional travel lane for a total of four travel lanes one-way to mitigate to No Project conditions.
- Other Improvements: This improvement will also ~~mitigate~~ improve the segment to an acceptable level of service C through 2015.

## Year 2030

- All mitigation identified in Year 2015
- North Harbor Drive between Terminal One Access and Winship Lane:
  - Mitigation: Provide one additional travel lane for a total of nine travel lanes to mitigate to No Project conditions through 2030. This segment is currently a maximum eight-lane configuration per City's roadway classification for Primary Arterial. A new roadway classification (9-lane Primary Arterial) would be required and corresponding capacity values defined to analyze the impact of the added lane.
  - Other Improvements: This improvement will also ~~mitigate~~ improve the segment to LOS D or better through 2025.
  - Other Improvements: Two additional travel lanes for a total of ten travel lanes would be required in 2030 to ~~mitigate~~ improve the segment to LOS D conditions.
- North Harbor Drive between Winship Lane and Rental Car Road:
  - Mitigation: Provide one additional travel lane for a total of nine travel lanes to mitigate to No Project conditions through 2030. This segment is currently a maximum eight-lane configuration per City's roadway classification for Primary Arterial. A new roadway classification (9-lane Primary Arterial) would be required and corresponding capacity values defined to analyze the impact of the added lane.
  - Other Improvements: This improvement would ~~mitigate~~ improve the street segment to LOS D or better through 2020.
  - Other Improvements: Two additional travel lanes for a total of ten travel lanes, 10-lane Prime configuration, would be required in 2025 and 2030 to ~~mitigate~~ improve the segment to LOS D conditions.
- North Harbor Drive between Rental Car Access Road and Laurel Street:
  - Mitigation: Provide one additional travel lane for a total of 7 lanes to mitigate to No Project conditions through 2030.
  - Other Improvements: A 10-lane Prime configuration (4 additional travel lanes) is not adequate to mitigate to LOS D or better in 2025 and 2030 and no ~~feasible mitigation is available to mitigate to LOS D conditions.~~ practicable traffic improvement is available. However, because the Project is not the cause of the traffic levels being below LOS D, no mitigation is required and this is not a significant impact.
- North Harbor Drive between Laurel Street and Hawthorn Street:
  - Mitigation: Provide one additional travel lane for a total of 7 lanes to mitigate to No Project conditions through 2030 and to LOS D or better in 2010 where it operates at LOS E with and without the project.
  - Other Improvements: 10-lane Prime configuration is required (4 additional travel lanes) to ~~mitigate~~ improve the segment to LOS D or better in 2025.
  - Other Improvements: A 10-lane Prime configuration (4 additional travel lanes) is not adequate to mitigate to LOS D or better in 2025 and 2030 and no ~~feasible mitigation is~~

~~available to mitigate to LOS D conditions.~~ practicable traffic improvement is available.  
However, because the Project is not the cause of the traffic levels being below LOS D, no mitigation is required and this is not a significant impact.

- Grape Street between North Harbor Drive and I-5:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes, which would require prohibiting parking on one side of Grape, to mitigate to No Project conditions through 2030.
  - Other Improvements: Two additional travel lanes for a total of 5 lanes (5-lane Major configuration) would be required between North Harbor Drive and Kettner to ~~mitigate~~ improve the segment to LOS C and D through 2030.
  - Other Improvements: Three additional travel lanes for a total of 6 lanes (6-lane Major) would be required between Kettner and I-5 to ~~mitigate~~ improve the segment to LOS D conditions.
- Hawthorn Street between North Harbor Drive and I-5:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes, which would require prohibiting parking on one side of Hawthorn, to mitigate to No Project conditions.
  - Other Improvements: A 4-lane Major classification would be required to ~~mitigate~~ improve the segment from North Harbor Drive to Kettner Boulevard to LOS C through 2030.
  - Other Improvements: Three additional lanes (6-lane Major one-way) would be required between Kettner Boulevard and I-5 to ~~mitigate~~ improve the segment to LOS D conditions in 2030.
- Kettner Boulevard between Washington Street and Sassafras Street:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes one-way to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the segment to LOS D in 2015 where it operates at LOS F with and without the project.
  - Other Improvements: A 4-lane Major classification would be required to ~~mitigate~~ improve the segment to LOS C through 2030.
- Kettner Boulevard between Sassafras Street and Palm Street:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes one-way mitigate to No Project conditions.
  - Other Improvements: These improvements would also ~~mitigate~~ improve the segment to LOS D in 2015.
  - Other Improvements: A 4-lane Major classification would be required to ~~mitigate~~ improve the segment to LOS C through 2030.
- Laurel Street between Pacific Highway and Kettner Boulevard: Reclassify from 4-Lane Collector to 4-Lane Major to mitigate to No Project conditions. This improvement would also ~~mitigate~~ improve the segment to LOS D.
  - Mitigation: Reclassify from 4-Lane Collector to 4-Lane Major to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the segment to LOS D.
- India Street between Laurel Street and Palm Street:
  - Mitigation: Provide one additional travel lane for a total of 3 lanes one-way which would require prohibiting on-street parking to mitigate to No Project conditions.
  - Other Improvements: A 4-lane Collector configuration would be required to ~~mitigate~~ improve the segment to LOS D or better through 2030.

- India Street between Palm Street and Washington Street:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes one-way which would require prohibiting on-street parking to mitigate to No Project conditions.
  - Other Improvements: This segment is currently classified as a 3-lane collector and a re-classification to 4-lane major would be required to ~~mitigate~~ improve the segment to LOS D conditions.

### **Proposed Airport Implementation Plan (Without Parking Structure)**

The following mitigation is identified for street segments with potentially significant traffic impacts. Where mitigation to No Project conditions and acceptable LOS conditions (defined by the City of San Diego to be LOS D) differs, separate mitigation measures are identified. Operations after implementation of proposed mitigation to No Project conditions is shown on [Tables 5-3.96 and 5-3.97](#) and, if necessary, additional ~~mitigation~~ improvements to LOS D or better conditions is shown on [Tables 5-3.98 and 5-3.99](#) for informational purposes.

#### **Year 2010**

- Sassafras Street between Kettner Boulevard and India Street:
  - Mitigation: Provide one additional eastbound travel lane for a total of one westbound and two eastbound travel lanes to mitigate to No Project conditions.
  - Other Improvements: Provide one additional eastbound and one additional westbound travel lanes for a total of two westbound and two eastbound to ~~mitigate~~ improve the segment to LOS B through 2030.

See Section 5.3.8.1 for a description of Sassafras Street.

#### **Year 2015**

- All mitigation identified in Year 2010:
- Kettner Boulevard between Sassafras Street and Palm Street which increased from LOS D under No Project to LOS E with Project:
  - Mitigation: Provide one additional travel lane for a total of four travel lanes one-way to mitigate to No Project conditions
  - Other Improvements: This improvement ~~which~~ also provides LOS D conditions through 2030.
- Sassafras Street between Pacific Highway and Kettner Boulevard:
  - Mitigation: Provide one additional eastbound travel lane for a total of two westbound and two eastbound travel lanes to mitigate to No Project conditions.
  - Other Improvements: This improvement will also ~~mitigate~~ improve the segment to an acceptable LOS C or better through 2030.

#### **Year 2030**

- All mitigation identified in Year 2015:
- North Harbor Drive between Terminal 1 Access and Winship Lane:
  - Mitigation: Provide one additional travel lane for a total of nine lanes to mitigate to No Project conditions. This segment is currently a maximum eight-lane configuration per City's roadway classification for Primary Arterial. A new roadway classification (9-lane Primary Arterial) would be required and corresponding capacity values defined to analyze the impact of the added lane.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the segment to LOS D conditions.

Table 5-3.96

**Street Segment Operations with Mitigation (2010 and 2015) - Mitigate to No Project Condition  
Implementation Plan (without Parking Structure)**

Roadway	Segment	Scenario	Year 2010		Year 2015	
			V/C	LOS	V/C	LOS
Kettner Blvd	Sassafras - Palm	No Project	<del>0.80</del>	D	0.90	D
		Project - No Mitigation	<del>0.84</del>	D	0.90	E
		Project - With Mitigation	0.50	B	0.56	C
Sassafras Street	Pacific - Kettner	No Project	<del>0.95</del>	E	1.14	F
		Project - No Mitigation	<del>0.97</del>	E	1.17	F
		Project - With Mitigation	0.39	B	0.47	C
	Kettner-India	No Project	1.25	F	1.46	F
		Project - No Mitigation	1.27	F	1.48	F
		Project - With Mitigation	0.84	E	0.99	E

Source: HNTB, 2007.



Table 5-3.97

**Street Segment Operations with Mitigation (2030) - Mitigate to No Project Condition  
Airport Implementation Plan (without Parking Structure)**

Roadway	Segment	Scenario	Year 2030	
			V/C	LOS
North Harbor Drive	T1 Access - Winship	No Project	0.94	E
		Project - No Mitigation	0.98	E
		Project - With Mitigation	0.92	D
	Winship - Rental Car Rd	No Project	0.97	E
		Project - No Mitigation	1.01	F
		Project - With Mitigation	0.94	E
	Rental Car Rd - Laurel	No Project	1.73	F
		Project - No Mitigation	1.78	F
		Project - With Mitigation	1.64	F
Laurel - Hawthorn	No Project	1.22	F	
	Project - No Mitigation	1.26	F	
	Project - With Mitigation	1.16	F	
Grape Street	Pacific - Kettner	No Project	1.46	F
		Project - No Mitigation	1.49	F
		Project - With Mitigation	1.24	F
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation	1.68	F
Project - With Mitigation	1.40	F		
Hawthorn Street	Harbor - Pacific	No Project	1.16	F
		Project - No Mitigation	1.19	F
		Project - With Mitigation	0.99	E
	Pacific - Kettner	No Project	1.03	F
		Project - No Mitigation	1.06	F
		Project - With Mitigation	0.88	E
		Kettner - I-5	No Project	1.66
Project - No Mitigation	1.69	F		
Project - With Mitigation	1.41	F		
Kettner Blvd	Washington - Sassafras	No Project	1.11	F
		Project - No Mitigation	1.14	F
		Project - With Mitigation	0.95	E
	Sassafras - Palm	No Project	0.99	E
		Project - No Mitigation	1.02	F
Project - With Mitigation	0.85	E		
Laurel Street	Pacific - Kettner	No Project	1.13	F
		Project - No Mitigation	1.16	F
		Project - With Mitigation	0.87	D
Sassafras Street	Pacific - Kettner	No Project	0.94	E
		Project - No Mitigation	0.99	E
		Project - With Mitigation	0.40	B
	Kettner-India	No Project	1.32	F
		Project - No Mitigation	1.36	F
Project - With Mitigation	0.91	E		
India Street	Laurel - Palm	No Project	2.64	F
		Project - No Mitigation	2.68	F
		Project - With Mitigation	1.79	F
	Palm - Sassafras	No Project	2.09	F
		Project - No Mitigation	2.11	F
Project - With Mitigation	0.84	E		

Source: HNTB, 2007.

Table 5-3.98

**Mitigate Improve to LOS D Condition (2010 and 2015)  
Airport Implementation Plan (without Parking Structure)**

*Mitigation-Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Roadway	Segment	Scenario	Year 2010		Year 2015	
			V/C	LOS	V/C	LOS
Kettner Blvd	Sassafras - Palm	No Project	<del>0.80</del>	D	0.90	D
		Project - No Mitigation Improvement	<del>0.84</del>	D	0.90	E
		Project - With Mitigation Improvement	0.50	B	0.56	C
Sassafras Street	Pacific - Kettner	No Project	<del>0.95</del>	E	1.14	F
		Project - No Mitigation Improvement	<del>0.97</del>	E	1.17	F
		Project - With Mitigation Improvement	0.39	B	0.47	C
Kettner-India	Kettner-India	No Project	1.25	F	1.46	F
		Project - No Mitigation Improvement	1.27	F	1.48	F
		Project - With Mitigation Improvement	0.34	B	0.40	B

Source: HNTB, 2007.

Table 5-3.99

**Mitigate Improve to LOS D Condition (2030)  
Implementation Plan (without Parking Structure)**

*Mitigation Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Roadway	Segment	Scenario	Year 2030	
			V/C	LOS
North Harbor Drive	T1 Access - Winship	No Project	0.94	E
		Project - No Mitigation Improvement	0.98	E
		Project - With Mitigation Improvement	0.92	D
	Winship - Rental Car Rd	No Project	0.97	E
		Project - No Mitigation Improvement	1.01	F
		Project - With Mitigation Improvement	0.88	D
	Rental Car Rd - Laurel	No Project	1.73	F
		Project - No Mitigation Improvement	1.78	F
		Project - With Mitigation Improvement	1.33	F
	Laurel - Hawthorn	No Project	1.22	F
		Project - No Mitigation Improvement	1.26	F
		Project - With Mitigation Improvement	0.94	E
Grape Street	Harbor - Pacific	No Project	1.13	F
		Project - No Mitigation Improvement	1.15	F
		Project - With Mitigation Improvement	0.72	C
	Pacific - Kettner	No Project	1.46	F
		Project - No Mitigation Improvement	1.49	F
		Project - With Mitigation Improvement	0.83	D
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation Improvement	1.68	F
		Project - With Mitigation Improvement	0.84	D
Hawthorn Street	Harbor - Pacific	No Project	1.16	F
		Project - No Mitigation Improvement	1.19	F
		Project - With Mitigation Improvement	0.74	C
	Pacific - Kettner	No Project	1.03	F
		Project - No Mitigation Improvement	1.06	F
		Project - With Mitigation Improvement	0.66	C
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation Improvement	1.69	F
		Project - With Mitigation Improvement	0.84	D
Kettner Blvd	Washington - Sassafras	No Project	1.11	F
		Project - No Mitigation Improvement	1.14	F
		Project - With Mitigation Improvement	0.71	C
	Sassafras - Palm	No Project	0.99	E
		Project - No Mitigation Improvement	1.02	F
		Project - With Mitigation Improvement	0.64	C
Laurel Street	Pacific - Kettner	No Project	1.13	F
		Project - No Mitigation Improvement	1.16	F
		Project - With Mitigation Improvement	0.87	D
Sassafras Street	Pacific - Kettner	No Project	0.94	E
		Project - No Mitigation Improvement	0.99	E
		Project - With Mitigation Improvement	0.40	B
	Kettner-India	No Project	1.32	F
		Project - No Mitigation Improvement	1.36	F
		Project - With Mitigation Improvement	0.36	B
India Street	Laurel - Palm	No Project	2.64	F
		Project - No Mitigation Improvement	2.68	F
		Project - With Mitigation Improvement	0.71	D
	Palm - Sassafras	No Project	2.09	F
		Project - No Mitigation Improvement	2.11	F
		Project - With Mitigation Improvement	0.63	C

Source: HNTB, 2007.

- North Harbor Drive between Winship Lane and Rental Car Access Road:
  - Mitigation: Provide one additional travel lane for a total of nine lanes to mitigate to No Project conditions. This segment is already at maximum eight-lane configuration per City's roadway classification for Primary Arterial. A new roadway classification (9-lane Primary Arterial) would be required and corresponding capacity values defined to be able to analyze the impact of the added lane.
  - Other Improvements: 10 lanes would be required to ~~mitigate~~ improve the segment to LOS D through 2030.
- North Harbor Drive between Rental Car Access Road and Laurel Street:
  - Mitigation: Provide one additional travel lane for a total of 7 lanes to mitigate to No Project conditions through 2030.
  - Other Improvements: A 10-lane Prime configuration (4 additional travel lanes) is not adequate to ~~mitigate~~ improve the segment to LOS D or better in 2025 and 2030 and no feasible ~~mitigation~~ improvement is available due to limited right-of-way available along San Diego Bay.
- North Harbor Drive between Laurel Street and Hawthorn Street:
  - Mitigation: Provide one additional travel lane for a total of 7 lanes to mitigate to No Project conditions until 2030, and to LOS D or better in 2010.
  - Other Improvements: A 10-lane Prime configuration (4 additional travel lanes) is not adequate to ~~mitigate~~ improve the segment to LOS D or better in 2025 and 2030 and no feasible ~~mitigation~~ improvement is available to mitigate to LOS D conditions due to limited right-of-way available along San Diego Bay.
- Grape Street between North Harbor Drive and I-5:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes, which would require prohibiting parking on one side of Grape Street, to mitigate to No Project conditions through 2030.
  - Other Improvements: Two additional travel lanes for a total of 5 lanes (5-lane Major configuration) would be required between North Harbor Drive and Kettner Boulevard to ~~mitigate~~ improve the segment to LOS C and D through 2030.
  - Other Improvements: Three additional travel lanes for a total of 6 lanes (6-lane Major configuration) would be required between Kettner and I-5 to ~~mitigate~~ improve street segments to LOS D conditions.
- Hawthorn Street between North Harbor Drive and I-5 Boulevard:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes, which would require prohibiting parking on one side of Hawthorn, to mitigate to No Project conditions.
  - Other Improvements: A 4-lane Major classification would be required to ~~mitigate~~ improve the segment from North Harbor Drive to Kettner Boulevard to LOS C in 2030.
  - Other Improvements: Three additional lanes (6-lane Major one-way) would be required to ~~mitigate~~ improve the segment between Kettner Boulevard and I-5 to mitigate to LOS D conditions in 2030.
- Kettner Boulevard between Washington Street and Sassafras Street:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes one-way to mitigate to No Project conditions.
  - Other Improvements: This improvement would also mitigate the segment to LOS D in 2015 where it operates at LOS E with and without the project.

- Other Improvements: A 4-lane Major classification would be required to ~~mitigate~~ improve the segment to LOS C through 2030.
- Kettner Boulevard between Sassafras Street and Palm Street:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes one-way to mitigate to No Project conditions
  - Other Improvements: A 4-lane Major classification would be required to ~~mitigate~~ improve the segment to LOS C through 2030.
- Laurel Street between Pacific Highway and Kettner Boulevard:
  - Mitigation: Reclassify from 4-Lane Collector to 4-Lane Major to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the segment to LOS D.
- India Street between Laurel Street and Palm Street:
  - Mitigation: Provide one additional travel lane for a total of 3 lanes one-way, which would require prohibiting on-street parking to mitigate to No Project conditions.
  - Other Improvements: Two additional lanes for a total 4-lane one-way configuration would be required to ~~mitigate~~ improve the segment to LOS D in 2030.
- India Street between Palm Street and Sassafras Street:
  - Mitigation: Provide one additional travel lane for a total of four lanes one-way; would require removal on-street parking to widen India Street to mitigate to No Project conditions.
  - Other Improvements: A 4-lane Major configuration/reclassification is required to ~~mitigate~~ improve street segments to LOS D or better in 2030.

### **Proposed Airport Land Use Plan**

The following mitigation is identified for street segments with potentially significant traffic impacts. Where mitigation to No Project conditions and acceptable LOS conditions (defined by the City of San Diego to be LOS D) differs, separate mitigation measures are identified. Operations after implementation of proposed mitigation to No Project conditions are shown in [Table 5-3.100](#) and, if necessary, additional ~~mitigation~~ improvements to LOS D conditions are shown in [Table 5-3.101](#) for informational purposes.

### **Year 2015**

- North Harbor Drive between Rental Car Access Road and Laurel Street:
  - Mitigation: Provide 4 additional travel lanes for a total of 10 lanes (5 westbound + 5 eastbound) to mitigate to No Project conditions
  - Other Improvements: A 10-lane Prime configuration (4 additional travel lanes) is not adequate to ~~mitigate~~ improve the segment to LOS D or better in 2015 and 2030 and no feasible ~~mitigation~~ improvement is available to ~~mitigate~~ improve the segment to LOS D conditions due to limited right-of-way available along San Diego Bay.
- North Harbor Drive between Laurel Street and Hawthorn Street:
  - Mitigation: Provide 4 additional travel lanes for a total of 10 lanes to mitigate to No Project conditions through 2030 and to LOS D in 2015.
  - Other Improvements: 10 lanes not adequate to ~~mitigate~~ improve the segment to LOS D in 2020 through 2030 and no feasible ~~mitigation~~ improvement is available to mitigate to LOS D conditions due to limited right-of-way available along San Diego Bay.

Table 5-3.100

### Street Segment Operations with Mitigation (2015 and 2030) - Mitigate to No Project Condition Proposed Airport Land Use Plan

Roadway	Segment		Year 2015		Year 2030	
			V/C	LOS	V/C	LOS
North Harbor Drive	T1 Access - Winship	No Project			0.94	E
		Project - No Mitigation			1.05	F
		Project - With Mitigation	0.78	G	0.92	D
	Winship - Rental Car Rd	No Project			0.97	E
		Project - No Mitigation			1.05	F
		Project - With Mitigation	0.79	C	0.92	D
	Rental Car Rd - Laurel	No Project	1.57	F	1.73	F
		Project - No Mitigation	1.79	F	2.01	F
		Project - With Mitigation	1.34	F	1.51	F
	Laurel - Hawthorn	No Project	1.05	F	1.22	F
		Project - No Mitigation	1.22	F	1.45	F
		Project - With Mitigation	0.91	D	1.09	F
	Hawthorn - Grape	No Project			0.82	C
		Project - No Mitigation			0.97	E
		Project - With Mitigation	0.76	G	0.90	D
Grape Street	Harbor - Pacific	No Project	0.92	E	1.13	F
		Project - No Mitigation	1.05	F	1.31	F
		Project - With Mitigation	0.88	E	1.09	F
	Pacific - Kettner	No Project	1.26	F	1.46	F
		Project - No Mitigation	1.40	F	1.64	F
		Project - With Mitigation	1.16	F	1.37	F
	Kettner - I-5	No Project	1.52	F	1.66	F
		Project - No Mitigation	1.64	F	1.82	F
		Project - With Mitigation	1.37	F	1.52	F
Hawthorn Street	Harbor - Pacific	No Project	0.94	E	1.16	F
		Project - No Mitigation	1.08	F	1.36	F
		Project - With Mitigation	0.90	E	1.13	F
	Pacific - Kettner	No Project	0.83	D	1.03	F
		Project - No Mitigation	0.95	E	1.19	F
		Project - With Mitigation	0.79	D	0.99	E
	Kettner - I-5	No Project	1.35	F	1.66	F
		Project - No Mitigation	1.47	F	1.61	F
		Project - With Mitigation	1.22	F	1.34	F
Kettner Blvd	Washington - Sassafras	No Project	0.94	E	1.11	F
		Project - No Mitigation	1.01	F	1.20	F
		Project - With Mitigation	0.63	C	0.75	C
	Sassafras - Palm	No Project	0.90	D	0.99	E
		Project - No Mitigation	0.96	E	1.07	F
		Project - With Mitigation	0.60	C	0.67	C
	Palm - Laurel	No Project			0.85	D
		Project - No Mitigation			0.92	E
		Project - With Mitigation	0.67	D	0.77	D
Laurel Street	Harbor - Pacific	No Project	0.82	D		
		Project - No Mitigation	0.90	E		
		Project - With Mitigation	0.80	D	0.77	G
	Pacific - Kettner	No Project	0.97	E	1.13	F
		Project - No Mitigation	1.05	F	1.22	F
		Project - With Mitigation	0.79	D	0.91	E
Sassafras Street	Pacific - Kettner	No Project	1.14	F	0.94	E
		Project - No Mitigation	1.33	F	1.04	F
		Project - With Mitigation	0.53	C	0.42	B
	Kettner-India	No Project	1.46	F	1.32	F
		Project - No Mitigation	1.60	F	1.40	F
		Project - With Mitigation	1.07	F	0.93	E
	Kettner - San Diego	No Project	0.99	E	0.93	E
		Project - No Mitigation	1.02	F	0.98	E
		Project - With Mitigation	0.77	D	0.73	C
India Street	Laurel - Palm	No Project	2.38	F	2.64	F
		Project - No Mitigation	2.60	F	2.89	F
		Project - With Mitigation	1.73	F	1.92	F
	Palm - Sassafras	No Project	2.01	F	2.09	F
		Project - No Mitigation	2.16	F	2.25	F
		Project - With Mitigation	0.86	E	0.90	E
	Sassafras - Washington	No Project	1.79	F	2.41	F
		Project - No Mitigation	2.22	F	2.82	F
		Project - With Mitigation	0.89	E	1.13	F
Rosecrans	Barnett - Sport Arena	No Project	0.97	E	0.88	D
		Project - No Mitigation	0.99	E	0.93	E
		Project - With Mitigation	0.83	C	0.78	C
	Nimitz Quimby - Barnett	No Project	1.03 0.92	F-E	0.98-0.87	E-D
		Project - No Mitigation	1.07-0.95	F-E	1.05-0.93	F-E
		Project - With Mitigation	0.95-0.85	E-D	0.93-0.84	E-D
	Nimitz - Quimby	No Project	1.03	F	0.98	E
		Project - No Mitigation	1.07	F	1.05	F
		Project - With Mitigation	0.95	E	0.93	E

Source: HNTB, 2007.

Table 5-3.101

### Street Segment Operations with Mitigation (2015 and 2030) - Mitigate Improve to LOS D Condition Proposed Airport Land Use Plan

*Mitigation Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Roadway	Segment		Year 2015		Year 2030		
			V/C	LOS	V/C	LOS	
North Harbor Drive	T1 Access - Winship	No Project			0.94	E	
		Project - No Mitigation Improvement			1.05	F	
		Project - With Mitigation Improvement	0.75	C	0.92	D	
Winship - Rental Car Rd		No Project			0.97	E	
		Project - No Mitigation Improvement			1.05	F	
		Project - With Mitigation Improvement	0.79	C	0.92	D	
Rental Car Rd - Laurel		No Project	1.57	F	1.73	F	
		Project - No Mitigation Improvement	1.79	F	2.01	F	
		Project - With Mitigation Improvement	1.34	F	1.51	F	
Laurel - Hawthorn		No Project	1.05	F	1.22	F	
		Project - No Mitigation Improvement	1.22	F	1.45	F	
		Project - With Mitigation Improvement	0.91	D	1.09	F	
Hawthorn - Grape		No Project			0.82	C	
		Project - No Mitigation Improvement			0.97	E	
		Project - With Mitigation Improvement	0.76	C	0.90	D	
Grape Street	Harbor - Pacific	No Project	0.92	E	1.13	F	
		Project - No Mitigation Improvement	1.05	F	1.31	F	
		Project - With Mitigation Improvement	0.66	C	0.82	D	
	Pacific - Kettner	No Project	1.26	F	1.46	F	
		Project - No Mitigation Improvement	1.40	F	1.64	F	
		Project - With Mitigation Improvement	0.87	D	0.68	C	
Kettner - I-5		No Project	1.52	F	1.66	F	
		Project - No Mitigation Improvement	1.64	F	1.82	F	
		Project - With Mitigation Improvement	0.82	D	0.76	C	
Hawthorn Street	Harbor - Pacific	No Project	0.94	E	1.16	F	
		Project - No Mitigation Improvement	1.08	F	1.36	F	
		Project - With Mitigation Improvement	0.68	C	0.85	D	
	Pacific - Kettner	No Project	0.83	D	1.03	F	
		Project - No Mitigation Improvement	0.95	E	1.19	F	
		Project - With Mitigation Improvement	0.59	C	0.75	C	
Kettner - I-5		No Project	1.35	F			
		Project - No Mitigation Improvement	1.47	F			
		Project - With Mitigation Improvement	0.82	D	0.84	D	
Kettner Blvd	Washington - Sassafras	No Project	0.94	E	1.11	F	
		Project - No Mitigation Improvement	1.01	F	1.20	F	
		Project - With Mitigation Improvement	0.63	C	0.75	C	
	Sassafras - Palm	No Project	0.90	D	0.99	E	
		Project - No Mitigation Improvement	0.96	E	1.07	F	
		Project - With Mitigation Improvement	0.60	C	0.67	C	
Palm - Laurel		No Project			0.85	D	
		Project - No Mitigation Improvement			0.92	E	
		Project - With Mitigation Improvement	0.59	C	0.58	C	
Laurel Street	Harbor - Pacific	No Project	0.82	D			
		Project - No Mitigation Improvement	0.90	E			
		Project - With Mitigation Improvement	0.80	D	0.77	D	
	Pacific - Kettner	No Project	0.97	E	1.13	F	
		Project - No Mitigation Improvement	1.05	F	1.22	F	
		Project - With Mitigation Improvement	0.79	D	0.81	D	
Sassafras Street	Pacific - Kettner	No Project	1.14	F	0.94	E	
		Project - No Mitigation Improvement	1.33	F	1.15	F	
		Project - With Mitigation Improvement	0.53	C	0.46	B	
	Kettner-India		No Project	1.46	F	1.32	F
			Project - No Mitigation Improvement	1.60	F	1.48	F
			Project - With Mitigation Improvement	0.43	B	0.40	B
Kettner - San Diego		No Project	0.99	E	0.93	E	
		Project - No Mitigation Improvement	1.02	F	0.98	E	
		Project - With Mitigation Improvement	0.77	D	0.73	C	
	India Street	Laurel - Palm	No Project	2.38	F	2.64	F
			Project - No Mitigation Improvement	2.60	F	2.89	F
			Project - With Mitigation Improvement	0.69	D	0.77	D
Palm - Sassafras		No Project	2.01	F	2.09	F	
		Project - No Mitigation Improvement	2.16	F	2.25	F	
		Project - With Mitigation Improvement	0.65	C	0.67	C	
	Sassafras - Washington		No Project	1.79	F	2.41	F
			Project - No Mitigation Improvement	2.22	F	2.82	F
			Project - With Mitigation Improvement	0.66	C	0.85	D
Rosecrans	Barnett - Sport Arena	No Project	0.97	E	0.88	D	
		Project - No Mitigation Improvement	0.99	E	0.93	E	
		Project - With Mitigation Improvement	0.83	C	0.78	C	
	Nimitz Quimby - Barnett		No Project	1.03	F	0.98	E
			Project - No Mitigation Improvement	1.07	F	1.05	F
			Project - With Mitigation Improvement	0.85	D	0.84	D
Nimitz - Quimby		No Project	1.03	F	0.98	E	
		Project - No Mitigation Improvement	1.07	F	1.05	F	
		Project - With Mitigation Improvement	0.85	D	0.84	D	

Source: HNTB, 2007.

- Grape Street between North Harbor Drive and Pacific Highway:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes which would require prohibiting parking on one side to mitigate to No Project conditions through 2030.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the street to LOS D through 2030.
- Grape Street between Pacific Highway and Kettner Boulevard:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes which would require prohibiting parking on one side to mitigate to No Project conditions through 2030.
  - Other Improvements: Two additional lanes for 5 lanes total required to ~~mitigate~~ improve the segment to LOS D through 2025.
  - Other Improvements: Three additional lanes for 6 lanes total required to ~~mitigate~~ improve the segment to LOS C in 2030.
- Grape Street between Kettner Boulevard and I-5:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes which would require prohibiting parking on one side to mitigate to No Project conditions.
  - Other Improvements: 6-lane Major configuration required to ~~mitigate~~ improve the segment to LOS D through 2025.
  - Other Improvements: Reclassification to 6-lane Prime is required to ~~mitigate~~ improve the segment to LOS D in 2030.
- Hawthorn Street between North Harbor Drive and Pacific Highway:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes which would require prohibiting parking on one side to mitigate to No Project conditions and LOS D through 2030
- Hawthorn Street between Pacific Highway and Kettner Boulevard:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes which would require prohibiting parking on one side to mitigate to No Project conditions
  - Other Improvements: This improvement would also and improve the segment to LOS D or better through 2030.
- Hawthorn Street between Kettner Boulevard and I-5:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes which would require prohibiting parking on one side to mitigate to No Project conditions in 2015.
  - Other Improvements: 5 lanes required to ~~mitigate~~ improve the segment to LOS D or better in 2015.
- Kettner Boulevard between Washington Street and Sassafras Street:
  - Provide one additional travel lane for a total of 4 lanes to mitigate to No Project conditions and improve the segment LOS D through 2030.
- Kettner Boulevard between Sassafras Street and Palm Street:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the segment to LOS D through 2030.
- Laurel Street between North Harbor Drive and Pacific Highway:
  - Mitigation: Provide one additional travel lane for a total of 5 lanes to mitigate to No Project conditions.



- Other Improvements: This improvement would also ~~mitigate~~ improve the segment to LOS D through 2025.
  - In 2030 background traffic decreased and no significant impacts were witnessed.
- Laurel Street between Pacific Highway and Kettner Boulevard:
  - Mitigation: Reclassify from 4-Lane Collector to 4-Lane Major Arterial to mitigate to No Project conditions
  - Other Improvements: ~~This improvement would also and to~~ improve the segment LOS D through 2025.
  - Other Improvements: One additional lane (5-Lane Major) required to ~~mitigate~~ improve the segment to LOS D in 2030.
- Sassafras Street between Pacific Highway and Kettner Boulevard:
  - Provide one additional eastbound travel lane to have two westbound and two eastbound travel lanes to mitigate to No Project conditions and to LOS C and B through 2030.
- Sassafras Street between Kettner Boulevard and India Street:
  - Mitigation: Provide one additional eastbound travel lane to have one westbound and two eastbound travel lanes to mitigate to No Project conditions.
  - Other Improvements: Two additional lanes for 4 lanes total required to ~~mitigate~~ improve the segment to LOS D or better until 2030.
- Washington Street between Kettner Boulevard and San Diego Street:
  - Mitigation: Reclassify to 4-lane Major to mitigate to No Project conditions.
  - Other Improvements: The proposed implementation will ~~mitigate~~ improve the segment to LOS D through 2030.
- India Street between Laurel Street and Palm Street:
  - Mitigation: Provide one additional travel lane for a total of 3 lanes one-way which would require prohibiting on-street parking to mitigate to No Project conditions.
  - Other Improvements: Two additional lanes for 4 lanes total required to ~~mitigate~~ improve the segment to LOS D through 2030.
- India Street between Palm Street and Sassafras Street:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes one-way which would require prohibiting on-street parking to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the segment to LOS D in 2020 and 2025.
  - Other Improvements: Reclassify to 4-lane Major to ~~mitigate~~ improve the segment to LOS D through 2030.
- India Street between Sassafras Street and Washington Street:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes one-way which would require prohibiting on-street parking to mitigate to No Project conditions.
  - Other Improvements: Reclassify to 4-lane Major to ~~mitigate~~ improve the segment to LOS D or better until 2030.
- Rosecrans Avenue between Barnett and Sports Arena:
  - Mitigation: Reclassify from 6-Lane Major Arterial to 6-Lane Prime Arterial to mitigate to No Project conditions.

- Other Improvements: The proposed improvements ~~mitigate~~ improve the segment to LOS C through 2030.
- Rosecrans Avenue between Nimitz Quimby and Barnett:
  - Mitigation: Provide one additional lane for a total of ~~5~~ 6 lanes to mitigate to No Project conditions.
  - Other Improvements: The proposed improvements improve the segment to LOS D through 2030. Sufficient right of way along portions of Rosecrans Avenue may not be available to add a 6<sup>th</sup> lane, as such it is unknown at this time whether mitigation is feasible.
  - ~~Two additional lanes for 6 lanes total required to mitigate to LOS D or better through 2030.~~
- Rosecrans between Nimitz and Quimby:
  - Mitigation: Provide one additional lane for a total of 5 lanes to mitigate to No Project conditions.
  - Other Improvements: 6 lanes are required to improve the segment to LOS D or better through 2030.

### **Year 2030**

- All mitigation identified in Year 2015, except Laurel Street between North Harbor Drive and Pacific Highway which improved to LOS D under the Land Use Plan
- North Harbor Drive between Terminal 1 Access and Winship Lane:
  - Mitigation: Provide 2 additional travel lanes for a total of 10 lanes to mitigate to No Project conditions.
  - Other Improvements: The proposed improvement would also ~~mitigate~~ improve the segment to LOS D through 2030.
- North Harbor Drive between Winship Lane and Rental Car Access Road:
  - Mitigation: Provide 2 additional travel lanes for a total of 10 lanes to mitigate to No Project conditions.
  - Other Improvements: The proposed improvement would also ~~mitigate~~ improve the segment to LOS D through 2030.
- North Harbor Drive between Hawthorn Street and Grape Street:
  - Mitigation: Provide one additional lane for a total of 7 lanes to mitigate to No Project conditions.
  - Other Improvements: The proposed improvement would also ~~mitigate~~ improve the segment to LOS D through 2030.

### **Airport Implementation Plan Alternative (With Parking Structure)**

The following mitigation is identified for street segments with potentially significant traffic impacts. Where mitigation to No Project conditions and acceptable LOS conditions (defined by the City of San Diego to be LOS D) differs, separate mitigation measures are identified. Operations after implementation of proposed mitigation to No Project conditions are shown on [Tables 5-3.102 and 5-3.103](#) and, if necessary, additional ~~mitigation~~ improvements to LOS D conditions is shown in [Tables 5-3.104 and 5-3.105](#) for informational purposes.

Table 5-3.102

**Street Segment Operations with Mitigation (2010 and 2015) - Mitigate to No Project Condition  
Airport Implementation Plan Alternative (with Parking Structure)**

Roadway	Segment		Year 2010		Year 2015	
			V/C	LOS	V/C	LOS
Kettner Blvd	Sassafras - Palm	No Project	<del>0.80</del>	D	0.897	D
		Project - No Mitigation	<del>0.84</del>	D	0.901	E
		Project - With Mitigation	0.50	B	0.56	C
Sassafras Street	Pacific - Kettner	No Project	0.95	E	1.14	F
		Project - No Mitigation	0.98	E	1.25	F
		Project - With Mitigation	0.39	B	0.50	C
	Kettner-India	No Project	1.25	F	1.46	F
Project - No Mitigation		1.27	F	1.54	F	
Project - With Mitigation		0.85	E	1.03	F	

Source: HNTB, 2007.

Table 5-3.103

**Street Segment Operations with Mitigation (2030) - Mitigate to No Project Condition  
Airport Implementation Plan Alternative (with Parking Structure)**

Roadway	Segment		Year 2030	
			V/C	LOS
North Harbor Drive	Rental Car Rd - Laurel	No Project	1.73	F
		Project - No Mitigation	1.79	F
		Project - With Mitigation	1.65	F
	Laurel - Hawthorn	No Project	1.22	F
		Project - No Mitigation	1.26	F
		Project - With Mitigation	1.17	F
Grape Street	Harbor - Pacific	No Project	1.13	F
		Project - No Mitigation	1.17	F
		Project - With Mitigation	0.97	E
	Pacific - Kettner	No Project	1.46	F
		Project - No Mitigation	1.51	F
		Project - With Mitigation	1.26	F
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation	1.69	F
		Project - With Mitigation	1.41	F
Hawthorn Street	Harbor - Pacific	No Project	1.16	F
		Project - No Mitigation	1.19	F
		Project - With Mitigation	0.99	E
	Pacific - Kettner	No Project	1.03	F
		Project - No Mitigation	1.06	F
		Project - With Mitigation	0.89	E
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation	1.69	F
		Project - With Mitigation	1.41	F
Kettner Blvd	Washington - Sassafras	No Project	1.11	F
		Project - No Mitigation	1.14	F
		Project - With Mitigation	0.95	E
	Sassafras - Palm	No Project	0.99	E
		Project - No Mitigation	1.02	F
		Project - With Mitigation	0.85	E
Laurel Street	Pacific - Kettner	No Project	1.13	F
		Project - No Mitigation	1.16	F
		Project - With Mitigation	0.87	D
Sassafras Street	Pacific - Kettner	No Project	0.94	E
		Project - No Mitigation	0.99	E
		Project - With Mitigation	0.40	B
	Kettner-India	No Project	1.32	F
		Project - No Mitigation	1.36	F
		Project - With Mitigation	0.91	E
India Street	Laurel - Palm	No Project	2.64	F
		Project - No Mitigation	2.68	F
		Project - With Mitigation	1.79	F
	Palm - Sassafras	No Project	2.09	F
		Project - No Mitigation	2.11	F
		Project - With Mitigation	0.84	E
	Sassafras - Washington	No Project	2.41	F
		Project - No Mitigation	2.42	F
		Project - With Mitigation	0.97	E

Source: HNTB, 2007.

Table 5-3.104

**Mitigate Improve to LOS D Condition (2010 and 2015)  
Airport Implementation Plan Alternative (with Parking Structure)**

*Mitigation Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Roadway	Segment		Year 2010		Year 2015	
			V/C	LOS	V/C	LOS
Kettner Blvd	Sassafras - Palm	No Project	0.80	D	0.90	D
		Project - No Mitigation Improvement	0.81	D	0.90	E
		Project - With Mitigation Improvement	0.50	B	0.56	C
Sassafras Street	Pacific - Kettner	No Project	0.95	E	1.14	F
		Project - No Mitigation Improvement	0.98	E	1.25	F
		Project - With Mitigation Improvement	0.39	B	0.50	C
	Kettner-India	No Project	1.25	F	1.46	F
		Project - No Mitigation Improvement	1.27	F	1.54	F
		Project - With Mitigation Improvement	0.34	B	0.41	B

Source: HNTB, 2007.

Table 5-3.105

**Mitigate-Improve to LOS D Condition (2030)**  
**Airport Implementation Plan Alternative (with Parking Structure)**

*Mitigation Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Roadway	Segment		Year 2030	
			V/C	LOS
North Harbor Drive	Rental Car Rd - Laurel	No Project	1.73	F
		Project - No Mitigation Improvement	1.79	F
		Project - With Mitigation Improvement	1.34	F
	Laurel - Hawthorn	No Project	1.22	F
		Project - No Mitigation Improvement	1.26	F
		Project - With Mitigation Improvement	0.95	E
Grape Street	Harbor - Pacific	No Project	1.13	F
		Project - No Mitigation Improvement	1.17	F
		Project - With Mitigation Improvement	0.73	C
	Pacific - Kettner	No Project	1.46	F
		Project - No Mitigation Improvement	1.51	F
		Project - With Mitigation Improvement	0.84	D
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation Improvement	1.69	F
		Project - With Mitigation Improvement	0.84	D
Hawthorn Street	Harbor - Pacific	No Project	1.16	F
		Project - No Mitigation Improvement	1.19	F
		Project - With Mitigation Improvement	0.74	C
	Pacific - Kettner	No Project	1.03	F
		Project - No Mitigation Improvement	1.06	F
		Project - With Mitigation Improvement	0.66	C
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation Improvement	1.69	F
		Project - With Mitigation Improvement	0.85	D
Kettner Blvd	Washington - Sassafras	No Project	1.11	F
		Project - No Mitigation Improvement	1.14	F
		Project - With Mitigation Improvement	0.71	C
	Sassafras - Palm	No Project	0.99	E
		Project - No Mitigation Improvement	1.02	F
		Project - With Mitigation Improvement	0.64	C
Laurel Street	Pacific - Kettner	No Project	1.13	F
		Project - No Mitigation Improvement	1.16	F
		Project - With Mitigation Improvement	0.87	D
Sassafras Street	Pacific - Kettner	No Project	0.94	E
		Project - No Mitigation Improvement	0.99	E
		Project - With Mitigation Improvement	0.40	B
	Kettner-India	No Project	1.32	F
		Project - No Mitigation Improvement	1.36	F
		Project - With Mitigation Improvement	0.36	B
India Street	Laurel - Palm	No Project	2.64	F
		Project - No Mitigation Improvement	2.68	F
		Project - With Mitigation Improvement	0.71	D
	Palm - Sassafras	No Project	2.09	F
		Project - No Mitigation Improvement	2.11	F
		Project - With Mitigation Improvement	0.63	C
	Sassafras - Washington	No Project	2.41	F
		Project - No Mitigation Improvement	2.42	F
		Project - With Mitigation Improvement	0.73	C

Source: HNTB, 2007.

## Year 2010

- **Sassafras Street between Pacific Highway and Kettner Boulevard:**
  - Mitigation: Provide one additional eastbound travel lane for a total of two westbound and two eastbound travel lanes to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the segment to LOS B conditions.
- **Sassafras Street between Kettner Boulevard and India Street:**
  - Mitigation: Provide one additional eastbound travel lane for a total of one westbound and two eastbound travel lanes to mitigate to No Project conditions.
  - Other Improvements: Provide one additional eastbound and one additional westbound travel lanes for a total of two westbound and two eastbound to ~~mitigate~~ improve the segment to LOS B conditions through 2030.

See Section 5.3.8.1 for a description of Sassafras Street.

## Year 2015

- All mitigation identified in Year 2010

Kettner Boulevard between Sassafras Street and Palm Street which increased from LOS D under No Project to LOS E with Project:

- Mitigation: Provide one additional travel lane for a total of four travel lanes one-way to mitigate to No Project conditions.
- Other Improvements: This improvement will also mitigate to an acceptable level of service D in 2015.

## Year 2030

- All mitigation identified in Year 2015
- **North Harbor Drive between Rental Car Access Road and Laurel Street:**
  - Mitigation: Provide one additional travel lane for a total of 7 lanes to mitigate to No Project conditions through 2030.
  - Other Improvements: A 10-lane Prime configuration (4 additional travel lanes) is not adequate to ~~mitigate~~ improve the segment to LOS D or better in 2025 and 2030 and no feasible ~~mitigation~~ improvement is available in 2030 due to limited right-of-way available along San Diego Bay.
- **North Harbor Drive between Laurel Street and Hawthorn Street:**
  - Mitigation: Provide one additional travel lane for a total of 7 lanes to mitigate to No Project conditions through 2030
  - Other Improvements: This improvement would also ~~and~~ improve the segment to LOS D or better in 2010.
  - Other Improvements: 10-lane Prime configuration is required (4 additional travel lanes) to ~~mitigate~~ improve the segment to LOS D or better in 2025.
  - Other Improvements: A 10-lane Prime configuration (4 additional travel lanes) is not adequate to ~~mitigate~~ improve the segment to LOS D or better in 2025 and 2030 and no feasible ~~mitigation~~ improvement is available in 2030 due to limited right-of-way available along San Diego Bay.
- **Grape Street between North Harbor Drive and I-5:**
  - Mitigation: Provide one additional travel lane for a total of 4 lanes, which would require prohibiting parking on one side of Grape, to mitigate to No Project conditions through 2030.

- Other Improvements: This improvement would also ~~mitigate~~ improve the segment between North Harbor Drive and Pacific Highway to LOS C through 2030.
  - Other Improvements: Two additional travel lanes for a total of 5 lanes (5-lane Major configuration) would be required between Pacific Highway and Kettner Boulevard to ~~mitigate~~ improve the segment to LOS C and D through 2030.
  - Other Improvements: Three additional travel lanes for a total of 6 lanes (6-lane Major) would be required between Kettner and I-5 to ~~mitigate~~ improve the segment to LOS D conditions.
- Hawthorn Street between North Harbor Drive and I-5 Boulevard:
    - Mitigation: Provide one additional travel lane for a total of 4 lanes, which would require prohibiting parking on one side of Hawthorn, to mitigate to No Project conditions.
    - Other Improvements: A 4-lane Major classification would be required to ~~mitigate~~ improve the segment the segment from North Harbor Drive to Kettner Boulevard to LOS C.
    - Other Improvements: Three additional lanes (6-lane Major one-way) would be required between Kettner Boulevard and I-5 to ~~mitigate~~ improve the segment to LOS D conditions.
- Kettner Boulevard between Washington Street and Sassafras Street:
    - Mitigation: Provide one additional travel lane for a total of 4 lanes one-way to mitigate to No Project conditions.
    - Other Improvements: This improvement would also ~~mitigate~~ improve the segment to LOS C in 2015.
- Kettner Boulevard between Sassafras Street and Palm Street:
    - Mitigation: Provide one additional travel lane for a total of 4 lanes one-way to mitigate to No Project conditions.
- Laurel Street between Pacific Highway and Kettner Boulevard:
    - Mitigation: Reclassify from 4-Lane Collector to 4-Lane Major to mitigate to No Project conditions.
    - Other Improvements: This improvement would also ~~mitigate~~ improve the segment to LOS D.
- India Street between Laurel Street and Palm Street:
    - Mitigation: Provide one additional travel lane for a total of 3 lanes one-way which would require prohibiting on-street parking to mitigate to No Project conditions.
    - Other Improvements: Provide two additional travel lanes for a total of 4 lanes one-way to ~~mitigate~~ improve the segment to LOS D.
- India Street between Palm Street and Washington Street:
    - Mitigation: Provide one additional travel lane for a total of 4 lanes one-way which would require prohibiting on-street parking to mitigate to No Project conditions.
    - Other Improvements: This segment is currently classified as a 4-lane collector and a re-classification and widening to 4-lane major would be required to ~~mitigate~~ improve the segment to LOS D conditions.



## **Airport Implementation Plan Alternative (Without Parking Structure)**

The following mitigation is identified for street segments with potentially significant traffic impacts. Where mitigation to No Project conditions and acceptable LOS conditions (defined by the City of San Diego to be LOS D) differs, separate mitigation measures are identified. Operations after implementation of proposed mitigation to No Project conditions are shown in [Tables 5-3.106 and 5-3.107](#) and, if necessary, additional ~~mitigation~~ improvements to LOS D conditions is shown in [Tables 5-3.108 and 5-3.109](#) for informational purposes.

### **Year 2010**

- Sassafra Street between Pacific Highway and Kettner Boulevard:
  - Mitigation: Provide one additional eastbound travel lane for a total of two westbound and two eastbound travel lanes to mitigate to No Project conditions.
  - Other Improvements: This improvement will also ~~mitigate~~ improve the segment to LOS D conditions.
- Sassafra Street between Kettner Boulevard and India Street:
  - Mitigation: Provide one additional eastbound travel lane for a total of one westbound and two eastbound travel lanes to mitigate to No Project conditions.
  - Other Improvements: Provide one additional eastbound and one additional westbound travel lanes for a total of two westbound and two eastbound to ~~mitigate~~ improve the segment to LOS B conditions through 2030.

See Section 5.3.8.1 for a description of Sassafra Street.

### **Year 2015**

- All mitigation identified in Year 2010
- Kettner Boulevard between Sassafra Street and Palm Street which increased from LOS D under No Project to LOS E with Project:
  - Mitigation: Provide one additional travel lane for a total of four travel lanes one-way to mitigate to No Project conditions which is also LOS D conditions.

### **Year 2030**

- All mitigation identified in Year 2015
- North Harbor Drive between Rental Car Access Road and Laurel Street:
  - Mitigation: Provide one additional travel lane for a total of 7 lanes to mitigate to No Project conditions through 2030.
  - Other Improvements: A 10-lane Prime configuration (4 additional travel lanes) is not adequate to ~~mitigate~~ improve the segment to LOS D or better in 2025 and 2030 and no feasible ~~mitigation~~ improvement is available in 2030 due to limited right-of-way available along San Diego.
- North Harbor Drive between Laurel Street and Hawthorn Street:
  - Mitigation: Provide one additional travel lane for a total of 7 lanes to mitigate to No Project conditions until 2030.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the segment LOS D or better in 2010.
  - Other Improvements: A 10-lane Prime configuration (4 additional travel lanes) is not adequate to ~~mitigate~~ improve the segment to LOS D or better in 2030 and no feasible ~~mitigation~~ improvement is available due to limited right-of-way available San Diego Bay.

Table 5-3.106

**Street Segment Operations with Mitigation (2010 and 2015) - Mitigate to No Project Condition  
Airport Implementation Plan Alternative (without Parking Structure)**

Roadway	Segment		Year 2010		Year 2015	
			V/C	LOS	V/C	LOS
Kettner Blvd	Sassafras - Palm	No Project	0.80	D	0.897	D
		Project - No Mitigation	0.84	D	0.902	E
		Project - With Mitigation	0.50	B	0.56	C
Sassafras Street	Pacific - Kettner	No Project	0.95	E	1.14	F
		Project - No Mitigation	0.98	E	1.17	F
		Project - With Mitigation	0.39	B	0.47	C
	Kettner-India	No Project	1.25	F	1.46	F
		Project - No Mitigation	1.27	F	1.49	F
		Project - With Mitigation	0.85	E	0.99	E

Source: HNTB, 2007.

Table 5-3.107

**Street Segment Operations with Mitigation (2030) - Mitigate to No Project Condition  
Airport Implementation Plan Alternative (without Parking Structure)**

Roadway	Segment		Year 2030	
			V/C	LOS
North Harbor Drive	Rental Car Rd - Laurel	No Project	1.73	F
		Project - No Mitigation	1.78	F
		Project - With Mitigation	1.64	F
	Laurel - Hawthorn	No Project	1.22	F
		Project - No Mitigation	1.26	F
		Project - With Mitigation	1.16	F
Grape Street	Harbor - Pacific	No Project	1.13	F
		Project - No Mitigation	1.16	F
		Project - With Mitigation	0.97	E
	Pacific - Kettner	No Project	1.46	F
		Project - No Mitigation	1.50	F
		Project - With Mitigation	1.25	F
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation	1.68	F
		Project - With Mitigation	1.40	F
Hawthorn Street	Harbor - Pacific	No Project	1.16	F
		Project - No Mitigation	1.18	F
		Project - With Mitigation	0.99	E
	Pacific - Kettner	No Project	1.03	F
		Project - No Mitigation	1.06	F
		Project - With Mitigation	0.88	E
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation	1.69	F
		Project - With Mitigation	1.41	F
Kettner Blvd	Washington - Sassafras	No Project	1.11	F
		Project - No Mitigation	1.14	F
		Project - With Mitigation	0.95	E
	Sassafras - Palm	No Project	0.99	E
		Project - No Mitigation	1.02	F
		Project - With Mitigation	0.85	E
Laurel Street	Pacific - Kettner	No Project	1.13	F
		Project - No Mitigation	1.16	F
		Project - With Mitigation	0.87	D
Sassafras Street	Pacific - Kettner	No Project	0.94	E
		Project - No Mitigation	0.91	E
		Project - With Mitigation	0.37	B
	Kettner-India	No Project	1.32	F
		Project - No Mitigation	1.30	F
		Project - With Mitigation	0.87	E
India Street	Laurel - Palm	No Project	2.64	F
		Project - No Mitigation	2.68	F
		Project - With Mitigation	1.78	F
	Palm - Sassafras	No Project	2.09	F
		Project - No Mitigation	2.11	F
		Project - With Mitigation	0.84	E

Source: HNTB, 2007.

Table 5-3.108

**Mitigate Improve to LOS D Condition (2010 and 2015)**  
**Implementation Plan Alternative (without Parking Structure)**

*Mitigation-Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Roadway	Segment		Year 2010		Year 2015	
			V/C	LOS	V/C	LOS
Kettner Blvd	Sassafras - Palm	No Project	<del>0.80</del>	<del>D</del>	0.90	D
		Project - No Mitigation Improvement	<del>0.84</del>	<del>D</del>	0.90	E
		Project - With Mitigation Improvement	0.50	B	0.56	C
Sassafras Street	Pacific - Kettner	No Project	0.95	E	1.14	F
		Project - No Mitigation Improvement	0.98	E	1.17	F
		Project - With Mitigation Improvement	0.39	B	0.47	C
	Kettner-India	No Project	1.25	F	1.46	F
		Project - No Mitigation Improvement	1.27	F	1.49	F
		Project - With Mitigation Improvement	0.34	B	0.40	B

Source: HNTB, 2007.

Table 5-3.109

**Mitigate Improve to LOS D Condition (2030)**  
**Airport Implementation Plan Alternative (without Parking Structure)**

*Mitigation Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Roadway	Segment		Year 2030	
			V/C	LOS
North Harbor Drive	Rental Car Rd - Laurel	No Project	1.73	F
		Project - No Mitigation Improvement	1.78	F
		Project - With Mitigation Improvement	1.33	F
	Laurel - Hawthorn	No Project	1.22	F
		Project - No Mitigation Improvement	1.26	F
		Project - With Mitigation Improvement	0.94	E
Grape Street	Harbor - Pacific	No Project	1.13	F
		Project - No Mitigation Improvement	1.16	F
		Project - With Mitigation Improvement	0.73	C
	Pacific - Kettner	No Project	1.46	F
		Project - No Mitigation Improvement	1.50	F
		Project - With Mitigation Improvement	0.83	D
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation Improvement	1.68	F
		Project - With Mitigation Improvement	0.84	D
Hawthorn Street	Harbor - Pacific	No Project	1.16	F
		Project - No Mitigation Improvement	1.18	F
		Project - With Mitigation Improvement	0.74	C
	Pacific - Kettner	No Project	1.03	F
		Project - No Mitigation Improvement	1.06	F
		Project - With Mitigation Improvement	0.66	C
	Kettner - I-5	No Project	1.66	F
		Project - No Mitigation Improvement	1.69	F
		Project - With Mitigation Improvement	0.84	D
Kettner Blvd	Washington - Sassafras	No Project	1.11	F
		Project - No Mitigation Improvement	1.14	F
		Project - With Mitigation Improvement	0.71	C
	Sassafras - Palm	No Project	0.99	E
		Project - No Mitigation Improvement	1.02	F
		Project - With Mitigation Improvement	0.64	C
Laurel Street	Pacific - Kettner	No Project	1.13	F
		Project - No Mitigation Improvement	1.16	F
		Project - With Mitigation Improvement	0.87	D
Sassafras Street	Pacific - Kettner	No Project	0.94	E
		Project - No Mitigation Improvement	1.00	E
		Project - With Mitigation Improvement	0.40	B
	Kettner-India	No Project	1.32	F
		Project - No Mitigation Improvement	1.37	F
		Project - With Mitigation Improvement	0.36	B
India Street	Laurel - Palm	No Project	2.64	F
		Project - No Mitigation Improvement	2.68	F
		Project - With Mitigation Improvement	0.71	D
	Palm - Sassafras	No Project	2.09	F
		Project - No Mitigation Improvement	2.11	F
		Project - With Mitigation Improvement	0.63	C

Source: HNTB, 2007.

- Grape Street between North Harbor Drive and I-5:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes, which would require prohibiting parking on one side of Grape, to mitigate to No Project conditions through 2030.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the segment between North Harbor Drive and Pacific Highway to LOS D.
  - Other Improvements: Two additional travel lanes for a total of 5 lanes (5-lane Major configuration) would be required between Pacific Highway and Kettner Boulevard to ~~mitigate~~ improve the segment to LOS D through 2030.
  - Other Improvements: Three additional travel lanes for a total of 6 lanes (6-lane Major configuration) would be required between Kettner Boulevard and I-5 to ~~mitigate~~ improve the segment to LOS D conditions.
- Hawthorn Street between North Harbor Drive and I-5:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes, which would require prohibiting parking on one side of Hawthorn, to mitigate to No Project conditions.
  - Other Improvements: A 4-lane Major classification would be required to ~~mitigate~~ improve the segment from North Harbor Drive to Kettner Boulevard to LOS C. This improvement would also ~~mitigate~~ improve the segment between North Harbor Drive and Kettner Boulevard to LOS D.
  - Other Improvements: Three additional lanes (6-lane Major one-way) would be required between Kettner Boulevard and I-5 to ~~mitigate~~ improve the segment to LOS D conditions.
- Kettner Boulevard between Washington Street and Sassafras Street:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes one-way to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the segment to LOS D in 2015.
- Kettner Boulevard between Sassafras Street and Palm Street:
  - Mitigation: Provide one additional travel lane for a total of 4 lanes one-way to mitigate to No Project conditions.
- Laurel Street between Pacific Highway and Kettner Boulevard:
  - Mitigation: Reclassify from 4-Lane Collector to 4-Lane Major to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the segment to LOS D.
- India Street between Laurel Street and Palm Street:
  - Mitigation: Provide one additional travel lane for a total of 3 lanes one-way by prohibiting on-street parking to mitigate to No Project conditions.
  - Other Improvements: Provide two additional travel lanes for a total of 4 lanes to ~~mitigate~~ improve the segment to LOS D conditions
- India Street between Palm Street and Sassafras Street:
  - Mitigation: Provide one additional travel lane for a total of four lanes one-way; would require removal on-street parking to widen India Street to mitigate to No Project conditions.
  - Other Improvements: A 4-lane Major configuration/classification is required to ~~mitigate~~ improve the segment to LOS D or better in 2030.

- India Street between Sassafras Street and Washington Street:
  - Mitigation: Provide one additional travel lane for a total of four lanes one-way; would require removal of on-street parking to widen India Street to mitigate to No Project conditions.
  - Other Improvements: A 4-lane Major configuration/classification is required to ~~mitigate~~ improve the segment to LOS C in 2030.

### **5.3.8.2 Intersections**

Any potentially significant impacts to intersections in the study area resulting from implementation of each alternative compared to the No Project Alternative are identified below along with potential mitigation measures. Subsequent to implementation of any required mitigation a peak hour roadway analysis would be conducted as part of a mitigation feasibility study to determine specific mitigation to be implemented. Intersections in the study area are within the jurisdiction of the City of San Diego.

### **Proposed Airport Implementation Plan (With Parking Structure)**

The following mitigation is identified for intersections with potentially significant traffic impacts. Where mitigation to No Project conditions and improvements to acceptable LOS D conditions (defined by the City of San Diego to be LOS D) differs, separate mitigation measures and improvements are identified. Operations after implementation of proposed mitigation to No Project conditions are shown on [Table 5-3.110](#) and, if necessary, additional ~~mitigation~~ intersection improvements to LOS D conditions or better are shown on [Table 5-3.111](#) for informational purposes.

#### **Years 2010 & 2015**

No significant traffic impacts occur in 2010 and 2015 and therefore no mitigation is required.

#### **Year 2030**

- Hawthorn Street and North Harbor Drive (AM & PM):
  - Mitigation: Restripe the westbound left turn lane to a shared left and right to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the intersection to LOS D.
- Grape Street and Kettner Boulevard (PM):
  - Mitigation: Add an exclusive southbound left turn lane to mitigate to No Project conditions.
  - Other Improvements: Add a second southbound left turn lane to ~~mitigate~~ improve the intersection to LOS D.
- Sassafras Street and Kettner Boulevard (PM):
  - Mitigation: Change cycle length from 70 sec to 90 sec to mitigate to No Project conditions.
  - Other Improvements: Add exclusive SBR lane to ~~mitigate~~ improve the intersection to LOS B.
- Grape Street and I-5 Southbound On-Ramp (PM):
  - Mitigation: Signal timing optimization would mitigate to No Project conditions.
  - Other Improvements: Add an exclusive eastbound right turn lane, resulting in 3-lane on-ramp, to ~~mitigate~~ improve the intersection to LOS D.

Table 5-3.110

**Intersection Operations with Mitigation Measures - Mitigate to No Project Conditions  
Implementation Plan (with Parking Structure)**

Intersection	Scenario		2030	
			Delay	LOS
Hawthorn Street/ North Harbor Drive	No Project	AM	173.0	F
		PM	55.9	E
	Project Without Mitigation	AM	182.2	F
		PM	62.3	E
Project With Mitigation	AM	50.6	D	
	PM	36.3	D	
Grape Street/ Kettner Boulevard	No Project	AM	14.8	B
		PM	77.1	E
	Project Without Mitigation	AM	14.7	B
		PM	80.0	E
Project With Mitigation	AM	14.7	B	
	PM	68.7	E	
Sassafras Street/ Kettner Boulevard	No Project	AM	9.6	A
		PM	62.5	E
	Project Without Mitigation	AM	11.1	B
		PM	80.4	F
Project With Mitigation	AM	6.7	A	
	PM	19.0	B	
Grape Street/ I-5 Southbound On-Ramp	No Project	AM	15.1	B
		PM	87.1	F
	Project Without Mitigation	AM	15.3	B
		PM	90.1	F
Project With Mitigation	AM	15.3	B	
	PM	84.2	F	

Source: HNTB, 2007.



Table 5-3.111

**Intersection Operations with Mitigation Measures - Mitigate Improve to LOS D  
Proposed Airport Implementation Plan (with Parking Structure)**

*Mitigation Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Intersection	Scenario		2030	
			Delay	LOS
Hawthorn Street/ North Harbor Drive	No Project	AM	173.0	F
		PM	55.9	E
	Project Without Mitigation- Improvement	AM	182.2	F
		PM	62.3	E
	Project With Mitigation- Improvement	AM	50.6	D
		PM	36.3	D
Grape Street/ Kettner Boulevard	No Project	AM	14.8	B
		PM	77.1	E
	Project Without Mitigation- Improvement	AM	14.7	B
		PM	80.0	E
	Project With Mitigation- Improvement	AM	14.7	B
		PM	43.0	D
Sassafras Street/ Kettner Boulevard	No Project	AM	9.6	A
		PM	62.5	E
	Project Without Mitigation- Improvement	AM	11.1	B
		PM	80.4	F
	Project With Mitigation- Improvement	AM	6.7	A
		PM	19.0	B
Grape Street/ I-5 Southbound On-Ramp	No Project	AM	15.1	B
		PM	87.1	F
	Project Without Mitigation- Improvement	AM	15.3	B
		PM	90.1	F
	Project With Mitigation- Improvement	AM	15.3	B
		PM	45.9	D

Source: HNTB, 2007.

## **Proposed Airport Implementation Plan (Without Parking Structure)**

The following mitigation is identified for intersections with potentially significant traffic impacts. Where mitigation to No Project conditions and improvements to acceptable LOS D conditions (defined by the City of San Diego to be LOS D) differs, separate mitigation measures and improvements are identified. Operations after implementation of proposed mitigation to No Project conditions is shown on **Tables 5-3.112** and, if necessary, additional mitigation intersection improvements to LOS D conditions ~~is~~ are shown on **Table 5-3.113** for informational purposes.

### **Years 2010 & 2015**

No significant impacts occur in 2010 and 2015 and therefore no mitigation is required.

### **Year 2030**

- Hawthorn Street and North Harbor Drive (AM & PM):
  - Mitigation: Restripe the westbound left turn lane to a shared left and right to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the intersection to LOS D.
- Sassafras Street and Kettner Boulevard (PM):
  - Mitigation: Change cycle length from 70 sec to 90 sec to mitigate to No Project conditions.
  - Other Improvements: Add exclusive SBR lane to ~~mitigate~~ improve the intersection to LOS B.
- Grape Street and I-5 Southbound On-Ramp (PM):
  - Signal timing optimization to mitigate to No Project conditions.
  - Other Improvements: Add an exclusive eastbound right turn lane and a northbound through lane, resulting in 3-lane on-ramp, to ~~mitigate~~ improve the intersection to LOS D.

## **Proposed Airport Land Use Plan**

The following mitigation is identified for intersections with potentially significant traffic impacts. Where mitigation to No Project conditions and improvements to acceptable LOS D conditions (defined by the City of San Diego to be LOS D) differs, separate mitigation measures and improvements are identified. Operations after implementation of proposed mitigation to No Project conditions are shown on **Table 5-3.114** and, if necessary, additional mitigation intersection improvements to LOS D or better conditions are shown on **Table 5-3.115** for informational purposes only.

### **Year 2015**

- Hawthorn Street and North Harbor Drive (AM & PM): Restripe the westbound left turn lane to a shared left and right to mitigate to No Project conditions. This improvement would also ~~mitigate~~ improve the intersection to LOS C in the AM and D in the PM peak hours.
- Laurel Street and Pacific Highway (PM):
  - Mitigation: Provide southbound right turn overlap to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the intersection to LOS D.
- Washington Street and Pacific Highway NB Ramps (AM & PM):
  - Mitigation: Optimize the signal timing by changing the cycle length to 80 sec. to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the intersection to LOS D.

Table 5-3.112

**Intersection Operations with Mitigation Measures - Mitigate to No Project Conditions  
Implementation Plan (without Parking Structure)**

Intersection	Scenario		2030	
			Delay	LOS
Hawthorn Street/ North Harbor Drive	No Project	AM	173.0	F
		PM	55.9	E
	Project Without Mitigation	AM	179.9	F
		PM	60.5	E
Project With Mitigation	AM	49.3	D	
	PM	35.7	D	
Sassafras Street/ Kettner Boulevard	No Project	AM	9.6	A
		PM	62.5	E
	Project Without Mitigation	AM	11.0	B
		PM	80.5	F
Project With Mitigation	AM	6.7	A	
	PM	19.1	B	
Grape Street/ I-5 Southbound On-Ramp	No Project	AM	15.1	B
		PM	87.1	F
	Project Without Mitigation	AM	15.3	B
		PM	124.0	F
Project With Mitigation	AM	15.3	B	
	PM	124.0	F	

Source: HNTB, 2007.

Table 5-3.113

**Intersection Operations with Mitigation Measures - Mitigate Improve to LOS D  
Implementation Plan (without Parking Structure)**

*Mitigation Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Intersection	Scenario		2030	
			Delay	LOS
Hawthorn Street/ North Harbor Drive	No Project	AM	173.0	F
		PM	55.9	E
	Project Without Mitigation- Improvement	AM	179.9	F
		PM	60.5	E
Project With Mitigation- Improvement	AM	49.3	D	
	PM	35.7	D	
Sassafras Street/ Kettner Boulevard	No Project	AM	9.6	A
		PM	62.5	E
	Project Without Mitigation- Improvement	AM	11.0	B
		PM	80.5	F
Project With Mitigation- Improvement	AM	6.7	A	
	PM	19.1	B	
Grape Street/ I-5 Southbound On-Ramp	No Project	AM	15.1	B
		PM	87.1	F
	Project Without Mitigation- Improvement	AM	15.3	B
		PM	124.0	F
Project With Mitigation- Improvement	AM	15.3	B	
	PM	39.1	D	

Source: HNTB, 2007.

Table 5-3.114

**Intersection Operations with Mitigation Measures - Mitigate to No Project Conditions  
Airport Land Use Plan**

Intersection	Scenario		2015		2030	
			Delay	LOS	Delay	LOS
Hawthorn Street/ North Harbor Drive	No Project	AM	49.6	D	173.0	F
		PM	25.2	C	55.9	E
	Project Without Mitigation	AM	84.4	F	225.9	F
		PM	37.7	D	115.4	F
		Project With Mitigation	AM	23.9	C	79.3
PM	37.7	D	61.9	E		
Laurel Street/ Pacific Highway	No Project	AM	33.7	C	33.7	C
		PM	62.4	E	60.4	E
	Project Without Mitigation	AM	34.5	C	34.8	C
		PM	69.3	E	66.6	E
		Project With Mitigation	AM	34.5	C	34.8
PM	54.5	D	57.4	E		
Grape Street/ Pacific Highway	No Project	AM			20.2	C
		PM			56.5	E
	Project Without Mitigation	AM			20.9	C
		PM			72.2	E
		Project With Mitigation	AM	<del>49.6</del>	B	20.9
PM	<del>38.4</del>	D	44.7	D		
Grape Street/ Kettner Boulevard	No Project	AM			14.8	B
		PM			77.1	E
	Project Without Mitigation	AM			14.7	B
		PM			98.3	F
		Project With Mitigation	AM	<del>42.8</del>	B	14.7
PM	<del>29.6</del>	C	71.1	E		
Sassafras Street/ Kettner Boulevard	No Project	AM			9.6	A
		PM			62.5	E
	Project Without Mitigation	AM			13.2	B
		PM			80.9	F
		Project With Mitigation	AM	9.6	A	8.3
PM	42.4	B	24.3	C		
Grape Street/ I-5 Southbound On-Ramp	No Project	AM			15.1	B
		PM			87.1	F
	Project Without Mitigation	AM			15.4	B
		PM			113.0	F
		Project With Mitigation	AM	9.6	A	15.4
PM	42.4	B	100.0	F		
Washington Street/ Pacific Highway NB-Ramps	No Project	AM	46.7	D	31.1	C
		PM	107.8	F	79.3	E
	Project Without Mitigation	AM	69.3	E	54.6	D
		PM	106.8	F	81.9	F
		Project With Mitigation	AM	42.1	D	54.6
PM	38.5	D	45.6	D		

Source: HNTB, 2007.

Table 5-3.115

**Intersection Operations with Mitigation Measures – Mitigate Improve to LOS D  
Airport Land Use Plan**

*Mitigation Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Intersection	Scenario		2015		2030	
			Delay	LOS	Delay	LOS
Hawthorn Street/ North Harbor Drive	No Project	AM	49.6	D	173.0	F
		PM	25.2	C	55.9	E
	Project Without Mitigation- Improvement	AM	84.4	F	225.9	F
		PM	37.7	D	115.4	F
	Project With Mitigation- Improvement	AM	23.9	C	79.3	E
		PM	37.7	D	61.9	E
Laurel Street/ Pacific Highway	No Project	AM	33.7	C	33.7	C
		PM	62.4	E	60.4	E
	Project Without Mitigation- Improvement	AM	34.5	C	34.8	C
		PM	69.3	E	66.6	E
	Project With Mitigation- Improvement	AM	34.5	C	29.9	C
		PM	54.5	D	54.9	D
Grape Street/ Pacific Highway	No Project	AM			20.2	C
		PM			56.5	E
	Project Without Mitigation- Improvement	AM			20.9	C
		PM			72.2	E
	Project With Mitigation- Improvement	AM	19.6	B	20.9	C
		PM	38.4	D	44.7	D
Grape Street/ Kettner Boulevard	No Project	AM			14.8	B
		PM			77.1	E
	Project Without Mitigation- Improvement	AM			14.7	B
		PM			98.3	F
	Project With Mitigation- Improvement	AM	12.8	B	13.2	B
		PM	29.6	C	16.5	B
Sassafras Street/ Kettner Boulevard	No Project	AM			9.6	A
		PM			62.5	E
	Project Without Mitigation- Improvement	AM			13.2	B
		PM			80.9	F
	Project With Mitigation- Improvement	AM	9.6	A	8.3	A
		PM	12.4	B	24.3	C
Grape Street/ I-5 Southbound On-Ramp	No Project	AM			15.1	B
		PM			87.1	F
	Project Without Mitigation- Improvement	AM			15.4	B
		PM			113.0	F
	Project With Mitigation- Improvement	AM	9.6	A	15.4	B
		PM	12.4	B	46.6	D
Washington Street/ Pacific Highway NB-Ramps	No Project	AM	46.7	D	31.1	C
		PM	107.8	F	79.3	E
	Project Without Mitigation- Improvement	AM	69.3	E	54.6	D
		PM	106.8	F	81.9	F
	Project With Mitigation- Improvement	AM	42.1	D	54.6	D
		PM	38.5	D	45.6	D

Source: HNTB, 2007.

## Year 2030

- Hawthorn Street and North Harbor Drive (AM & PM):
  - Mitigation: Restripe westbound left turn lane to a shared left and right to mitigate to No Project conditions.
  - Other Improvements: Add an exclusive westbound left turn lane to ~~mitigate~~ improve the intersection to LOS E.
- Laurel Street and Pacific Highway (PM):
  - Mitigation: Provide southbound right turn overlap to mitigate to No Project conditions.
  - Other Improvements: Optimize signal timing (cycle length = 120 or less) to ~~mitigate~~ improve the intersection to LOS D.
- Grape Street and Pacific Highway (PM):
  - Mitigation: Add an exclusive northbound right turn lane to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the intersection to LOS D conditions.
- Grape Street and Kettner Boulevard (PM):
  - Mitigation: Add exclusive southbound left turn lane to mitigate to No Project conditions.
  - Other Improvements: Add a fourth eastbound through lane to ~~mitigate~~ improve the intersection to LOS B.
- Sassafras Street and Kettner Boulevard (PM):
  - Mitigation: Add an exclusive southbound right turn lane to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the intersection to LOS C conditions.
- Grape Street and I-5 Southbound On-Ramp (PM):
  - Other Improvements: Add another exclusive eastbound right turn lane to ~~mitigate~~ improve the intersection to LOS D and would result in a 3-lane on-ramp.
- Washington Street and Pacific Highway NB Ramps (AM & PM):
  - Mitigation: Optimize signal timing (increase cycle length to 90) to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the intersection to LOS D conditions.

As stated previously, because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

### **Airport Implementation Plan Alternative (With Parking Structure)**

The following mitigation is identified for intersections with potentially significant traffic impacts. Where mitigation to No Project conditions and improvements to acceptable LOS D conditions (defined by the City of San Diego to be LOS D) differs, separate mitigation measures and improvements are identified. Operations after implementation of proposed mitigation to No Project conditions are shown on **Table 5-3.116** and, if necessary, additional ~~mitigation~~ intersection improvements to LOS D or better conditions are shown on **Table 5-3.117** for informational purposes.

Table 5-3.116

**Intersection Operations with Mitigation Measures - Mitigate to No Project Conditions  
Implementation Plan Alternative (with Parking Structure)**

Intersection	Scenario		2030	
			Delay	LOS
Hawthorn Street/ North Harbor Drive	No Project	AM	173.0	F
		PM	55.9	E
	Project Without Mitigation	AM	180.3	F
		PM	61.1	E
Project With Mitigation	AM	49.7	D	
	PM	35.9	D	
Grape Street/ Pacific Highway	No Project	AM	20.2	C
		PM	56.5	E
	Project Without Mitigation	AM	20.3	C
		PM	58.6	E
Project With Mitigation	AM	20.3	C	
	PM	34.8	C	
Grape Street/ Kettner Boulevard	No Project	AM	14.8	B
		PM	77.1	E
	Project Without Mitigation	AM	14.7	B
		PM	80.0	E
Project With Mitigation	AM	14.7	B	
	PM	69.1	E	
Sassafras Street/ Kettner Boulevard	No Project	AM	9.6	A
		PM	62.5	E
	Project Without Mitigation	AM	11.1	B
		PM	80.4	F
Project With Mitigation	AM	6.7	A	
	PM	19.1	B	
Grape Street/ I-5 Southbound On-Ramp	No Project	AM	15.1	B
		PM	87.1	F
	Project Without Mitigation	AM	15.3	B
		PM	89.6	F
Project With Mitigation	AM	15.3	B	
	PM	83.9	F	

Source: HNTB, 2007.

Table 5-3.117

**Intersection Operations with Mitigation Measures - Mitigate Improve to LOS D  
Implementation Plan Alternative (with Parking Structure)**

*Mitigation Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Intersection	Scenario		2030	
			Delay	LOS
Hawthorn Street/ North Harbor Drive	No Project	AM	173.0	F
		PM	55.9	E
	Project Without Mitigation- Improvement	AM	180.3	F
		PM	61.1	E
	Project With Mitigation- Improvement	AM	49.7	D
		PM	35.9	D
Grape Street/ Pacific Highway	No Project	AM	20.2	C
		PM	56.5	E
	Project Without Mitigation- Improvement	AM	20.3	C
		PM	58.6	E
	Project With Mitigation- Improvement	AM	20.3	C
		PM	34.8	C
Grape Street/ Kettner Boulevard	No Project	AM	14.8	B
		PM	77.1	E
	Project Without Mitigation- Improvement	AM	14.7	B
		PM	80.0	E
	Project With Mitigation- Improvement	AM	13.7	B
		PM	42.9	D
Sassafras Street/ Kettner Boulevard	No Project	AM	9.6	A
		PM	62.5	E
	Project Without Mitigation- Improvement	AM	11.1	B
		PM	80.4	F
	Project With Mitigation- Improvement	AM	6.7	A
		PM	19.1	B
Grape Street/ I-5 Southbound On-Ramp	No Project	AM	15.1	B
		PM	87.1	F
	Project Without Mitigation- Improvement	AM	15.3	B
		PM	89.6	F
	Project With Mitigation- Improvement	AM	15.3	B
		PM	45.9	D

Source: HNTB, 2007.



## **Years 2010 & 2015**

No mitigation is required in 2010 and 2015.

## **Year 2030**

- Hawthorn Street and North Harbor Drive (AM & PM):
  - Mitigation: Restripe the westbound left turn lane to a shared left and right to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the intersection to LOS D.
- Grape Street and Pacific Highway (PM):
  - Mitigation: Add an exclusive northbound right turn lane to mitigate to No Project conditions.
  - Other Improvements: This improvement would also ~~mitigate~~ improve the intersection to ~~and~~ LOS C.
- Grape Street and Kettner Boulevard (PM):
  - Mitigation: Add an exclusive southbound left turn lane to mitigate to No Project conditions.
  - Other Improvements: Add a second southbound left turn lane to ~~mitigate~~ improve the intersection to LOS D.
- Sassafras Street and Kettner Boulevard (PM):
  - Mitigation: Change cycle length from 70 sec to 90 sec to mitigate to No Project conditions.
  - Other Improvements: Add exclusive southbound right turn lane to ~~mitigate~~ improve the intersection to LOS B.
- Grape Street and I-5 Southbound On-Ramp (PM):
  - Mitigation: Signal timing optimization would mitigate to No Project conditions.
  - Other Improvements: Add an exclusive eastbound right turn lane, resulting in 3-lane on-ramp, to ~~mitigate~~ improve the intersection to LOS D.

## **Airport Implementation Plan Alternative (Without Parking Structure)**

The following mitigation is identified for intersections with potentially significant traffic impacts. Where mitigation to No Project conditions and improvements to acceptable LOS D conditions (defined by the City of San Diego to be LOS D) differs, separate mitigation measures and improvements are identified. Operations after implementation of proposed mitigation to No Project conditions are shown in **Table 5-3.118** and, if necessary, additional ~~mitigation~~ intersection improvements to LOS D or better conditions are shown on **Table 5-3-119** for informational purposes.

## **Years 2010 & 2015**

No mitigation is required in 2010 and 2015.

## **Year 2030**

- Hawthorn Street and North Harbor Drive (AM & PM): Restripe the westbound left turn lane to a shared left and right to mitigate to No Project conditions. This improvement would also ~~mitigate~~ improve the intersection to LOS D.
- Grape Street and Kettner Boulevard (PM):
  - Mitigation: Add an exclusive southbound left turn lane to mitigate to No Project conditions.
  - Other Improvements: Convert one southbound through lane to a shared through and left turn lane to ~~mitigate~~ improve the intersection to LOS D.

Table 5-3.118

**Intersection Operations with Mitigation Measures - Mitigate to No Project Conditions  
Implementation Plan Alternative (without Parking Structure)**

Intersection	Scenario		2030	
			Delay	LOS
Hawthorn Street/ North Harbor Drive	No Project	AM	173.0	F
		PM	55.9	E
	Project Without Mitigation	AM	179.2	F
		PM	60.0	E
	Project With Mitigation	AM	49.1	D
		PM	35.5	D
Grape Street/ Kettner Boulevard	No Project	AM	14.8	B
		PM	77.1	E
	Project Without Mitigation	AM	14.7	B
		PM	79.6	E
	Project With Mitigation	AM	14.7	B
		PM	69.0	E
Sassafras Street/ Kettner Boulevard	No Project	AM	9.6	A
		PM	62.5	E
	Project Without Mitigation	AM	11.1	B
		PM	80.9	F
	Project With Mitigation	AM	6.8	A
		PM	19.0	B
Grape Street/ I-5 Southbound On-Ramp	No Project	AM	15.1	B
		PM	87.1	F
	Project Without Mitigation	AM	15.3	B
		PM	89.1	F
	Project With Mitigation	AM	15.3	B
		PM	89.1	F

Source: HNTB, 2007.

Table 5-3.119

**Intersection Operations with Mitigation Measures - Mitigate-Improve to LOS D  
Implementation Plan Alternative (without Parking Structure)**

*Mitigation Improvements assessed in this table will bring the street segment to an acceptable level of service C or D as defined by the City of San Diego and is provided for Informational Purposes ONLY.*

Intersection	Scenario		2030	
			Delay	LOS
Hawthorn Street/ North Harbor Drive	No Project	AM	173.0	F
		PM	55.9	E
	Project Without Mitigation- Improvement	AM	179.2	F
		PM	60.0	E
	Project With Mitigation- Improvement	AM	49.1	D
		PM	35.5	D
Grape Street/ Kettner Boulevard	No Project	AM	14.8	B
		PM	77.1	E
	Project Without Mitigation- Improvement	AM	14.7	B
		PM	79.6	E
	Project With Mitigation- Improvement	AM	13.9	B
		PM	53.4	D
Sassafras Street/ Kettner Boulevard	No Project	AM	9.6	A
		PM	62.5	E
	Project Without Mitigation- Improvement	AM	11.1	B
		PM	80.9	F
	Project With Mitigation- Improvement	AM	6.8	A
		PM	19.0	B
Grape Street/ I-5 Southbound On-Ramp	No Project	AM	15.1	B
		PM	87.1	F
	Project Without Mitigation- Improvement	AM	15.3	B
		PM	89.1	F
	Project With Mitigation- Improvement	AM	15.3	B
		PM	36.0	D

Source: HNTB, 2007.

Grape Street and I-5 Southbound On-Ramp (PM):

- Mitigation: Signal timing optimization to mitigate to No Project conditions.
  - Other Improvements: Add an exclusive eastbound right turn lane and a northbound through lane, resulting in 3-lane on-ramp, to ~~mitigate~~ improve the intersection to LOS D.
- Sassafra Street and Kettner Boulevard (PM):
    - Mitigation: Change cycle length from 70 sec to 90 sec to mitigate to No Project conditions.
    - Other Improvements: Add exclusive southbound right turn lane to ~~mitigate~~ improve the intersection to LOS B.

### 5.3.8.3 **Freeway Segments**

#### **Proposed Airport Implementation Plan**

No significant impacts to freeway segments would result from development of the Proposed Airport Implementation Plan and no mitigation measures are required.

#### **Proposed Airport Land Use Plan**

The Proposed Airport Land Use Plan would have significant impacts to the following freeway segments:

#### **Freeway Segments with Significant Traffic Impacts**

##### **Year 2015**

- I-5 (~~northbound and southbound segments, AM and PM peak hours~~)
  - ~~North of I-8 (AM and PM – southbound segment only)~~
  - I-8 to Old Town Avenue (AM – southbound segment only; PM – both directions)
  - Old Town Avenue to Washington Street (PM – northbound segment only)
  - Hawthorn Street to First Avenue (AM – northbound segment only; PM – southbound segment only)
  - First Avenue to SR-163 (AM – northbound segment only; PM – both directions)
  - SR-163 to SR-94 (AM and PM – northbound segment only)
- I-8 East of I-5 (westbound segment only, AM and PM)

##### **Year 2030**

- All segments identified in Year 2015 (except for I-5 northbound between First Avenue and Hawthorn Street which improved to LOS D during the AM peak hour) plus the following:
- ~~Northbound I-5 between Hawthorn Street and India Street (AM)~~
- I-8 East of I-5 (eastbound segment, AM and PM)
- ~~Northbound I-5 between Pacific Highway Viaduct and Washington Street (AM)~~
- 1-5 North of I-8 (PM – northbound segment)

The Proposed Airport Land Use Plan would impact the freeway segments identified above by increasing densities by approximately 1% to 5% compared to No Project conditions. However, widening the freeway by one lane in one direction could reduce densities by as much as 20%, as shown in [Table 5-3.120](#). Freeway widening is therefore more than necessary to mitigate the freeway impacts associated with the Proposed Airport Land Use Plan. As stated previously, because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

Table 5-3.120  
**Freeway Operations with One Lane Freeway Widening**  
 (For illustration purposes only)

AM Peak Hour SB I-5 Freeway		Year 2015			Year 2030		
From	To	No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/ Decrease with Mitigation	No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/ Decrease with Mitigation
North of I-8	I-8	35.8	29.0	-18.9%	38.0	30.9	-18.6%
I-8	Old Town Avenue	36.4	29.6	-18.7%	37.5	30.6	-18.6%
Old Town Avenue	Washington Street	29.9	24.4	-18.4%	27.6	22.6	-18.1%
Washington Street	Pacific Highway Viaducts	32.1	25.7	-20.0%	30.4	24.3	-20.0%
Pacific Highway Viaducts	India Street	36.7	29.3	-19.9%	33.4	26.7	-19.9%
India Street	Hawthorn Street	37.4	29.9	-19.9%	34.5	27.7	-19.9%
Hawthorn Street	First Avenue	31.4	25.5	-18.7%	28.0	22.9	-18.1%
First Avenue	SR 163	33.1	26.9	-18.8%	30.4	24.8	-18.3%
SR 163	SR 94	19.4	15.9	-17.9%	18.2	15.1	-17.1%

NOTE: Bold/Shading = Freeway segment calculated to operate at Percent Increase D, E or F exceeding Caltrans target Percent Increase C.

Source: HNTB, 2007.

Significant Impact

### **Airport Implementation Plan Alternative**

No significant impacts to freeway segments would result from development of the Airport Implementation Plan Alternative and no mitigation measures are required.

### **Conclusion**

While it is understood that the widening of I-5 would fully mitigate all impacts to the freeway segments under the Airport Land Use Plan, the SDCRAA acknowledges that freeway widening is complex and is not in the region's long-range transportation plan. Further, as with other traffic mitigation measures, freeway widening is within the responsibility and jurisdiction of Caltrans so SDCRAA is unable to determine the likelihood or feasibility of freeway widening as a mitigation measure. As a result, SDCRAA cannot ensure that the impact will be reduced to less than significant and alternative mitigation and potential benefits have been identified.

The 2003 Central I-5 Corridor Study's Recommended Improvement Alternative E, direct freeway ramps from Old Town to Pacific Highway, was evaluated as a potential mitigation measure. The northbound and southbound sections of I-5 between Washington Street and Old Town Avenue would benefit from this improvement measure. Implementation of this measure would mitigate the potentially significant impact under the Land Use Plan to the northbound freeway segment during the PM peak hour, such that No Project conditions would be restored. While the southbound AM and PM and northbound AM operations would be improved, these segments are not identified as having potentially significant impacts. As such, implementation of 2003 Central I-5 Corridor Study's Recommended Improvement Alternative E, direct freeway ramps from Old Town to Pacific Highway, would result in the reduction of significant impacts to the segment of I-5 between Washington Street and Old Town Avenue. The implementation of this measure would not reduce the freeway impacts on southbound I-5 between I-8 and Old Town Avenue and between Hawthorn Street and SR 163, on northbound I-5 between India Street and SR 94 and between Old Town Avenue and I-8, on eastbound and westbound I-8. Again, because the responsibility and jurisdiction over the direct freeway ramps lies with Caltrans, SDCRAA cannot ensure that such mitigation will be implemented and thus it is possible that significant impacts will remain after Project implementation. SDCRAA will cooperate with all responsible agencies for such measures and encourage their implementation.

[Table 5-3.121](#) illustrates alternative mitigation to improve freeway segments.

Table 5-3.121

**Freeway Operations with Ramps from I-5 to Pacific Highway at Old Town Avenue – AM Peak Hour  
Central I-5 Corridor Study Recommended Improvement E**

AM Peak Hour		Year 2015			Year 2030		
SB I-5 Freeway		No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/ Decrease with Mitigation	No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/ Decrease with Mitigation
From	To						
North of I-8	I-8	35.8	36.3	1.40%	38	38.7	1.80%
I-8	Old Town Avenue	36.4	37	1.70%	37.5	38.2	1.80%
Old Town Avenue	Washington Street	29.9	29.9	0.00%	27.6	27.6	0.00%
Washington Street	Pacific Highway Viaducts	32.1	32.1	0.00%	30.4	30.4	0.00%
Pacific Highway Viaducts	India Street	36.7	36.7	0.10%	33.4	33.4	0.10%
India Street	Hawthorn Street	37.4	37.4	0.10%	34.5	34.6	0.10%
Hawthorn Street	First Avenue	31.4	31.9	1.60%	28	28.6	2.40%
First Avenue	SR 163	33.1	33.6	1.50%	30.4	31	2.20%
SR 163	SR 94	19.4	19.9	2.60%	18.2	18.9	3.60%

NB I-5 Freeway		Year 2015			Year 2030		
From	To	No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/ Decrease with Mitigation	No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/ Decrease with Mitigation
SR 94	SR 163	56.7	57.7	1.80%	53.4	54.7	2.60%
SR 163	First Avenue	42.7	43.8	2.40%	40.3	41.6	3.40%
First Avenue	Hawthorn Street	35.4	36.4	2.90%	31.3	32.7	4.40%
Hawthorn Street	India Street	36.3	36.5	0.70%	31.9	32.3	1.30%
India Street	Pacific Highway Viaducts	36.1	36.3	0.30%	31.7	31.9	0.70%
Pacific Highway Viaducts	Washington Street	25.2	25.4	0.40%	21.8	22	1.00%
Washington Street	Old Town Avenue	30.5	30.5	0.00%	27.8	27.8	0.00%
Old Town Avenue	I-8	30.2	30.5	1.00%	26.5	26.9	1.30%
I-8	North of I-8	37.1	37.3	0.70%	37.4	37.7	0.90%

I-8 Freeway		Year 2015			Year 2030		
From	To	No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/ Decrease with Mitigation	No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/ Decrease with Mitigation
I-5	East	29.4	29.6	0.70%	24.4	24.6	1.20%
East	I-5	35.7	36.1	1.20%	36.2	36.8	1.60%

**Table 5-3.121 (continued)**  
**Freeway Operations with Ramps from I-5 to Pacific Highway at Old Town Avenue – PM Peak Hour**  
**Central I-5 Corridor Study Recommended Improvement E**

PM Peak Hour		Year 2015			Year 2030		
SB I-5 Freeway		No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/Decrease with Mitigation	No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/Decrease with Mitigation
From	To						
North of I-8	I-8	41.8	42.3	1.20%	45.9	46.5	1.30%
I-8	Old Town Avenue	36.9	37.6	1.70%	42	42.6	1.50%
Old Town Avenue	Washington Street	31.1	31.1	0.00%	31.7	31.7	0.00%
Washington Street	Pacific Highway Viaducts	33.1	33.1	-0.10%	34.8	34.7	-0.10%
Pacific Highway Viaducts	India Street	41.9	41.8	-0.20%	41.3	41.2	-0.30%
India Street	Hawthorn Street	41.7	41.6	-0.20%	42.7	42.6	-0.30%
Hawthorn Street	First Avenue	36.8	37.6	2.10%	38.8	39.7	2.50%
First Avenue	SR 163	46.8	47.6	1.60%	48.9	49.8	2.00%
SR 163	SR 94	26.7	27.5	2.90%	27.2	28.2	3.60%

NB I-5 Freeway		Year 2015			Year 2030		
From	To	No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/Decrease with Mitigation	No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/Decrease with Mitigation
SR 94	SR 163	39.5	40.5	2.60%	37.2	38.4	3.30%
SR 163	First Avenue	39.3	40.4	2.60%	38	39.3	3.20%
First Avenue	Hawthorn Street	32.3	33.3	3.10%	30.6	31.8	4.00%
Hawthorn Street	India Street	38.5	38.6	0.30%	39.5	39.7	0.40%
India Street	Pacific Highway Viaducts	37.8	37.9	0.10%	35.8	35.9	0.10%
Pacific Highway Viaducts	Washington Street	30.6	30.6	0.10%	29.6	29.6	0.10%
Washington Street	Old Town Avenue	35.7	35.7	0.00%	35.4	35.4	0.00%
Old Town Avenue	I-8	36.8	37.2	1.10%	35.7	36.1	1.20%
I-8	North of I-8	38.2	38.6	0.99%	42.9	43.4	1.10%

I-8 Freeway		Year 2015			Year 2030		
From	To	No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/Decrease with Mitigation	No Project (pc/mi/ln)	Project with Mitigation (pc/mi/ln)	Percent Increase/Decrease with Mitigation
I-5	East	38.9	39.3	0.80%	37.1	37.5	1.10%
East	I-5	37.8	38.2	1.10%	35.4	35.9	1.50%

Source: HNTB, 2007

Legend:

	LOS E
	LOS F
	Significant Impact
	Operation with Ramps
	Significant Impact Mitigated

**NOTE:** This table was not included in the Draft EIR. It does not represent significant new information and does not affect the significance determinations presented in the Draft EIR.

#### **5.3.8.4 Freeway Ramps**

Mitigation for freeway ramps is within the jurisdiction of Caltrans and mitigation for metered freeway ramps would require increasing ramp metering rates.

#### **Proposed Airport Implementation Plan**

No significant impacts to metered freeway ramps would result from development of the Proposed Airport Implementation Plan and no mitigation measures are required.

#### **Proposed Airport Land Use Plan**

No significant impacts to metered freeway ramps would result from development of the Proposed Airport Land Use Plan Alternative and no mitigation measures are required.

#### **Airport Implementation Plan Alternative**

No significant impacts to metered freeway ramps would result from development of the Airport Implementation Plan Alternative and no mitigation measures are required.

#### **5.3.8.5 Railroad Crossings**

Under the No Project Alternative, Proposed Airport Implementation Plan, and Airport Implementation Plan Alternative, total vehicle delay at all railroad crossings were estimated to be under the VHD threshold for each street segment except for Washington Street which exceeds the VHD threshold in 2020 and 2025. Since the condition occurs even under the No Project Alternative, the Proposed Airport Implementation Plan and Implementation Plan Alternative would not result in significant railroad crossing impact and no mitigation measures are required.

Under the Proposed Airport Land Use Plan, the higher volumes at Washington Street raised the VHD threshold, consequently resulting in no impacts at Washington Street in any year. Therefore, the Proposed Airport Land Use Plan would not result in significant railroad crossing impact and no mitigation measures are required.

#### **5.3.8.6 Transit**

Under the No Project Alternative, Proposed Airport Implementation Plan, Airport Implementation Plan Alternative, and Proposed Airport Land Use Plan no existing or planned transit routes would be modified. Therefore, the Proposed Airport Implementation Plan, Airport Implementation Plan Alternative, and Proposed Airport Land Use Plan would not result in significant transit impact and no mitigation measures are required.

SDCRAA is aware of SANDAG's most recent Regional Transportation Plan which calls for development of a Bus Rapid Transit system to accompany the existing Trolley and Coaster service.

The Airport Authority supports improvements to Airport transit service and is developing policies and programs to encourage and increase transit use by airport users comprised of passengers and employees. The Authority is committed to increasing transit ridership to SDIA and has led a multi-agency Airport Transit/Roadway Committee which developed a Draft Airport Transit Plan for SDIA identifying opportunities to improve transit access. The main goal of the Airport Transit Plan and the Authority is to increase the airport passenger transit ridership from the existing 1.2 percent to the national average of 5 percent over the next 3 to 5 years. Recommendations of this Plan are presented in [Table 2-21](#) within Section 2.4.1, *Airport Transit Plan*, of this document.

In addition, the Proposed Airport Land Use Plan designates Ground Transportation land uses in the North Area that may include an intermodal transit center and a proposed transit corridor connecting to the South Area. Further analysis of an intermodal transit center will be coordinated with the regional transportation agencies.



### **5.3.8.7 Parking**

No alternative would remove any parking lots designated for public use and passenger terminals also are not located close to commercial or residential areas. The Proposed Airport Implementation Plan, Airport Implementation Plan Alternative, and Proposed Airport Land Use Plan would provide additional parking compared to the No Project Alternative and would not result in significant parking impact. Therefore, no mitigation is required.

### **5.3.8.8 Terminal Curbside**

Under the No Project Alternative no new curbside would be provided and there would be an airport-wide deficiency of 610 linear feet in 2015 and ~~4,650~~ 1,650 linear feet in 2030.

Under the Proposed Airport Implementation Plan, Airport Implementation Plan Alternative, and Proposed Airport Land Use Plan sufficient curb length is provided to meet future requirements through 2015. Therefore, the Proposed Airport Implementation Plan, Airport Implementation Plan Alternative, and Proposed Airport Land Use Plan would result in positive curbside impacts and therefore, no mitigation measures are required.

### **5.3.8.9 On-Airport Traffic Circulation**

Under the No Project Alternative, Proposed Airport Implementation Plan, Airport Implementation Plan Alternative, and Proposed Airport Land Use Plan all terminal roadways would operate at LOS D or better during peak hours. In addition, all alternatives would provide adequate site ingress and egress and would not affect public street operations. No roadways would be designed to cause traffic hazards to motor vehicles, bicyclists or pedestrians. Therefore, the Proposed Airport Implementation Plan, Airport Implementation Plan Alternative, and Proposed Airport Land Use Plan would have no significant on-airport traffic circulation impact and no mitigation measures are required.

### **5.3.8.10 Construction**

Two traffic and circulation construction measures described in Section 5.3.6 *Construction Impacts* will be implemented as additional actions undertaken by the SDCRAA. The measures are ~~entitled~~:

- MM5.3-3           ▪ Establish a Construction Coordination Office within the Ground Transportation Department
- MM5.3-4           ▪ Require Orientation for Construction Personnel

### **5.3.8.11 Level of Significance after Mitigation Measures**

As described in Section 5.3.3, *Traffic Impacts and Significance Criteria*, significance criteria used to determine potentially significant impacts for freeway segments and metered on-ramps, street/roadway segments, intersections and parking were derived from the City of San Diego Development Services Department's CEQA Significance Determination Thresholds guidelines dated January 2007; significance criteria for railroad crossings were derived from the California Utilities Commission, and best practice management was used to determine significance criteria for transit, parking, terminal curbsides and on-airport roadways.

Per Section O, *Transportation/Circulation and Parking*, of the City of San Diego's CEQA Significance Determination Thresholds dated January 2007 (described in Section 5.3.3 of this ~~DEIR~~ FEIR), mitigation measures have been identified to ~~(1) restore/and maintain the traffic facility to an acceptable Level of Service defined by the City of San Diego to be LOS D or better and (2) mitigate the project's direct significant and/or cumulatively considerable traffic impacts. In many cases these proposed mitigation measures are the same.~~ For informational purposes only additional actions that would be necessary to improve the LOS to D or better were also provided.

Mitigation measures were identified in this section for each potentially significant impact per the City's guidelines. After mitigation, each potentially significant impact caused by the Project will be reduced to less than significant. In addition, W-when possible mitigation was additional actions were identified to improve the level of service of the transportation facility to within the City's acceptable guidelines, LOS D

or better, and even though the Project will not cause the traffic condition. In many instances the mitigation-traffic improvement mitigation measures identified to mitigate a potentially significant impact to insignificant conditions also improved the LOS of the facility to LOS D or better. In some instances no feasible mitigation practicable traffic improvement measure could be identified to mitigate improve the transportation facility to LOS D or better. However, because CEQA only requires mitigation for impacts caused by the Project, the lack of traffic improvement measures in such instances is not considered a significant impact. As a result, after mitigation, all traffic related impacts are reduced to less than significant.

Although the mitigation measures identified would reduce traffic impacts to a level of less than significant, the roadway segments, intersection, arterial roadways, and freeway ramps and operations are within the legal authority, responsibility and jurisdiction of the City of San Diego or Caltrans, not SDCRAA. As such, SDCRAA lacks the legal authority to ensure that these other agencies will implement the mitigation measures necessary to render the traffic impacts less than significant. If these agencies do not implement the mitigation measures identified and adopted by SDCRAA, it is possible that the traffic impacts of the Project will remain significant after Project implementation.

Subsequent to implementation of any required mitigation a peak hour roadway analysis would be conducted as part of a mitigation feasibility study to determine specific mitigation measures to be implemented.

## 5.4 Population and Housing

This section describes the general approach and methodology, significance criteria, and environmental setting, and it considers potential population and housing impacts associated with the Proposed Project (Preferred Alternative) and its alternatives. Additionally, this section describes potential construction and cumulative impacts. There were no comments in response to the NOP or the previously circulated Draft EIR specific to potential population and housing impacts.

### 5.4.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

This analysis incorporates existing data sources including U.S. Census data, the SDCRAA's recently prepared *SDIA 2005 ALUCP Final EIR*, and SANDAG population and housing estimates. Because the Proposed Project would not increase the CNEL under aircraft approach and departure paths (see Section 5.1, *Noise*), this section focuses on population and housing in the vicinity of the Airport. The potential effect of the Proposed Project on population and housing was evaluated qualitatively in light of the fact that the Proposed Project would not entail the construction or demolition of any residential units, nor would it result in the substantial movement of people to or from the area.

The changes to the Proposed Project and alternatives that are included in this ~~recirculated Draft~~ Final EIR do not affect the results of the population and housing analysis presented in the previously circulated Draft EIR. Specifically, the changes to the Proposed Project and alternatives do not include any new facilities that would displace any residences or people, nor would the proposed changes draw new residents to the San Diego region. Additionally, based on the nature of the Proposed Project and alternatives, and considering their potential effects to population and housing, extending the horizon year to 2030 would not change the findings of the previously circulated analysis of impacts.

### 5.4.2 Significance Criteria

For the purposes of this analysis, potential significant population and housing impacts were evaluated based on the CEQA Environmental Checklist Appendix G of *CEQA State Guidelines*. The Proposed Project would have a significant population and housing impact if it would:

- Displace a substantial number of people;
- Displace a substantial amount of residential units; and/or
- Induce substantial population growth that would affect the population/housing balance.

### 5.4.3 Environmental Setting

#### 5.4.3.1 Population

SDIA is located in San Diego's Central Major Statistical Area (MSA), the most densely populated area of San Diego County. The Central MSA extends from I-8 to the north, to SR-54 to the south (including Coronado Peninsula), and from the Pacific Ocean to the west to the western borders of La Mesa and

Lemon Grove neighborhoods in the east ([Figure 5.4-1](#)). As shown in [Table 5-4.1](#), the Central MSA population was approximately 619,000 in 2000; by 2005, the population had risen to approximately 649,500, an increase of 4.9% percent.<sup>51</sup> Based on 2000 population statistics, over half (50.6 percent) of the population of the City of San Diego resides in the Central MSA.<sup>52</sup>

Table 5-4.1  
**Population Characteristics of the SDIA Area and Region: 2000 and 2005**

Statistical Area	Total Population	
	2000 Census (April 1)	2005 Estimate (January 1)
Peninsula Subregion of Central MSA*	61,098	61,733
Central San Diego Subregion of Central MSA**	155,827	167,233
Central MSA	619,133	649,523
City of San Diego	1,223,400	1,305,736
Greater San Diego Region	2,813,833	3,051,280

\* SDIA lies in the Peninsula Subregion of the Central MSA  
\*\* The Central San Diego Subregion of the Central MSA lies directly east of SDIA

Source: SANDAG, 2003.

SDIA lies within the Peninsula Subregion of the Central MSA. Compared to the larger Central MSA of which it is a part, the Peninsula Subregion population grew at a slower rate (from approximately 61,100 in 2000 to an estimated approximately 61,730; a one percent increase).<sup>53</sup> There is no permanent residential population adjacent to SDIA due to the airport-related industrial/commercial nature of the area and the presence of I-5 directly east of the project site. The nearest population centers to the Airport include the redeveloped Liberty Station on the former Naval Training Center, to the west; other Peninsula Community Planning Area neighborhoods, also to the west; and the Uptown Community Planning Area, to the east of I-5. Military personnel also are stationed at the Marine Corps Recruit Depot to the north of SDIA.

### 5.4.3.2 **Housing**

There is no housing within or immediately adjacent to SDIA (although there are military quarters at the Marine Corps Recruit Depot to the north). The Central MSA, which encompasses SDIA, is among the primary housing areas for San Diego County. The area had approximately 225,305 housing units in 2000 and an estimated approximately 230,943 units in 2005, an increase of 5,638 units (2.5 percent).<sup>54</sup> Approximately one quarter of all San Diego County housing units are located in the Central MSA. The Peninsula Subregion of the Central MSA had approximately 26,874 total dwelling units in 2000 with a 3.9 percent vacancy rate, and an estimated 26,934 units in 2005 with a 3.5 percent vacancy rate.<sup>55</sup> [Table 5-4.2](#) provides housing information for the Peninsula and Central San Diego Subregions, Central MSA, City of San Diego and greater San Diego Region.

<sup>51</sup> San Diego Association of Governments, Fall 2005a. Population and Housing Estimates, Major Statistical Area 0 – Central. The 2000 population estimate is from the U.S. Census (for April 1). The 2005 population is an estimate (for January 1).

<sup>52</sup> San Diego Association of Governments, June 12, 2003. Census 2000 Profile, City of San Diego.

<sup>53</sup> San Diego Association of Governments, Fall 2005b. Population and Housing Estimates, Subregional Area 2 – Peninsula. The 2000 population estimate is from the U.S. Census (for April 1). The 2005 population is an estimate (for January 1).

<sup>54</sup> San Diego Association of Governments, Fall 2005a. Population and Housing Estimates, Major Statistical Area – Central.

<sup>55</sup> San Diego Association of Governments, Fall 2005b. Population and Housing Estimates, Subregional Area 2 – Peninsula.

Table 5-4.2  
Housing in Project Area

Area	Year	Total Housing Stock	Single Family	Multi-Family	Mobile Homes & Other	Persons per Household	Units per Acre
Peninsula Subregion of Central MSA*	2000	26,874	14,199	12,472	203	2.05	11.5
	2005	26,934	13,476	13,458	0	2.09	n/a
Central San Diego** Subregion of Central MSA	2000	70,466	24,296	46,047	123	2.09	21.8
	2005	77,035	23,475	53,549	11	2.09	n/a
Central MSA	2000	225,305	113,536	109,583	2186	2.69	11.6
	2005	230,943	103,651	125,614	1678	2.72	n/a
City of San Diego	2000	469,689	264,933	198,342	6414	2.61	9.7
	2005	495,378	288,638	201,142	5598	2.65	n/a
Greater San Diego Region	2000	1,040,149	628,652	364,636	46861	2.73	3.2
	2005	1,108,500	678,221	384,242	46037	2.77	n/a

\* SDIA lies in the Peninsula Subregion of the Central MSA

\*\* The Central San Diego Subregion of the Central MSA lies directly east of SDIA

n/a – not available

Source: San Diego Association of Governments 2006, SANDAG "Data Warehouse" at <http://www.sandag.org/dw/>.

## 5.4.4 Impacts

This section considers potential population and housing impacts associated with the Proposed Project (Preferred Alternative) and its alternatives.

### 5.4.4.1 Proposed Project - With and Without Parking Structure

Implementing the Proposed Project (Preferred Alternative) would not significantly affect population or housing. Developing SDIA with the proposed land uses would not displace any residents or residences because the proposed project locations currently contain airport or aviation industrial uses. The Proposed Project (Preferred Alternative) also would not generate enough new employment opportunities at SDIA to affect the job/housing balance or induce growth that would affect this balance (see also Section 6.2, *Growth-Inducing Impacts*). Additionally, the level of proposed improvements would not be such to entice new residents to the San Diego area, thereby creating a need for new housing.

The Proposed Project (Preferred Alternative) would not displace any residences or people because there are no residences or people living on or adjacent to the site. The construction involved in the Proposed Airport Implementation Plan projects would not be on a large enough scale to draw new residents into the area, nor would the additional of new gates at SDIA be expected to induce growth within the region (see Section 6.2, *Growth-Inducing Effects*). Accordingly, the Proposed Airport Implementation Plan would not have a significant impact on population or housing.

### 5.4.4.2 East Terminal Alternative - With and Without Parking Structure

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the Proposed Airport Land Use Plan see Chapter Four, section 4.2.1 *Airport Land Use Plan* for a detailed explanation. Therefore, the East Terminal Alternative includes the Proposed Airport Land Use Plan. The East Terminal Alternative would not displace any residences or people because there are no residences or people living on site (or adjacent). The construction involved in the East Terminal Alternative would not be on a large enough scale to draw new residents into the area, nor would the additional of new gates at SDIA be expected to induce growth within the region. Accordingly, the East Terminal Alternative would not have a significant impact on population or housing.

#### **5.4.4.3 No Project Alternative**

Under the No Project, there would be no change to the housing or population of San Diego (no impact).

#### **5.4.5 Construction Impacts**

Construction activities would have no direct impact on population and housing because no people or residences would be displaced. Indirect impacts would be negligible because the San Diego region has an adequate labor pool to accomplish the proposed construction activities without the need to bring in workers from other areas. Similarly, the level of construction activity at SDIA would not be of a large enough magnitude to entice a large number of construction workers from other areas to move to San Diego.

#### **5.4.6 Cumulative Impacts**

Because the Proposed Project would not displace people or homes or induce growth within the region, it would not incrementally contribute to a significant cumulative effect on housing or population.

#### **5.4.7 Mitigation Measures/Other Improvements**

Because the Proposed Project would not cause significant housing or population impacts, it would not require mitigation.

#### **5.4.8 Level of Significance after Mitigation Measures**

Population and housing changes due to the Proposed Project (Preferred Alternative) are less than significant, therefore mitigation is not required and the levels of significance are not reduced by mitigation measures.

## 5.5 Air Quality

This section describes the general approach and methodology, regulatory framework, significance criteria, and environmental setting in consideration of potential air quality impacts associated with the Proposed Project and its alternatives. The material includes a brief explanation of air quality conditions at SDIA and its environs, a discussion of governmental efforts to manage air quality in the area, and a summary of available air monitoring data collected from monitoring sites located within San Diego County. This section also identifies the various sources of air emissions associated with SDIA and describes their characteristics and quantifies their impacts. Lastly this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts.

Comments in response to the NOP specific to potential air quality impacts were received from the following agency:

- California Air Resources Board - effects of aircraft taxi/idle times; pre-conditioned air at gates; diesel particulate matter; potential violations of air quality standards; compatibility with State Implementation Plan; construction emissions; and quantities of criteria air pollutants, hydrocarbons and hazardous air pollutants

All written and oral comments during the NOP process are provided in [Appendix A](#). Comments received specific to air quality impacts are addressed within this section of the EIR.

Review comments on the previous Draft EIR circulated in May 2006 that pertain to air quality were submitted by the San Diego Unified Port District and include the following:

- Provide list of permits required for construction and other relevant rules/regulations.
- Use URBan EMISsions (UBREMIS) to calculate construction emissions.
- Provide more technical information with explanation in the air quality section.
- Identify other reasonably foreseeable projects in the Cumulative Impacts Section.
- Add more specificity to the mitigation measures.
- Identify sensitive receptors.

These comments are addressed in this section. Other review comments received pertaining to human health are addressed in Section 5.16, *Human Health Risk Assessment*. Greenhouse gas emissions are addressed in Section 5.19, *Greenhouse Gas Emissions*.

### 5.5.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGRAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

For the technical assessment, the potential impacts to air quality associated with the construction and operation of the Proposed Project (Preferred Alternative) and the East Terminal Alternative (both with and without the Parking Structure); the Land Use Plan; as well as the No Project Alternative are evaluated by using appropriate and up-to-date analytical methods and computer models. Consistent with CEQA

guidelines, the analyses are comprised of an emissions inventory and dispersion modeling of existing (i.e., baseline) and future-year conditions. The results are then compared to applicable air quality standards and other CEQA criteria to determine the significance of the potential impacts.

The potential effects to human health from hazardous air pollutants (HAPs) are discussed separately in Section 5.16, *Human Health Risk Assessment*. Background information, data, and other supporting materials developed for the air quality assessments and HHRA are provided in [Appendix E, Air Quality](#) and [Appendix H, Human Health Risk Assessment](#), respectively.

## 5.5.2 Regulatory Framework

### 5.5.2.1 Regulatory Agencies

The regulation and management of ambient (i.e., “outdoor”) air quality conditions in San Diego County is the responsibility of federal, state and local governmental agencies. These agencies are identified in [Table 5-5.1](#) and a brief description of their roles and responsibilities follow.

On the federal level, the U.S. Environmental Protection Agency (EPA) establishes the guiding principles and policies for protecting air quality conditions throughout the nation, including San Diego County. Under the Federal Clean Air Act (CAA), EPA is also responsible for promulgating the National Ambient Air Quality Standards (NAAQS) – outdoor levels of air pollutants that are considered safe for public health, welfare, and the environment. EPA’s other responsibilities relevant to this assessment include the approval of the State Implementation Plan (SIP) and the regulation of aircraft emissions.

On the state level, the California Air Resources Board (CARB) serves to help ensure that federal air quality requirements and guidelines are met. CARB also enforces the California Ambient Air Quality Standards (CAAQS), monitors air quality, and regulates mobile sources of emissions (i.e., on-road and off-road motor vehicles and equipment).

On the local level, the San Diego County Air Pollution Control District (SDAPCD) is responsible for administering federal and state air quality regulations, permitting of stationary sources of air emissions, and monitoring of air quality conditions in the county. Together, CARB, the SDAPCD, and the San Diego Association of Governments (SANDAG) are involved in the preparation and implementation of the SIP for San Diego County.

Table 5-5.1

**Agencies Involved in Air Quality Management in San Diego County**

Agency	Roles and Responsibilities
U.S. Environmental Protection Agency (EPA)	<i>Federal agency</i> - Sets national clean air policies under the federal CAA; promulgates the NAAQS; reviews and approves SIPs. Also regulates aircraft emissions. (All of California is located in EPA Region 9, headquartered in San Francisco.)
California Air Resources Board (CARB)	<i>State agency</i> - Establishes state-wide clean air policies and rules; promulgates the CAAQS; regulates mobile sources (i.e. motor vehicles) of emissions; and conducts ambient air monitoring throughout California. Also involved in the preparation of the SIP. (Located and headquartered in Sacramento.)
San Diego County Air Pollution Control District (SDAPCD)	<i>Local agency</i> – Enforces federal and state air quality regulations county-wide; permits stationary sources of emissions; conducts air monitoring; and is involved with SANDAG in preparation of the SIP for San Diego County. (Located in San Diego.)

CAA = Clean Air Act

CAAQS = California Ambient Air Quality Standards

NAAQS = National Ambient Air Quality Standards

SANDAG = San Diego Council of Governments

SIP = State Implementation Plan

Source: KB Environmental Sciences, Inc., 2007.



It should be noted that both CARB and EPA have recently instituted progressively more stringent diesel engine emission reduction targets and timetables for PM and NOx. These emission standards will further reduce the potential impacts associated with diesel-fueled GSE, construction equipment and other off-road vehicles and equipment associated with the airport.<sup>56</sup> As the local regulatory agency for air quality, SDAPCD has several regulations that could apply to the proposed improvements to SDIA. These rules principally address visible emissions, nuisances (such as odor), and fugitive dust; boilers and emergency generators, as well as conformity with the SIP and include the following:

- Rule No. 50: *Visible Emissions* - Prohibits the discharge of visible emissions in excess of prescribed time frames and opacity limits.
- Rule No. 51: *Nuisances (Odor)* - Prohibits the creation of air quality nuisances (including odor-causing compounds).
- Rule No. 54: *Dust* - Prohibits the generation of fugitive dust in excess of levels that cause nuisances or impede visibility.
- Rule No. 68: *Fuel Burning Equipment* - Required for boilers used for heat and/or steam generation.
- Rule No. 1501: *Conformity of General Federal Actions* - Requires projects or actions that involve federal approval to demonstrate conformity with the applicable SIP.

In addition, a Building Permit from the City of San Diego Development Services would be required prior to the installation of any back-up generators.

### **5.5.2.2 Ambient Air Quality Standards**

As stated previously, the EPA and CARB have established standards, (i.e., NAAQS/CAAQS) to protect public health, the environment, and the quality of life from the detrimental effects of air pollution.<sup>57</sup> These standards have been set for carbon monoxide (CO), ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM), and lead (Pb). The CAAQS are shown in **Table 5-5.2** and also include sulfates, hydrogen sulfides and vinyl chloride.

### **5.5.2.3 Air Monitoring Data**

Together, CARB and SDAPCD operate nine permanent ambient air quality monitoring sites scattered throughout San Diego County as part of their ongoing state and local air monitoring programs. As shown on **Figure 5.5-1**, the closest of these air monitoring stations to SDIA is located approximately two miles southeast of the airport in downtown San Diego<sup>58</sup>. No air monitoring stations are located directly on, or adjacent to, the SDIA.

**Table 5-2.3** contains the most recent summary information and data from the downtown San Diego monitoring site including the pollutants measured and the highest recorded levels in the three year period ending in 2006 (e.g., the year for which the most recent data is available). These pollutant levels are not necessarily representative of the conditions near the airport, but are reported as indicators of air quality conditions in this part of San Diego County<sup>59</sup>. Information is also provided indicating whether or not the highest recorded levels represent violations of either the CAAQS.

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<sup>56</sup> <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>

<sup>57</sup> The NAAQS and CAAQS may be viewed at [www.epa.gov/air/criteria.html](http://www.epa.gov/air/criteria.html) and [www.arb.ca.gov/research/aaqs/aaqs.htm](http://www.arb.ca.gov/research/aaqs/aaqs.htm), respectively.

<sup>58</sup> These air monitoring stations are components of the permanent network operated by CARB/SDAPCD in San Diego County. The locations are established according to a series of parameters that take into consideration meteorological conditions, emission source(s) locations, demographics and pollutant characteristics.

<sup>59</sup> The downtown San Diego air monitoring station is located approximately two miles from SDIA. The area is characterized as urban core with periods of high motor vehicle traffic volumes and restricted air movement. Pollutants such as CO, NO<sub>2</sub>, SO<sub>2</sub> and PM are considered "localized" in comparison to O<sub>3</sub> which is more "regional" in coverage. Based upon these parameters, the air quality conditions in the vicinity of the downtown San Diego site may differ from the airport area.

Table 5-5.2

## California Ambient Air Quality Standards (CAAQS)

Pollutant	Averaging Time	CAAQS	Comments
Carbon monoxide (CO)	1 hour	20 ppm (23 mg/m <sup>3</sup> )	CO is a colorless, odorless, tasteless gas; can temporarily accumulate into localized "hot-spots" in calm weather conditions and in the wintertime. CO usually dissipates quickly, posing no widespread threat to human health or the environment. Under elevated ambient concentrations, CO can cause headache and nausea in humans. Mobile sources (i.e. motor vehicles), indoor heating and open burning are among the pre-dominant anthropogenic (i.e. man-made) sources of CO.
	8-hour	9.0 ppm (10 mg/m <sup>3</sup> )	
Ozone (O <sub>3</sub> )	1 hour	0.09 ppm (180 µg/m <sup>3</sup> )	O <sub>3</sub> is a secondary pollutant, formed from daytime reactions of NO <sub>x</sub> and VOC rather than being directly emitted by natural or man-made sources. In elevated concentrations, O <sub>3</sub> is a strong oxidant with deleterious effects on both human health and the natural environment. The CAAQS for O <sub>3</sub> was lowered recently and the averaging period changed from one to eight hours.
	8-hour	0.07 ppm (137 µg/m <sup>3</sup> )	
Nitrogen dioxide (NO <sub>2</sub> )	1 hour	0.18 ppm (338 µg/m <sup>3</sup> )	NO <sub>2</sub> , nitric oxide (NO), and the nitrate radical (NO <sub>3</sub> ) are collectively called oxides of nitrogen (NO <sub>x</sub> ) and NO <sub>2</sub> is the compound commonly measured with air quality monitors. NO <sub>x</sub> is generally emitted in the form of NO, which is oxidized to NO <sub>2</sub> . The principal man-made source of NO <sub>x</sub> is fuel combustion in motor vehicles and power plants. In elevated concentrations, NO <sub>2</sub> causes adverse health effects and reactions of NO <sub>x</sub> with other atmospheric chemicals can lead to the formation of O <sub>3</sub> and acidic precipitation.
	Annual	0.030 ppm (56 µg/m <sup>3</sup> )	
Sulfur dioxide (SO <sub>2</sub> )	1 hour	0.25 ppm (655 µg/m <sup>3</sup> )	For man-made sources, SO <sub>2</sub> is emitted primarily by the combustion of sulfur-containing fuels and sulfuric acid manufacturing. SO <sub>2</sub> can lead to the formation of acidic precipitation and in elevated concentrations impair human lung functions and plant growth.
	24-hour	0.04 ppm (105 µg/m <sup>3</sup> )	
Respirable Particulate Matter (PM <sub>10</sub> )	24-hour	50 µg/m <sup>3</sup>	PM comprises of very small particles of dirt, dust, soot or liquid droplets called aerosols. The regulatory standards for PM are segregated by sizes (i.e., respirable or PM <sub>10</sub> and fine or PM <sub>2.5</sub> ). PM is formed from both natural and man-made sources including wind erosion over exposed soils (i.e., fugitive dust), the burning of fossil fuels and incineration of solid wastes, and as an exhaust product from the internal combustion engine. Of growing concern are the effects of PM on visibility and the potential impairment to human health in the form of diesel emissions.
	Annual	20 µg/m <sup>3</sup>	
Fine Particulate Matter (PM <sub>2.5</sub> )	24-hour	35 µg/m <sup>3</sup>	
	Annual	12 µg/m <sup>3</sup>	
Lead (Pb)	Monthly	1.5 µg/m <sup>3</sup>	Lead is a "heavy metal" most commonly associated with emissions from industrial sources including waste oil and solid waste incineration, iron and steel production, lead smelting, and battery and lead alkyl manufacturing. The lead content of motor vehicle fuel, which was a major source of atmospheric lead in the past, has significantly declined with the widespread use of unleaded fuel.

ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter; mg/m<sup>3</sup> = milligrams per cubic meter.

Source: KB Environmental Sciences, Inc., 2007.

Table 5-5.3

**2004-2006 Downtown San Diego Air Monitoring Station Data Summary<sup>a</sup>**

<b>Pollutant</b>	<b>Averaging Time</b>	<b>Maximum Concentration</b>	<b>CAAQS</b>	<b>Above CAAQS (Yes/No)<sup>b</sup></b>
CO	1 hour	10.8 ppm	20 ppm	No
	8 hour	4.7 ppm	9 ppm	No
O <sub>3</sub>	1 hour	0.108 ppm	0.09 ppm	Yes
	8 hour	0.091 ppm	0.070 ppm	Yes
NO <sub>2</sub>	1 hour	0.094 ppm	0.18 ppm	No
	Annual	0.021 ppm	0.030 ppm	No
SO <sub>2</sub>	1 hour	0.042 ppm	0.25 ppm	No
	24 hour	0.009 ppm	0.04 ppm	No
PM <sub>10</sub>	24 hour	76 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	Yes
	Annual	37 µg/m <sup>3</sup>	20 µg/m <sup>3</sup>	Yes
PM <sub>2.5</sub>	24 hour	63 µg/m <sup>3</sup>	35 µg/m <sup>3</sup>	Yes
	Annual	15.6 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	Yes

<sup>a</sup> See Figure 5.5-1 for map of station locations.

<sup>b</sup> The maximum concentrations were compared to the CAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

CAAQS = California Ambient Air Quality Standards (the National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or stricter).

CO = Carbon monoxide; O<sub>3</sub> = Ozone; NO<sub>2</sub> = Nitrogen dioxide; SO<sub>2</sub> = Sulfur dioxide.

PM<sub>10</sub> = Respirable particulate matter less than 10 microns in diameter; PM<sub>2.5</sub> = Fine particulate matter less than 2.5 microns in diameter;

ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter.

Source: SDAPCD, Air Quality in San Diego County, 2006 Annual Report, 2006.

### 5.5.2.4 Attainment/Non-attainment Status

Based on air monitoring data and in accordance with the federal and state CAAs, all areas within California are designated with respect to the NAAQS and CAAQS as attainment, non-attainment, maintenance, or unclassifiable.<sup>60</sup>

The current attainment/non-attainment designations for San Diego County are summarized in [Table 5-5.4](#). As shown, San Diego County (including the area surrounding SDIA) is currently designated as “attainment” for NO<sub>2</sub>, SO<sub>2</sub>, and lead for both federal and state criteria; classified as “maintenance” and “attainment” for CO, respectively; and “unclassifiable” and non-attainment for PM<sub>10</sub>, respectively. For O<sub>3</sub>, San Diego County is designated as a “moderate non-attainment area” for the new federal and state 8-hour standards and “non-attainment” for the state PM<sub>2.5</sub> standard.

Table 5-5.4

<b>Attainment/Non-attainment Designations for San Diego County</b>	
<b>Pollutant</b>	<b>Attainment Status: Federal/State</b>
CO	Maintenance / Attainment
NO <sub>2</sub>	Attainment / Attainment
O <sub>3</sub>	Non-attainment / Non-attainment
SO <sub>2</sub>	Attainment / Attainment
PM <sub>10</sub>	Unclassifiable / Non-attainment
PM <sub>2.5</sub>	Non-attainment / Non-attainment
Lead	Attainment / Attainment
Sulfates	n.a. / Attainment
Hydrogen Sulfide	n.a. / Unclassifiable
Visibility	n.a. / Unclassifiable

Source: SDAPCD, 2007.  
n.a. = not applicable.

### 5.5.2.5 State Implementation Plan & Regional Air Quality Strategy

Because San Diego County currently does not meet the NAAQS/CAAQS for O<sub>3</sub>, the CAAQS for PM<sub>2.5</sub>, and did not previously meet the NAAQS for CO, a SIP and Regional Air Quality Strategy (RAQS) are in place, or are being prepared, to bring the area into compliance with these standards.<sup>61</sup> The current status of the SIP/RAQS that apply to San Diego County are identified in [Table 5-5.5](#) and discussed further below.

<sup>60</sup> By definition, an area with air quality better than the NAAQS/CAAQS is designated as attainment and an area with air quality worse than the NAAQS/CAAQS is designated as non-attainment. Maintenance areas are in transition from non-attainment to attainment and an area is designated as unclassifiable when there is a lack of data to form a basis of attainment status.

<sup>61</sup> In summary, the SIP/RAQS is the cumulative record of all air pollution control strategies, emission budgets, and timetables implemented or adopted by regulatory agencies within California (including CARB and SDCAPCD) to bring non-attainment areas into compliance with the NAAQS/CAAQS.

Table 5-5.5

**State Implementation Plan (SIP) / Regional Air Quality Strategy (RAQS)  
Summary for San Diego County**

<b>Pollutant</b>	<b>Document Title</b>	<b>Status</b>	<b>Comments</b>
O <sub>3</sub>	<i>2002 Ozone (1-Hour Federal) Redesignation Request and Maintenance Plan</i>	Dated December 2002; the currently "approved" SIP for this pollutant.	Calls for reductions in VOC and NO <sub>x</sub> with attainment achieved in 2006.
	<i>2007 Ozone State Implementation Plan (8-Hour Federal)</i>	Under preparation by CARB, SCAPCD, SANDAG and others for the entire southern California area.	To be submitted for EPA review and approval in 2007. Will call for reductions in VOC and NO <sub>x</sub> with attainment achieved in 2012.
CO	<i>1995/96 Maintenance Plan</i>	Approved in 1998 for the period 1998 to 2008.	The 2008 to 2018 plan was submitted to EPA in 2006.
PM <sub>2.5</sub>	n.a.	Under development by SCAPCD.	-

Source: SDAPCD, 2007.

n.a = not available

### 5.5.3 Significance Criteria

As the "Lead" agency for the EIR, SDCRAA has adopted the State of California CEQA Significance Criteria for air quality.<sup>62</sup> Similarly, the City of San Diego, Development Services Department, has developed draft CEQA guidelines that are comparable.<sup>63</sup> According to these two sets of guidelines, a project may have significant impacts to air quality if it:

- Conflicts with or obstruct implementation of an applicable air quality plan;<sup>64</sup>
- Violates any air quality standard or contribute substantially to an existing or projected air quality violation;<sup>65</sup> There is no regulatory threshold from an agency with jurisdiction over SDIA, and therefore the SDCRAA has discretion to determine a reasonable threshold. In doing so, SDCRAA has looked to air quality standards from other jurisdictions and looked to see whether the air conditions between the jurisdictions are reasonably similar. If the conditions are similar, SDCRAA determined that it would be reasonable to use the threshold established by the other jurisdiction. The SDCRAA has reviewed other authorities and found that Sacramento California has adopted, after a rulemaking, a standard that identifies a substantial contribution as follows: "If a project emits pollutants at a level equal to or greater than 5% of the CAAQS, it is considered to contribute substantially to an existing or projected CAAQS violation." *Guide to Air Quality Assessment in Sacramento County*, Sacramento Metropolitan Air Quality Management District, July, 2004. The SDCRAA found that the Sacramento area is non-attainment for CAAQS for O<sub>3</sub> and PM<sub>10</sub> and the San Diego area is non-attainment for CAAQS for O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> and therefore have reasonably similar air quality conditions. As such the SDCRAA has decided to use the 5% threshold to determine significance for this EIR. The SDCRAA will continue to monitor the City of San Diego's threshold of significance criteria for use in future environmental reviews specific to significant contribution determinations.
- significant contribution determinations.

<sup>62</sup> 2006 CEQA Guidelines, Consulting Engineers and Land Surveyors of California, 2006.

<sup>63</sup> City of San Diego, *Significance Determination Thresholds*, California Environmental Quality Act (CEQA), Development Services Department, Land Development Review Division, Environmental Analysis Section, January 2007.

<sup>64</sup> The applicable air quality plans are the *2002 Ozone (1-Hour Federal) Redesignation Request and Maintenance Plan and the Carbon Monoxide 1995/96 Maintenance Plan* (see Section 5.1.2.5).

<sup>65</sup> The applicable air quality standards are the NAAQS / CAAQS (see Section 5.1.2.2).

- Exceeds the following quantitative thresholds for the “criteria” pollutants of CO, PM<sub>10</sub>/PM<sub>2.5</sub> and SO<sub>x</sub> or the O<sub>3</sub> precursors of NO<sub>x</sub> and VOC in tons/year: CO = 100; NO<sub>x</sub> = 40; PM<sub>10</sub> = 15; PM<sub>2.5</sub> = 10; SO<sub>x</sub> = 40; and VOC = 13.7.
- Results in increased PM<sub>10</sub> concentrations by 5 µg/m<sup>3</sup> at the maximum exposed individual (MEI) and an exceedance of the PM<sub>10</sub> significance threshold;
- Causes CO “hot-spot” levels to exceed a 1 hour value of 20 ppm or an 8-hour average of 9 ppm;
- Exposes sensitive receptors (i.e., schools, hospitals, resident- or day-care facilities, etc.) to substantial concentrations of HAPs such as diesel PM;
- Creates objectionable odors affecting a substantial number of people; or
- Releases substantial quantities of air contaminants beyond the boundaries of the premises upon which the (stationary) source emitting the contaminants is located.

## 5.5.4 Sources of Airport Air Emissions

Almost all large metropolitan airports (including SDIA) experience air emissions from the following general source categories: aircraft; ground service equipment (GSE); motor vehicles; fuel storage and transfer facilities; a variety of stationary sources; an assortment of aircraft (including auxiliary power units (APUs)), airfield and building maintenance activities; and periodic construction activities for new projects or improvements to existing facilities. [Table 5-5.6](#) provides a summary listing of these sources of air emissions, the pollutants, and their characteristics.

## 5.5.5 Environmental Setting

As discussed above in the *Approach and Methodology Section*, the assessment of existing (i.e., 2005) air quality conditions at SDIA is comprised of two primary components: (1) an emissions inventory, which discloses the amounts of emissions generated by airport-related activities and (2) dispersion modeling, which provides an indication of how these emissions affect ambient (“outdoor”) air quality conditions. ~~In principle, these existing conditions serve as the “baseline” to which the future-year conditions are compared to determine if the proposed improvements to SDIA are significant under CEQA.~~ Existing conditions are provided for informational purposes however, air quality impacts due to the Proposed Project are determined by comparing the No Project Alternatives to the Project Alternatives (Preferred Project and Airport Plan Alternatives).

To avoid repetition, [Appendix E, Air Quality](#), contains more detailed discussions of the methodologies, models, data sources, and assumptions used for these analyses.

### 5.5.5.1 Emissions Inventory

The airport-related sources of emissions included in the emissions inventory for SDIA are identified as aircraft, GSE, both on- and off-site motor vehicles, stationary sources. Construction emissions are also included. Aircraft emissions encompass those that are generated throughout the entire landing/take-off (LTO) cycle (i.e., approach, landing, taxi-in, taxi-out, take-off and climb-out). On-site motor vehicles include passenger, employee and cargo traffic operating on all the major roadways, parking facilities and curbsides on the airport property. Off-site motor vehicles are those bound for, or departing the airport on the nearby surface transportation network (i.e., arterials and freeways). Stationary source emissions are those associated with the airport central heating plant, the fuel storage facility and a number of back-up electrical generators.

For calculating emissions from aircraft, GSE and APU, the most recent version of the FAA Emissions and Dispersion Modeling System (EDMS5.0.2) was used.<sup>66</sup> The aircraft activity levels, fleet mix, and other SDIA-specific operational characteristics were obtained from the SDIA Airport Master Plan and are the same data as used for the Noise analysis (see Section 5.1 *Noise*). GSE/APU utilization information was

<sup>66</sup> FAA, Emissions and Dispersion Modeling System, Office of Environment and Energy, 2007.

Table 5-5.6

**Airport-Related Sources of Air Emissions**

Sources	Emissions	Characteristics
Aircraft	CO, NO <sub>x</sub> , PM, SO <sub>x</sub> , VOC	Exhaust products of fuel combustion that vary depending on aircraft engine type, number of engines, power setting, and period of operation. Emissions are also emitted by an aircraft's auxiliary power unit (APU).
Motor vehicles	CO, NO <sub>x</sub> , PM, VOC	Exhaust products of fuel combustion from motor vehicles approaching, departing, and moving about the Airport site. Emissions vary depending on vehicle type, distance traveled and operating speed.
Ground service equipment (GSE)	CO, NO <sub>x</sub> , PM, SO <sub>x</sub> , VOC	Exhaust products of fuel combustion from service trucks, tow tugs, belt loaders, and other portable equipment.
Fuel storage and transfer	VOC	Formed from evaporation and vapor displacement of fuel from storage tanks and fuel transfer facilities. Emissions vary with fuel usage, type of storage tank, refueling method and fuel type.
Stationary sources	CO, NO <sub>x</sub> , PM, SO <sub>x</sub> , VOC	Exhaust products of fossil fuel combustion. Emissions are generally well controlled with operational techniques and post-burn collection methods. Sources include boilers, emergency generators, paint and surface coating operations, etc.
Construction	CO, NO <sub>x</sub> , PM, SO <sub>x</sub> , VOC	Dust generated during excavation and land clearing, exhaust emissions from construction equipment and motor vehicles, and evaporative emissions from asphalt paving and painting.

The emissions shown are considered to be the primary ones.

CO = Carbon monoxide

NO<sub>x</sub> = Nitrogen oxides

SO<sub>x</sub> = Sulfur oxides

PM = Particulate matter

VOC = Volatile organic compounds

Source: KB Environmental Sciences, Inc. 2006.

derived from on-site surveys conducted at SDIA and supplemented with EDMS data, wherever necessary.

For motor vehicles, the CARB EMFAC2007 model<sup>67</sup> was used along with traffic data, roadway operational conditions, and parking facility information contained in Section 5.3 *Traffic and Circulation* or provided by the SDCRAA. Information and emissions data for stationary sources were obtained from SDCRAA files and the appropriate U.S. EPA AP-42 documentation.<sup>68</sup>

Emissions associated with construction equipment and vehicles were based on EMFAC2007 emission factors, the CARB URBEMIS model and construction schedules provided by SDCRAA, and are discussed further in Section 5.5.7.

The overall layout of the individual emissions sources at SDIA were obtained from up-to-date aerial photography and scaled drawings of the airport and its environs. These models, assessment methods and supporting materials are summarized in [Table 5-5.7](#).

<sup>67</sup> CARB 2002, EMFAC2002 Version 2.3, User's guide, November 2002, [www.arb.ca.gov/msei/on-road/pubs.htm](http://www.arb.ca.gov/msei/on-road/pubs.htm)

<sup>68</sup> U.S. EPA, *Compilation of Air Pollutant Emission Factors* (AP-42), [www.epa.gov/ttn/chief/ap42/index](http://www.epa.gov/ttn/chief/ap42/index)

The results of the Baseline/Existing Conditions emissions inventory for SDIA, which include the pollutants CO, VOC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10/2.5</sub> expressed in units of tons per year (tpy) for each emission source, and are summarized in [Table 5-5.8](#). These values are compared to future-year conditions with and without the Proposed Project and its alternatives in subsequent sections for informational purposes as a means of determining potential significance under CEQA.

Table 5-5.7

**Air Quality Analysis Models, Methods and Sources of Information**

Emission Source Type	Model or Method	Supporting Data & Information
Aircraft	FAA Emissions & Dispersion Modeling System (EDMS) <sup>a</sup>	<ul style="list-style-type: none"> <li>• Total operations – SIMMOD Analysis for <i>SDIA Master Plan</i></li> <li>• Fleet mix – SIMMOD Analysis for <i>SDIA Master Plan</i></li> <li>• Times-in-mode – Default data except for taxi-in, taxi-out &amp; delay which was based on <i>SDIA Master Plan</i> SIMMOD modeling.</li> <li>• Atmospheric mixing height - NCDC</li> <li>• Runway/taxiway layout and locations – Current aerial photo with scaled drawings of existing and future-year plans for SDIA.</li> </ul>
APU	EDMS	<ul style="list-style-type: none"> <li>• APU Type – EDMS default, by aircraft type.</li> <li>• Usage rates – Based on SDIA GSE / gate survey and EDMS default data.</li> <li>• Gate layout and locations – Current aerial photo with scaled drawings of existing and future-year plans for SDIA.</li> </ul>
GSE	EDMS	<ul style="list-style-type: none"> <li>• Fleet mix - Based on SDIA gate survey.</li> <li>• Operating times – Based on SDIA GSE survey.</li> <li>• Operating characteristics, engine and fuel type – EDMS default data.</li> <li>• Gate layout &amp; locations – Current aerial photo with scaled drawings of existing and future-year plans for SDIA.</li> </ul>
Motor vehicles	CARB EMFAC2007 <sup>b</sup>	<ul style="list-style-type: none"> <li>• Traffic volumes – EIR <i>Traffic Section</i></li> <li>• Fleet mix – EIR <i>Traffic Section</i> and SDIA Master Plan</li> <li>• Operating speeds – EIR <i>Traffic Section</i></li> <li>• Operating characteristics - EIR <i>Traffic Section</i></li> <li>• Roadway layout and locations - Current aerial photo, scaled drawings of existing &amp; future-year plans for SDIA, and roadway/intersection schematics.</li> </ul>
Stationary sources	U.S. EPA AP-42 <sup>c</sup> and EDMS	<ul style="list-style-type: none"> <li>• Source &amp; fuel type – <i>SDIA Air Quality Compliance Guide</i></li> <li>• Operating times – <i>SDIA Air Quality Compliance Guide</i></li> <li>• Emission factors – AP-42</li> <li>• Locations - Current aerial photo with scaled drawings of existing and future-year plans for SDIA.</li> </ul>
Construction	CARB OFFROAD2007 <sup>d</sup> URBIMIS	<ul style="list-style-type: none"> <li>• Equipment Schedule - SDCRAA</li> <li>• Equipment size and hours of operation - SDCRAA</li> <li>• Emission factors – OFFROAD for combustion sources and URBEMIS for fugitive dust sources</li> </ul>

<sup>a</sup> EDMS Version 5.0.2 (FAA, 2007), most current version.

<sup>b</sup> EMFAC2007 Version 2.3 On-road Emissions Inventory Estimation Model

<sup>c</sup> U.S. EPA AP-42

<sup>d</sup> OFFROAD2007 – Emissions Inventory Estimation Model for Off-road Sources  
URBEMIS – CARB Land Use Emissions Model

Source: KB Environmental Sciences, 2007.



Table 5-5.8

**2005 Baseline/Existing Condition Air Emissions Inventory (tons per year)**

Source	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft <sup>a</sup>	344	112	688	66	15	15
GSE/APU <sup>b</sup>	513	20	70	6.3	<del>2.4</del> 2.0	<del>2.0</del> 1.9
Stationary Sources <sup>c</sup>	3.7	3.2	12	4.0	0.6	0.6
Motor Vehicles (On-site) <sup>d</sup>	51	3.0	5.6	0.0	0.5	0.3
Motor Vehicles (Off-site) <sup>e</sup>	328	44 10	79 58	0.7 0.5	4.0 2.9	2.6 1.9
<b>Totals</b>	<del>1,240</del> <b>1,150</b>	<del>152</del> 148	<del>855</del> 833	<del>77</del>	<del>22</del> 21	<del>20</del>

CO = Carbon monoxide; VOC = Volatile organic compounds; NO<sub>x</sub> = Nitrogen oxides; SO<sub>x</sub> = Sulfur oxides; PM<sub>10/2.5</sub> = Particulate matter (10 and 2.5 microns, respectively); GSE = ground support equipment; APU = auxiliary power units

<sup>a</sup> Aircraft emissions comprise those from the entire LTO cycle (i.e., approach, landing, taxi-in, taxi-out, take-off and climbout).

<sup>b</sup> GSE and APU emissions based upon observed operating times from on-site surveys conducted at SDIA.

<sup>c</sup> Stationary source emissions include those associated with boilers, emergency generators, and fuel storage facilities.

<sup>d</sup> On-site motor vehicles are airport-related traffic operating on airport roadway and parking facilities.

<sup>e</sup> Off-site motor vehicles are airport-related traffic operating on public roadways/freeways.

Note: fractions of whole numbers are given where differences to future-year conditions are less than one ton.

Source: KB Environmental Sciences, Inc. 2007.

### 5.5.5.2 Ambient Concentrations

As with the emissions inventory, EDMS served as the principal model for predicting ambient concentrations of CO, NO<sub>2</sub>, PM<sub>10/2.5</sub>, and SO<sub>2</sub> both on the airport and in neighboring areas. Therefore, the same sets of input data and other supporting information developed for the emissions inventory (and listed in [Table 5-5.7](#)) were also used for the dispersion analysis.

Based on land use information contained in Section 5.2 *Land Use Planning*, sensitive receptors were located in areas within close proximity to SDIA and where the general public could have unrestricted access for one to several hours or longer. These include the school and residential areas of Liberty Station to the west and northwest; Spanish Landing Park and the recreation area along Navy Lagoon to the south and west; and the military installations (i.e., MCRD and United States Coast Guard) to the north and southeast. Other receptors were placed along the SDIA property boundary approximately 1,000 feet apart as a means of the identifying areas of highest pollutant concentrations whether the public had access or not. As shown in [Figure 5.5-2](#) a total of 33 receptors were analyzed.

A full year (e.g., 2002) of meteorological data (i.e., wind speed and direction, atmospheric mixing height, etc.) collected at the SDIA (for lower air data) and San Diego Miramar MCAS (for upper air data) weather stations were used.<sup>69</sup> Notably, the year 2002 was determined to be the “worst-case” meteorological year within the five-year period of 2002 through 2006.<sup>70</sup>

For consistency, all of the EDMS dispersion modeling results are expressed in units of micrograms/cubic meter (µg/m<sup>3</sup>) for each pollutant and receptor. In each case, the highest predicted concentrations are reported. Background concentrations were also added to account for the effects from sources located outside the dispersion modeling study area.<sup>71</sup> This combination of adding the highest modeled concentrations to the background concentrations produces conservatively high results that are unlikely to occur in reality.

<sup>69</sup> National Climatic Data Center (NCDC), Electronic Meteorological Data for San Diego, CA, provided to KB Environmental Sciences, 2007

<sup>70</sup> See Appendix E for discussion on worst-case meteorological data analysis.

<sup>71</sup> See Appendix E for discussion on the determination of the background concentrations.

**Table 5-5.9** contains a summary of the 2005 Baseline/Existing Condition dispersion modeling results. Reported as *Maximum Modeled Concentrations*, these values represent the highest predicted levels at all of the 33 receptors analyzed. As shown, predicted concentrations of CO and SO<sub>2</sub> are well within the CAAQS for these two pollutants. By comparison, the highest predicted levels of PM<sub>10/2.5</sub> and NO<sub>2</sub> are above the CAAQS. For PM<sub>10/2.5</sub> these results are to be expected as monitoring data from the San Diego area reveal violations of the CAAQS for these parameters. In the case of NO<sub>2</sub> (1) the highest predicted levels occur at only two receptors situated immediately under the flight path to the primary runway at SDIA; (2) land-uses in these areas located east and west of the runway are vacant (or adjacent to roadways) and not “typical” of human exposures; and (3) it is likely that EDMS is over-predicting these levels as there have been no recorded violations of the CAAQS for this pollutant in the San Diego area.

A separate dispersion modeling assessment of potential CO “hot-spots” was also conducted in areas of high motor vehicle traffic volumes (i.e., roadway intersections) and deteriorating Levels of Service (LOS) (see Section 5.5.6.3).

Table 5-5.9

**2005 Baseline/Existing Conditions Dispersion Modeling Results (µg/m<sup>3</sup>)<sup>a</sup>**

Pollutant	Averaging Time	Maximum Concentration <sup>b</sup>	CAAQS <sup>c</sup>	Above CAAQS (Yes/No) <sup>d</sup>
CO	1-hour	<del>49,063</del> <u>19,008</u>	23,000	No
	8-hour	<del>6,913</del> <u>6,804</u>	10,000	No
NO <sub>2</sub>	1 hour	<del>574</del> <u>568</u>	338	Yes
	Annual	<del>59</del> <u>54</u>	56	<del>Yes</del> <u>No</u>
SO <sub>2</sub>	1-hour	332	655	No
	24-hour	37	105	No
PM <sub>10</sub>	24-hour	<del>79</del> <u>83</u>	50	Yes
	Annual	<del>37</del> <u>39</u>	20	Yes
PM <sub>2.5</sub>	24-hour	<del>68</del> <u>67</u>	35	Yes
	Annual	<del>45</del> <u>17</u>	12	Yes

CO = Carbon monoxide; NO<sub>2</sub> = Nitrogen dioxide; SO<sub>2</sub> = Sulfur dioxide; PM<sub>10/2.5</sub> = Particulate matter (10 and 2.5 microns, respectively).

<sup>a</sup> See [Figure 5.895-1](#) for map of receptor locations.

<sup>b</sup> Maximum Concentration means highest predicted concentration using EDMS at all of the receptors analyzed with conservatively high background concentrations added.

<sup>c</sup> CAAQS = California Ambient Air Quality Standards. The National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or more strict.

<sup>d</sup> ~~The maximum modeled concentrations were compared to the CAAQS and determined whether (yes) that the concentration is above the standard or (no) that the concentration is equal to or below the standard. The maximum concentrations were compared to the CAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).~~

CAAQS = California Ambient Air Quality Standards (the National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or stricter).

Source: KB Environmental Sciences, Inc. 2007.

## 5.5.6 Impact Analysis

Consistent with the assessment of Baseline conditions, air quality impacts associated with the Proposed Project (Preferred Alternative) and the East Terminal Alternative (both with and without the Parking Structure), as well as the No Project Alternative are based on emission inventories and dispersion modeling results. Again, the emissions inventories provide an overall measure of the types and total amounts of emissions generated by airport-related sources and enable comparisons to established CEQA thresholds. By comparison, the dispersion modeling converts the emission inventory results to

predicted ambient concentrations on and around the Airport that are then compared to federal and state air quality standards.

In all cases, the analyses were conducted following the same approach and methodology discussed above in Section 5.5.5, *Environmental Setting* (i.e., comparing emissions under the Project to those under the No Project Alternative).

### 5.5.6.1 Proposed Project - With Parking Structure

The results of the Proposed Airport Implementation Plan – With Parking Structure air quality impact analyses are contained in this section. To avoid repetition, [Appendix E, Air Quality](#), contains further and more detailed discussions of the methodologies, models, data sources, and assumptions used.

#### Emissions Inventory

The emissions inventory for the Proposed Airport Implementation Plan is summarized in [Table 5-5.10](#), [Table 5-5.11](#), and [through 5-5.12](#) for 2010, 2015, and 2030, respectively.<sup>72</sup> For comparative purposes, the ~~2005 Baseline Conditions~~ No Project Alternative results are also shown, along with the differences between the two conditions, the appropriate CEQA criteria and an indication of whether or not the outcomes are considered potentially significant.

As shown, the total estimated emissions for this alternative do not exceed the CEQA Thresholds of Significance for CO, VOC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10/2.5</sub> in 2010 and 2015. ~~In 2030, the total estimated emissions do not exceed CEQA Thresholds of Significance for CO, VOC, SO<sub>x</sub>, and PM<sub>10/2.5</sub>. However, the differences in total emissions between this alternative and the Baseline Condition No Project Alternative exceeds the thresholds for NO<sub>x</sub> in 2030 and as such is considered a significant impact. 2010 and 2015 and for VOC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10/2.5</sub> for 2030. Again, this outcome is due to the forecasted growth in operations at SDIA over this timeframe, with or without the planned airport improvements. Nevertheless, these future-year increases in emissions over Baseline conditions are considered potentially significant under CEQA.~~

Table 5-5.10  
2010 Proposed Airport Implementation Plan - With Parking Structure  
Air Emissions Inventory (tons per year)<sup>a</sup>

Source	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	372	118	785	75	17	17
GSE/APU	318	12	47	2.3	1.5	1.4
Stationary Sources	4.1	3.3	13	4.0	0.7	0.7
Motor Vehicles (On-site)	<del>96</del> <u>44</u>	<del>4.4</del> <u>2.3</u>	<del>18.1</del> <u>4.7</u>	<del>0.1</del> <u>0.0</u>	<del>1.5</del> <u>0.7</u>	<del>1.0</del> <u>0.5</u>
Motor Vehicles (Off-site)	<del>276</del> <u>178</u>	<del>44</del> <u>7</u>	<del>68</del> <u>44</u>	<del>0.4</del> <u>0.2</u>	<del>4.5</del> <u>2.9</u>	<del>2.9</del> <u>1.8</u>
2010 Airport Total	<del>4,066</del> <u>916</u>	<del>148</del> <u>142</u>	<del>934</del> <u>894</u>	82	<del>25</del> <u>23</u>	<del>23</del> <u>22</u>
<del>2005 Baseline Total</del>	<del>1,240</del> <u>1,150</u>	<del>152</del> <u>148</u>	<del>855</del> <u>833</u>	77	<del>22</del> <u>21</u>	20
<u>2010 No Project Total</u>	<u>908</u>	<u>141</u>	<u>893</u>	<u>82</u>	<u>23</u>	<u>22</u>
Differences(+/-)	<del>-174</del> <u>9</u>	<del>-3.8</del> <u>-5.8</u> <u>1</u>	<del>76</del> <u>1</u>	<del>4.8</del> <u>0</u>	<del>3.2</del> <u>0</u>	<del>3</del> <u>0</u>
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	No	<del>Yes</del> <u>No</u>	No	No	No

<sup>a</sup> See [Table 5-5.8](#) for explanatory footnotes and abbreviations.

<sup>72</sup> Appendix E contains the emissions inventories for the years 2020 and 2025.

Table 5-5-11  
**2015 Proposed Airport Implementation Plan - With Parking Structure**  
**Air Emissions Inventory (tons per year)<sup>a</sup>**

Source	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	412	132	1,002	91	22	22
GSE/APU	194	7.4	31	2.3	1.0	<del>1.0</del> <u>0.9</u>
Stationary Sources	4.1	3.5	13	4.0	0.7	0.7
Motor Vehicles (On-site)	<del>72</del> <u>36</u>	<del>3.0</del> <u>1.7</u>	<del>42.6</del> <u>3.8</u>	<del>0.4</del> <u>0.0</u>	<del>1.6</del> <u>0.8</u>	<del>1.4</del> <u>0.6</u>
Motor Vehicles (Off-site)	<del>200</del> <u>142</u>	<del>7.7</del> <u>5.4</u>	<del>48</del> <u>34</u>	<del>0.4</del> <u>0.3</u>	<del>4.4</del> <u>3.2</u>	<del>2.8</del> <u>2.0</u>
2015 Airport Total	<del>882</del> <u>786</u>	<del>154</del> <u>150</u>	<del>1,107</del> <u>1,083</u>	98	<del>30</del> <u>27</u>	<del>27</del> <u>26</u>
<del>2005 Baseline Total</del>	<del>1,240</del> <u>1,150</u>	<del>152</del> <u>148</u>	<del>855</del> <u>833</u>	77	<del>22</del> <u>21</u>	20
<u>2015 No Project Total</u>	<u>778</u>	<u>150</u>	<u>1,082</u>	<u>97</u>	<u>27</u>	<u>26</u>
Differences(+/-)	<del>-359</del> <u>-364</u> <u>9</u>	<del>1.9</del> <u>2.3</u> <u>1</u>	<del>250</del> <u>1</u>	<del>20.8</del> <u>20.6</u> <u>0</u>	<del>7.8</del> <u>6.1</u> <u>0</u>	<del>6.5</del> <u>5.9</u> <u>0</u>
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	No	<del>Yes</del> <u>No</u>	No	No	No

<sup>a</sup> See Table 5-5.8 for explanatory footnotes and abbreviations.

Table 5-5.12  
**2030 Proposed Airport Implementation Plan - With Parking Structure**  
**Air Emissions Inventory (tons per year)<sup>a</sup>**

Source	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	438	162	1,459	120	31	31
GSE/APU	99	4.4	19	2.6	0.5	0.4
Stationary Sources	4.1	3.7	13	4.0	0.7	0.7
Motor Vehicles (On-site)	<del>44</del> <u>22</u>	<del>1.8</del> <u>0.9</u>	<del>6.1</del> <u>2.0</u>	<del>0.4</del> <u>0.0</u>	<del>1.8</del> <u>1.1</u>	<del>1.2</del> <u>0.8</u>
Motor Vehicles (Off-site)	<del>128</del> <u>91</u>	<del>5.4</del> <u>3.8</u>	<del>26</del> <u>19</u>	<del>0.5</del> <u>0.3</u>	<del>5.1</del> <u>3.6</u>	<del>3.0</del> <u>2.1</u>
2030 Airport Total	<del>710</del> <u>654</u>	<del>177</del> <u>175</u>	<del>1,522</del> <u>1,511</u>	<u>127</u>	<del>39</del> <u>37</u>	<del>37</del> <u>35</u>
<del>2005 Baseline Total</del>	<del>1,240</del> <u>1,150</u>	<del>152</del> <u>145</u>	<del>855</del> <u>833</u>	77	<del>22</del> <u>21</u>	<del>20</del> <u>21</u>
<u>2030 No Project Total</u>	<u>626</u>	<u>172</u>	<u>1,456</u>	<u>122</u>	<u>36</u>	<u>34</u>
Differences(+/-)	<del>-530</del> <u>-496</u> <u>28</u>	<del>25.3</del> <u>26.4</u> <u>3</u>	<del>667</del> <u>678</u> <u>55</u>	<del>50</del> <u>5</u>	<del>17</del> <u>16</u> <u>2</u>	<del>17</del> <u>15</u> <u>1</u>
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	<del>Yes</del> <u>No</u>	Yes	<del>Yes</del> <u>No</u>	<del>Yes</del> <u>No</u>	<del>Yes</del> <u>No</u>

<sup>a</sup> See Table 5-5.8 for explanatory footnotes and abbreviations.

## **Ambient Concentrations**

The dispersion modeling results for the Proposed Airport Implementation Plan - With Parking Structure are summarized in [Tables 5-5.13, 5.5-14, and through 5-5.15](#) for 2010, 2015, and 2030, respectively.<sup>73</sup> For comparative purposes, CAAQS are also shown along with an indication of whether or not the outcomes are considered potentially significant under CEQA.

As shown, the dispersion modeling results for this alternative are well within the CAAQS for CO and SO<sub>2</sub>. However, similar to the Baseline (i.e., 2005) conditions, the modeling results predict exceedances of the NO<sub>2</sub> and PM<sub>10/2.5</sub> CAAQS. For PM<sub>10/2.5</sub> these results are to be expected as monitoring data from the San Diego area reveal violations of the CAAQS for these parameters. In the case of NO<sub>2</sub>, (1) the highest predicted levels occur at only two receptors situated immediately under the flight path to the primary runway at SDIA; (2) land-uses in these areas located east and west of the runway are vacant (or adjacent to roadways) and not “typical” of human exposures; and (3) it is likely that EDMS is over-predicting these levels as there have been no violations of the CAAQS for this pollutant in the San Diego area.

Table 5-5.13  
2010 Proposed Airport Implementation Plan - With Parking Structure  
Dispersion Modeling Results (µg/m<sup>3</sup>)<sup>a</sup>

<b>Pollutant</b>	<b>Averaging Time</b>	<b>Maximum Concentration</b>	<b>CAAQS</b>	<b>Potentially Significant? Above CAAQS (Yes/No)<sup>b</sup></b>
CO	1 hour	<del>48,638</del> <u>18,582</u>	23,000	No
	8-hour	<del>6,525</del> <u>6,355</u>	10,000	No
NO <sub>2</sub>	1 hour	<del>538</del> <u>535</u>	338	<b>Yes</b>
	Annual	<del>59</del> <u>53</u>	56	<b>Yes-No</b>
SO <sub>2</sub>	1 hour	307	655	No
	24-hour	38	105	No
PM <sub>10</sub>	24-hour	<del>80</del> <u>84</u>	50	<b>Yes</b>
	Annual	<del>37</del> <u>39</u>	20	<b>Yes</b>
PM <sub>2.5</sub>	24-hour	<del>68</del> <u>65</u>	35	<b>Yes</b>
	Annual	<del>46</del> <u>19</u>	12	<b>Yes</b>

<sup>a</sup> See [Table 5-5.9](#) for explanatory footnotes and abbreviations.

<sup>b</sup> The maximum concentrations were compared to the CAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

CAAQS = California Ambient Air Quality Standards (the National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or stricter).

<sup>73</sup> Dispersion modeling was not conducted for the years 2020 and 2025 as these time-periods are bracketed by 2015 and 2030 and the emissions inventory results for all four years are similar.

Table 5-5.14

**2015 Proposed Airport Implementation Plan - With Parking Structure  
Dispersion Modeling Results<sup>a</sup> ( $\mu\text{g}/\text{m}^3$ )**

Pollutant	Averaging Time	Maximum Concentration	CAAQS	Potentially Significant? Above CAAQS (Yes/No) <sup>b</sup>
CO	1 hour	<del>46,004</del> <u>15,963</u>	23,000	No
	8-hour	<del>6,184</del> <u>6,090</u>	10,000	No
NO <sub>2</sub>	1 hour	<del>516</del> <u>514</u>	338	Yes
	Annual	<del>58</del> <u>55</u>	56	<del>Yes</del> <u>No</u>
SO <sub>2</sub>	1 hour	<del>303</del> <u>302</u>	655	No
	24-hour	42	105	No
PM <sub>10</sub>	24-hour	<del>84</del> <u>84</u>	50	Yes
	Annual	<del>37</del> <u>40</u>	20	Yes
PM <sub>2.5</sub>	24-hour	<del>68</del> <u>67</u>	35	Yes
	Annual	<del>46</del> <u>18</u>	12	Yes

<sup>a</sup> See Table 5-5.9 for explanatory footnotes and abbreviations.

<sup>b</sup> The maximum concentrations were compared to the CAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

CAAQS = California Ambient Air Quality Standards (the National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or stricter).

Table 5-5.15

**2030 Proposed Airport Implementation Plan - With Parking Structure  
Dispersion Modeling Results<sup>a</sup> ( $\mu\text{g}/\text{m}^3$ )**

Pollutant	Averaging Time	Maximum Concentration	CAAQS	Potentially Significant? Above CAAQS (Yes/No) <sup>b</sup>
CO	1 hour	<del>44,615</del> <u>14,589</u>	23,000	No
	8-hour	<del>5,728</del> <u>5,725</u>	10,000	No
NO <sub>2</sub>	1 hour	560	338	Yes
	Annual	<del>65</del> <u>63</u>	56	Yes
SO <sub>2</sub>	1 hour	312	655	No
	24-hour	45	105	No
PM <sub>10</sub>	24-hour	<del>79</del> <u>84</u>	50	Yes
	Annual	<del>38</del> <u>40</u>	20	Yes
PM <sub>2.5</sub>	24-hour	68	35	Yes
	Annual	<del>46</del> <u>18</u>	12	Yes

<sup>a</sup> See Table 5-5.9 for explanatory footnotes and abbreviations.

<sup>b</sup> The maximum concentrations were compared to the CAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

CAAQS = California Ambient Air Quality Standards (the National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or stricter).

### 5.5.6.2 Proposed Project - Without Parking Structure

The results of the Proposed Airport Implementation Plan - Without Parking Structure air quality impact analyses are contained in this section.

#### Emissions Inventory

The emissions inventories for this alternative are summarized in [Tables 5-5.16, 5-5.17, and through 5-5.18](#) for 2010, 2015, and 2030, respectively.<sup>74</sup> As shown, the total estimated emissions for this alternative do not exceed the CEQA Thresholds of Significance for CO, VOC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10/2.5</sub> in 2010 and 2015. In 2030, the total estimated emissions do not exceed CEQA Thresholds of Significance for CO, VOC, SO<sub>x</sub>, and PM<sub>10/2.5</sub>. However, the differences in total emissions between this alternative and the Baseline Condition No Project Alternative exceeds the thresholds for NO<sub>x</sub> in 2030, 2010 and 2015 and for VOC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10/2.5</sub> for 2030. Again, this outcome is due to the forecasted growth in operations at SDIA over this timeframe, with or without the planned airport improvements. Nevertheless, these future year increases in emissions over Baseline conditions are considered potentially significant under CEQA.

#### Ambient Concentrations

As shown above, the outcomes of the emission inventories for the Proposed Airport Implementation Plan - With Parking Structure reveal that total emissions for are slightly higher (or equal to) the “Without Parking Structure” condition. Pollutant concentrations are slightly higher with the Airport Implementation Plan – with Parking Structure due to the reduced dispersion of pollutants cause by the parking structure itself. Similarly, the outcomes of the dispersion modeling analyses are also expected to be comparable and therefore not repeated for the Proposed Airport Implementation Plan - Without the Parking Structure conditions.

Table 5-5.16  
2010 Proposed Airport Implementation Plan - Without Parking Structure  
Air Emissions Inventory (tons per year)<sup>a</sup>

Source	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	372	118	785	75	17	17
GSE/APU	318	12	47	2.3	<del>1.5</del> 1.4	1.4
Stationary Sources	4.1	3.3	13	4.0	0.7	0.7
Motor Vehicles (On-site)	<del>92</del> 40	<del>4.4</del> 2.1	<del>17.7</del> 4.3	<del>0.1</del> 0.0	<del>1.4</del> 0.6	<del>1.0</del> 0.4
Motor Vehicles (Off-site)	<del>277</del> 179	<del>41</del> 7	<del>68</del> 44	<del>0.4</del> 0.2	<del>4.5</del> 2.9	<del>2.9</del> 1.9
2010 Airport Total	<del>1,063</del> 913	<del>148</del> 142	<del>930</del> 893	82	<del>25</del> 23	<del>23</del> 22
<del>2005 Baseline Total</del>	<del>1,240</del> 1,150	<del>152</del> 148	<del>855</del> 833	77	<del>22</del> 21	20
<u>2010 No Project Total</u>	<u>908</u>	<u>141</u>	<u>893</u>	<u>82</u>	<u>23</u>	<u>22</u>
Differences(+/-)	<del>-177</del> 5	<del>-4.2</del> 1	<del>76</del> 1	<del>5</del> 0	<del>3</del> 0	<del>3</del> 0
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	No	<del>Yes</del> No	No	No	No

<sup>a</sup> See [Table 5-5.8](#) for explanatory footnotes and abbreviations.

<sup>74</sup> [Appendix E](#) contains the emissions inventories for the years 2020 and 2025.

Table 5-5.17  
**2015 Proposed Airport Implementation Plan - Without Parking Structure**  
**Air Emissions Inventory (tons per year) <sup>a</sup>**

Source	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	412	132	1,002	91	22	22
GSE/APU	194	7.4	31	2.3	1.0	<del>4.0</del> <u>0.9</u>
Stationary Sources	4.1	3.5	13	4.0	0.7	0.7
Motor Vehicles (On-site)	<del>68</del> <u>33</u>	<del>2.9</del> <u>1.5</u>	<del>42.3</del> <u>3.5</u>	<del>0.4</del> <u>0.0</u>	<del>4.6</del> <u>0.8</u>	<del>4.4</del> <u>0.6</u>
Motor Vehicles (Off-site)	<del>200</del> <u>141</u>	<del>7.7</del> <u>5.4</u>	<del>48</del> <u>35</u>	<del>0.4</del> <u>0.3</u>	<del>4.4</del> <u>3.1</u>	<del>2.8</del> <u>2.0</u>
2015 Airport Total	<del>878</del> <u>783</u>	<del>454</del> <u>150</u>	<del>4,106</del> <u>1,083</u>	98	<del>29</del> <u>27</u>	<del>27</del> <u>26</u>
<del>2005 Baseline Total</del>	<del>4,240</del> <u>4,150</u>	<del>452</del> <u>148</u>	<del>855</del> <u>833</u>	77	<del>22</del> <u>21</u>	20
<u>2015 No Project Total</u>	<u>778</u>	<u>150</u>	<u>1,082</u>	<u>97</u>	<u>27</u>	<u>26</u>
Differences(+/-)	<del>-363</del> <u>-367</u> <u>5</u>	<del>4.7</del> <u>2.1</u> <u>1</u>	<del>251</del> <u>250</u> <u>1</u>	<del>21</del> <u>0</u>	<del>7</del> <u>6.0</u> <u>0</u>	<del>7</del> <u>5.9</u> <u>0</u>
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	No	<del>Yes</del> <u>No</u>	No	No	No

<sup>a</sup> See [Table 5-5.8](#) for explanatory footnotes and abbreviations.



Table 5-5.18

**2030 Proposed Airport Implementation Plan - Without Parking Structure  
Air Emissions Inventory (tons per year)<sup>a</sup>**

Source	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	438	162	1,459	120	31	31
GSE/APU	99	4.4	19	2.6	0.5	0.4
Stationary Sources	4.1	3.7	13	4.0	0.7	0.7
Motor Vehicles (On-site)	<del>38-20</del>	<del>1.6-0.8</del>	<del>5.6-1.9</del>	<del>0.1-0.0</del>	<del>1.7-1.0</del>	<del>1.1-0.7</del>
Motor Vehicles (Off-site)	<del>126-90</del>	<del>5.3-3.8</del>	<del>25-18</del>	<del>0.5-0.3</del>	<del>5.0-3.6</del>	<del>3.0-2.1</del>
2030 Airport Total	<del>705-651</del>	<del>177-175</del>	<del>1,524-1,510</del>	127	<del>39-37</del>	<del>37-35</del>
<del>2005 Baseline Total</del>	<del>1,240-1,150</del>	<del>152-148</del>	<del>855-833</del>	77	<del>22-21</del>	20
2030 No Project Total	626	172	1,456	122	36	34
Differences(+/-)	<del>-536-499</del> 25	<del>24.5-26.3</del> 2	<del>666-677</del> 55	<del>50-5</del>	<del>17-16</del> 1	<del>17-15</del> 1
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	Yes <u>No</u>	Yes	Yes <u>No</u>	Yes <u>No</u>	Yes <u>No</u>

<sup>a</sup> See [Table 5-5.8](#) for explanatory footnotes and abbreviations.

### 5.5.6.3 East Terminal Alternative - With Parking Structure

The results of the Airport Implementation Plan Alternative - With Parking Structure air quality impact analyses are contained in this section. Notably, this alternative is very similar to the Proposed Airport Implementation Plan in terms of the types, locations and emission characteristics of the primary emission sources (i.e., aircraft, GSE, motor vehicles, etc.) at the airport. The only exception to this is the surface traffic patterns and volumes on airport roadways in the vicinity of the Main Terminal Area, North Area and the former Teledyne-Ryan area.

#### **Emissions Inventory**

The emissions inventories for this alternative are summarized in [Tables 5-5.19, 5-5.20, and through 5-5.21](#) for 2010, 2015, and 2030, respectively.<sup>75</sup> As shown, the total estimated emissions for this alternative do not exceed the CEQA Thresholds of Significance for CO, VOC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10/2.5</sub> in 2010 and 2015. In 2030, the total estimated emissions do not exceed CEQA Thresholds of Significance for CO, VOC, SO<sub>x</sub>, and PM<sub>10/2.5</sub>. However, the differences in total emissions between this alternative and the Baseline Condition No Project Alternative exceeds the thresholds for NO<sub>x</sub> in 2030, 2010 and 2015 and for VOC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10/2.5</sub> for 2030. Again, this outcome is due to the forecasted growth in operations at SDIA over this timeframe, with or without the planned airport improvements. Nevertheless, these future year increases in emissions over Baseline conditions are considered potentially significant under CEQA.

#### Ambient Concentrations

The dispersion modeling results for this alternative are summarized in [Tables 5-5.22, 5-5.23, and through 5-5.24](#) for the years 2010, 2015, and 2030, respectively.<sup>76</sup> As shown, the results are within the CAAQS for CO and SO<sub>2</sub>. However, the results predict exceedances of the NO<sub>2</sub> and PM<sub>10/2.5</sub> CAAQS.

<sup>75</sup> [Appendix E](#) contains the emissions inventories for the Proposed Airport Implementation Plan Alternative for 2020 and 2025.

<sup>76</sup> Dispersion modeling was not conducted for the years 2020 and 2025 as these time-periods are bracketed by 2015 and 2030 and the emissions inventory results for all four years are similar.

Again, for PM<sub>10/2.5</sub> these results are to be expected as monitoring data from the San Diego area reveal violations of the CAAQS for these parameters. In the case of NO<sub>2</sub>, (1.) the highest predicted levels occur at only two receptors situated immediately under the flight path to the primary runway at SDIA; (2.) land-uses in these areas located east and west of the runway are vacant (or adjacent to roadways) and not “typical” of human exposures; and (3.) it is likely that EDMS is over-predicting these levels given that there have been no violations of the CAAQS for this pollutant in the San Diego area.

Table 5-5.19

**2010 Airport Implementation Plan Alternative - With Parking Structure  
Air Emissions Inventory<sup>a</sup> (tons per year)**

Source	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	384	119	787	76	17	17
GSE/APU	316	12	47	2.1	1.5	<del>1.5</del> 1.4
Stationary Sources	4.1	3.3	13	4.0	0.7	0.7
Motor Vehicles (On-site)	43	2.2	4.6	0.0	0.6	0.5
Motor Vehicles (Off-site)	<del>249</del> 177	<del>40</del> 7	<del>64</del> 44	<del>0.3</del> 0.2	<del>4.0</del> 2.9	<del>2.6</del> 1.8
2010 Airport Total	<del>997</del> 926	<del>146</del> 143	<del>912</del> 895	82	<del>24</del> 23	<del>23</del> 22
2005 Baseline Total	1,240 <del>1,150</del>	152 148	855 833	77	22 24	20 22
2010 No Project Total	908	141	893	82	23	22
Differences(+/-)	<del>-243</del> 19	<del>-6.2</del> 2	<del>57</del> 3	<del>5</del> 1	<del>2</del> 0	<del>3</del> 0
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	No	Yes No	No	No	No

<sup>a</sup> See Table 5-5.8 for explanatory footnotes and abbreviations.

Table 5-5.20

**2015 Airport Implementation Plan Alternative - With Parking Structure  
Air Emissions Inventory<sup>a</sup> (tons per year)**

Source	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	426	133	1,004	92	22	22
GSE/APU	<del>485</del> 193	<del>7.2</del> 7.4	31	2.3	1.0	<del>1.0</del> 0.9
Stationary Sources	4.1	3.5	13	4.0	0.7	0.7
Motor Vehicles (On-site)	35	1.6	3.7	0.0	0.8	0.6
Motor Vehicles (Off-site)	<del>199</del> 141	<del>7.6</del> 5.4	<del>48</del> 34	<del>0.4</del> 0.3	<del>4.4</del> 3.1	<del>2.8</del> 2.0
2015 Airport Total	<del>849</del> 798	<del>153</del> 151	<del>1,098</del> 1,085	<del>99</del> 98	<del>29</del> 28	<del>27</del> 26
2005 Baseline Total	1,240 <del>1,150</del>	152 148	855 833	77	22	20
2015 No Project Total	778	150	1,082	97	27	26
Differences(+/-)	<del>-391</del> <del>-351</del> 21	<del>1.4</del> <del>3.2</del> 2	<del>243</del> <del>252</del> 3	<del>24</del> 1	<del>7</del> <del>6.1</del> 0	<del>6</del> 0
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	No	Yes No	No	No	No

<sup>a</sup> See Table 5-5.8 for explanatory footnotes and abbreviations.

Table 5-5.21

**2030 Airport Implementation Plan Alternative - With Parking Structure  
Air Emissions Inventory<sup>a</sup> (tons per year)**

Source	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	449	163	1,461	121	31	31
GSE/APU	<del>98</del> <u>99</u>	4.4	19	2.6	0.5	0.4
Stationary Sources	4.1	3.7	13	4.0	0.7	0.7
Motor Vehicles (On-site)	21	0.9	2.0	0.0	1.0	0.8
Motor Vehicles (Off-site)	<del>128</del> <u>91</u>	<del>5.4</del> <u>3.8</u>	<del>26</del> <u>18</u>	<del>0.5</del> <u>0.3</u>	<del>5.0</del> <u>3.6</u>	<del>3.0</del> <u>2.1</u>
2030 Airport Total	<del>700</del> <u>664</u>	<del>177</del> <u>175</u>	<del>1,520</del> <u>1,513</u>	128	<del>39</del> <u>37</u>	<del>36</del> <u>35</u>
2005 Baseline Total	<del>1,240</del> <u>1,150</u>	<del>152</del> <u>148</u>	<del>855</del> <u>833</u>	77	<del>22</del> <u>21</u>	20
<u>2030 No Project Total</u>	<u>626</u>	<u>172</u>	<u>1,456</u>	<u>122</u>	<u>36</u>	<u>34</u>
Differences(+/-)	<del>-540</del> <del>-486</del> <u>38</u>	<del>24.6</del> <del>27</del> <u>3</u>	<del>665</del> <del>680</del> <u>57</u>	<del>51</del> <u>6</u>	<del>17</del> <del>16</del> <u>2</u>	<del>16</del> <del>15</del> <u>2</u>
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	<del>Yes</del> <u>No</u>	Yes	<del>Yes</del> <u>No</u>	<del>Yes</del> <u>No</u>	<del>Yes</del> <u>No</u>

<sup>a</sup> See Table 5-5.8 for explanatory footnotes and abbreviations.

Table 5-5.22

**2010 Project Implementation Plan Alternative - With Parking Structure  
Dispersion Modeling Results<sup>a</sup> (µg/m<sup>3</sup>)**

Pollutant	Averaging Time	Maximum Concentration	CAAQS	Potentially Significant? Above CAAQS (Yes/No) <sup>b</sup>
CO	1 hour	<del>17,329</del> <u>17,274</u>	23,000	No
	8-hour	<del>6,525</del> <u>6,317</u>	10,000	No
NO <sub>2</sub>	1 hour	<del>473</del> <u>471</u>	338	Yes
	Annual	<del>57</del> <u>53</u>	56	<del>Yes</del> <u>No</u>
SO <sub>2</sub>	1 hour	263	655	No
	24-hour	39	105	No
PM <sub>10</sub>	24-hour	<del>80</del> <u>84</u>	50	Yes
	Annual	<del>37</del> <u>39</u>	20	Yes
PM <sub>2.5</sub>	24-hour	<del>68</del> <u>65</u>	35	Yes
	Annual	<del>15</del> <u>19</u>	12	Yes

<sup>a</sup> See Table 5-5.9 for explanatory footnotes and abbreviations.

<sup>b</sup> The maximum concentrations were compared to the CAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

CAAQS = California Ambient Air Quality Standards (the National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or stricter).

Table 5-5.23

**2015 Project Implementation Plan Alternative - With Parking Structure  
Dispersion Modeling Results<sup>a</sup> ( $\mu\text{g}/\text{m}^3$ )**

Pollutant	Averaging Time	Maximum Concentration	CAAQS	Potentially Significant? Above CAAQS (Yes/No) <sup>b</sup>
CO	1 hour	<del>45,953</del> <u>15,913</u>	23,000	No
	8-hour	<del>6,184</del> <u>6,049</u>	10,000	No
NO <sub>2</sub>	1 hour	<del>477</del> <u>475</u>	338	Yes
	Annual	<del>59</del> <u>55</u>	56	<del>Yes</del> <u>No</u>
SO <sub>2</sub>	1 hour	297	655	No
	24-hour	41	105	No
PM <sub>10</sub>	24-hour	<del>84</del> <u>84</u>	50	Yes
	Annual	<del>37</del> <u>40</u>	20	Yes
PM <sub>2.5</sub>	24-hour	<del>68</del> <u>67</u>	35	Yes
	Annual	<del>46</del> <u>18</u>	12	Yes

<sup>a</sup> See Table 5-5.9 for explanatory footnotes and abbreviations.

<sup>b</sup> The maximum concentrations were compared to the CAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

CAAQS = California Ambient Air Quality Standards (the National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or stricter).

Table 5-5.24

**2030 Project Implementation Plan Alternative - With Parking Structure  
Dispersion Modeling Results<sup>a</sup> ( $\mu\text{g}/\text{m}^3$ )**

Pollutant	Averaging Time	Maximum Concentration	CAAQS	Potentially Significant? Above CAAQS (Yes/No) <sup>b</sup>
CO	1 hour	<del>44,684</del> <u>14,659</u>	23,000	No
	8-hour	<del>5,737</del> <u>5,734</u>	10,000	No
NO <sub>2</sub>	1 hour	<del>564</del> <u>560</u>	338	Yes
	Annual	<del>65</del> <u>63</u>	56	Yes
SO <sub>2</sub>	1 hour	314	655	No
	24-hour	45	105	No
PM <sub>10</sub>	24-hour	<del>79</del> <u>84</u>	50	Yes
	Annual	<del>38</del> <u>40</u>	20	Yes
PM <sub>2.5</sub>	24-hour	68	35	Yes
	Annual	<del>46</del> <u>18</u>	12	Yes

<sup>a</sup> See Table 5-5.9 for explanatory footnotes and abbreviations.

<sup>b</sup> The maximum concentrations were compared to the CAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

CAAQS = California Ambient Air Quality Standards (the National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or stricter).

### 5.5.6.4 East Terminal Alternative - Without Parking Structure

The results of the Airport Implementation Plan Alternative - Without Parking Structure air quality impact analyses are contained in this section. Again, this alternative is very similar to the Proposed Airport Implementation Plan Alternative - With Parking Structure in terms of the types, locations and emission characteristics of the primary emission sources (i.e., aircraft, GSE, motor vehicles, etc.) at the Airport. The only exception is the surface traffic patterns and volumes on both on-site and off-site roadways and the location and size of on-site parking facilities.

#### Emissions Inventory

The emissions inventories for this alternative are summarized in [Tables 5-5.25, 5-5.26, and 5-5.27](#) for 2010, 2015, and 2030, respectively.<sup>77</sup> As shown, the total estimated emissions for this alternative do not exceed the CEQA Thresholds of Significance for CO, VOC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10/2.5</sub> in 2010 and 2015. In 2030, the total estimated emissions do not exceed CEQA Thresholds of Significance for CO, VOC, SO<sub>x</sub>, and PM<sub>10/2.5</sub>. However, the differences in total emissions between this alternative and the Baseline Condition No Project Alternative exceeds the thresholds for NO<sub>x</sub> in 2030, 2010 and 2015 and for VOC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10/2.5</sub> for 2030. Again, this outcome is due to the forecasted growth in operations at SDIA over this timeframe, with or without the planned airport improvements. Nevertheless, these future-year increases in emissions over Baseline conditions are considered potentially significant under CEQA.

#### Ambient Concentrations

As shown above, the outcomes of the emission inventories reveal that total emissions for the Airport Implementation Plan Alternative - With Parking Structure are slightly higher (or equal to) the “Without Parking Structure” scenario. Again, pollutant concentrations are slightly higher with the Airport Implementation Plan Alternative – with Parking Structure due to the reduced dispersion of pollutants cause by the parking structure itself. Similarly, the outcomes of the dispersion modeling analyses are also expected to be comparable and, therefore, not repeated for the “Without Parking Structure” conditions.

Table 5-5.25  
2010 Airport Implementation Plan Alternative - Without Parking Structure  
Air Emissions Inventory<sup>a</sup> (tons per year)

Source	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	384	119	787	76	17	17
GSE/APU	<del>346</del> <u>318</u>	12	47	<del>2.4</del> <u>2.3</u>	<del>1.5</del> <u>1.4</u>	<del>1.5</del> <u>1.4</u>
Stationary Sources	4.1	3.3	13	4.0	0.7	0.7
Motor Vehicles (On-site)	42	2.1	4.5	0.0	0.6	0.4
Motor Vehicles (Off-site)	<del>249</del> <u>177</u>	<del>40</del> <u>7.1</u>	<del>64</del> <u>44</u>	<del>0.3</del> <u>0.2</u>	<del>4.0</del> <u>2.9</u>	<del>2.6</del> <u>1.8</u>
2010 Airport Total	<del>995</del> <u>925</u>	<del>146</del> <u>143</u>	<del>942</del> <u>895</u>	82	<del>24</del> <u>23</u>	<del>23</del> <u>22</u>
2005 Baseline Total	<del>1,240</del> <u>1,150</u>	<del>152</del> <u>143</u>	<del>855</del> <u>833</u>	77	<del>22</del> <u>21</u>	20
2010 No Project Total	<u>908</u>	<u>141</u>	<u>893</u>	<u>82</u>	<u>23</u>	<u>22</u>
Differences (+/-)	<del>-245</del> - <u>17</u>	<del>-6.3</del> <u>2</u>	<del>57</del> <u>3</u>	<del>5</del> <u>1</u>	<del>2</del> <u>0</u>	<del>3</del> <u>0</u>
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	No	<del>Yes</del> - <u>No</u>	No	No	No

<sup>a</sup> See [Table 5-5.8](#) for explanatory footnotes and abbreviations.

<sup>77</sup> [Appendix E](#) contains the emissions inventories for the Proposed Airport Implementation Plan Alternative (without Parking Structure) for 2020 and 2025.

Table 5-5.26

**2015 Airport Implementation Plan Alternative - Without Parking Structure  
Air Emissions Inventory<sup>a</sup> (tons per year)**

Source	CO	HC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	426	133	1,004	92	22	22
GSE/APU	<del>485</del> <u>193</u>	<del>7.2</del> <u>7.4</u>	31	2.3	1.0	<del>4.0</del> <u>0.9</u>
Stationary Sources	4.1	3.5	13	4.0	0.7	0.7
Motor Vehicles (On-site)	34	1.6	3.6	0.0	0.8	0.6
Motor Vehicles (Off-site)	<del>499</del> <u>140</u>	<del>7.6</del> <u>5.4</u>	<del>47</del> <u>34</u>	<del>0.4</del> <u>0.3</u>	<del>4.4</del> <u>3.1</u>	<del>2.8</del> <u>2.0</u>
2015 Airport Total	<del>848</del> <u>797</u>	<del>453</del> <u>151</u>	<del>1,098</del> <u>1,085</u>	<del>99</del> <u>98</u>	<del>29</del> <u>28</u>	<del>27</del> <u>26</u>
2005 Baseline Total	<del>1,240</del> <u>1,150</u>	<del>152</del> <u>151</u>	<del>855</del> <u>833</u>	77	<del>22</del> <u>21</u>	20
2015 No Project Total	<u>778</u>	<u>150</u>	<u>1,082</u>	<u>97</u>	<u>27</u>	<u>26</u>
Differences (+/-)	<del>-392</del> <del>-353</del> <u>19</u>	<del>4.4</del> <del>3.4</del> <u>2</u>	<del>243</del> <del>252</del> <u>3</u>	<del>21</del> <u>1</u>	<del>7</del> <del>6.4</del> <u>0</u>	<del>7</del> <del>6.0</del> <u>0</u>
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	No	<del>Yes</del> <u>No</u>	No	No	No

<sup>a</sup> See Table 5-5.8 for explanatory footnotes and abbreviations.

Table 5-5.27

**2030 Airport Implementation Plan Alternative - Without Parking Structure  
Air Emissions Inventory<sup>a</sup> (tons per year)**

Source	CO	HC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	449	163	1,461	121	31	31
GSE/APU	<del>98</del> <u>99</u>	4.4	19	2.6	0.5	0.4
Stationary Sources	4.1	3.7	13	4.0	0.7	0.7
Motor Vehicles (On-site)	21	0.9	1.9	0.0	1.0	0.7
Motor Vehicles (Off-site)	<del>428</del> <u>90</u>	<del>5.4</del> <u>3.8</u>	<del>26</del> <u>18</u>	<del>0.5</del> <u>0.3</u>	<del>5.0</del> <u>3.6</u>	<del>3.0</del> <u>2.1</u>
2030 Airport Total	<del>699</del> <u>663</u>	<del>477</del> <u>175</u>	<del>1,520</del> <u>1,513</u>	128	<del>39</del> <u>37</u>	<del>36</del> <u>35</u>
2005 Baseline Total	<del>1,240</del> <u>1,150</u>	<del>152</del> <u>148</u>	<del>855</del> <u>833</u>	77	<del>22</del> <u>21</u>	20
2030 No Project Total	<u>626</u>	<u>172</u>	<u>1,456</u>	<u>122</u>	<u>36</u>	<u>34</u>
Differences (+/-)	<del>-544</del> <del>-487</del> <u>37</u>	<del>24.6</del> <del>27</del> <u>3</u>	<del>665</del> <del>680</del> <u>57</u>	<del>50.7</del> <u>6</u>	<del>17</del> <del>16</del> <u>1</u>	<del>16</del> <del>15</del> <u>1</u>
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	<del>Yes</del> <u>No</u>	Yes	<del>Yes</del> <u>No</u>	<del>Yes</del> <u>No</u>	<del>Yes</del> <u>No</u>

<sup>a</sup> See Table 5-5.8 for explanatory footnotes and abbreviations.

### 5.5.6.5 Proposed Airport Land Use Plan

From the standpoint of air quality, the Proposed Airport Land Use Plan is also very similar to the Proposed Airport Implementation Plan in terms of the types, locations and emission characteristics of the

primary emission sources associated with the airport. Exceptions are related to on- and off-site airport-related surface traffic patterns and the locations of on-site motor vehicle parking facilities.

### **Emissions Inventory**

The emissions inventories for the Proposed Airport Land Use Plan are summarized in **Tables 5-5.28 and 5-5.29** for 2015 and 2030, respectively.<sup>78</sup> As shown, the total estimated emissions for this alternative do not exceed the CEQA Thresholds of Significance for CO, VOC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10/2.5</sub> in 2010 and 2015. In 2030, the total estimated emissions do not exceed CEQA Thresholds of Significance for CO, VOC, SO<sub>x</sub>, and PM<sub>10/2.5</sub>. However, the differences in total emissions between the Proposed Airport Land Use Plan and the Baseline Condition No Project Alternative exceeds the threshold for NO<sub>x</sub> in 2030, 2010 and 2015 and for VOC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10/2.5</sub> for 2030. Again, this outcome is due to the forecasted growth in operations at SDIA over this timeframe, with or without the planned airport improvements. Nevertheless, these future year increases in emissions over Baseline conditions are considered potentially significant under CEQA.

### **Ambient Concentrations**

The dispersion modeling results for the Proposed Airport Land Use Plan Alternative are summarized in **Tables 5-5.30 and 5-5.31** for the years 2015 and 2030, respectively.<sup>79</sup> As shown, the results are well within the CAAQS for CO and SO<sub>2</sub>. However, predicted exceedances<sup>7</sup> of the NO<sub>2</sub> and PM<sub>10/2.5</sub> CAAQS are shown. Again, for PM<sub>10/2.5</sub> these results are to be expected as monitoring data from the San Diego area reveal violations of the CAAQS for these parameters. In the case of NO<sub>2</sub>, (1) the highest predicted levels occur at only two receptors situated immediately under the flight paths to the primary runway at SDIA; (2) land-uses in these areas located east and west of the runway are vacant (or adjacent to roadways) and not “typical” of human exposures; and (3) it is likely that EDMS is over-predicting these levels as violations of the CAAQS for this pollutant have not occurred in the San Diego area.

Table 5-5.28

**2015 Proposed Airport Land Use Plan  
Air Emissions Inventory<sup>a</sup> (tons per year)**

Source	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	412	132	1,002	91	22	22
GSE/APU	194	7.4	31	2.3	1.0	<del>4.0</del> <u>0.9</u>
Stationary Sources	4.1	3.5	13	4.0	0.7	0.7
Motor Vehicles (On-site)	<del>80</del> <u>47</u>	<del>3.5</del> <u>2.3</u>	<del>13.0</del> <u>4.9</u>	0.1	<del>4.8</del> <u>1.1</u>	<del>4.3</del> <u>0.8</u>
Motor Vehicles (Off-site)	<del>233</del> <u>168</u>	<del>8.9</del> <u>6.44</u>	<del>56</del> <u>41</u>	<del>0.5</del> <u>0.3</u>	<del>5.2</del> <u>3.7</u>	<del>3.2</del> <u>2.3</u>
2015 Airport Total	<del>922</del> <u>825</u>	<del>456</del> <u>152</u>	<del>1,114</del> <u>1,090</u>	<del>98</del>	<del>34</del> <u>28</u>	<del>28</del> <u>27</u>
2005 Baseline Total	<del>1,240</del> <u>1,150</u>	<del>152</del> <u>148</u>	<del>855</del> <u>833</u>	77	<del>22</del> <u>24</u>	20
2015 No Project Total	<del>778</del>	<del>150</del>	<del>1,082</del>	<del>97</del>	<del>27</del>	<del>26</del>
Differences (+/-)	<del>-318</del> <u>-325</u> <u>47</u>	<del>3.5</del> <u>3.8</u> <u>2</u>	<del>259</del> <u>257</u> <u>8</u>	<del>21</del> <u>0</u>	<del>9</del> <u>6.9</u> <u>1</u>	<del>8</del> <u>6.4</u> <u>1</u>
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	No	<del>Yes</del> <u>No</u>	No	No	No

<sup>a</sup> See [Table 5-5.8](#) for explanatory footnotes and abbreviations.

<sup>78</sup> [Appendix E](#) contains the emissions inventories for the Airport Land Use Plan for 2020 and 2025.

<sup>79</sup> Dispersion modeling was not conducted for the years 2020 and 2025 as these time-periods are bracketed by 2015 and 2030 and the emissions inventory results for all four years are similar.

Table 5-5.29

**2030 Proposed Airport Land Use Plan  
Air Emissions Inventory<sup>a</sup> (tons per year)**

Source	CO	HC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	438	162	1,459	120	31	31
GSE/APU	99	4 <u>4.4</u>	19	2.6	0.5	0.4
Stationary Sources	4.1	3.7	13	4.0	0.7	0.7
Motor Vehicles (On-site)	<del>49</del> <u>29</u>	<del>2.4</del> <u>1.3</u>	<del>6.7</del> <u>2.7</u>	<del>0.2</del> <u>0.1</u>	<del>2.2</del> <u>1.4</u>	<del>1.5</del> <u>1.1</u>
Motor Vehicles (Off-site)	<del>148</del> <u>106</u>	<del>6</del> <u>4.5</u>	<del>30</del> <u>22</u>	<del>0.6</del> <u>0.4</u>	<del>5.8</del> <u>4.2</u>	<del>3.5</del> <u>2.5</u>
2030 Airport Total	<del>737</del> <u>675</u>	<del>178</del> <u>176</u>	<del>1,527</del> <u>1,514</u>	<del>127</del> <u>127</u>	<del>41</del> <u>38</u>	<del>37</del> <u>36</u>
2005 Baseline Total	<del>1,240</del> <u>1,150</u>	<del>152</del> <u>148</u>	<del>855</del> <u>833</u>	<del>77</del> <u>77</u>	<del>22</del> <u>21</u>	<del>20</del> <u>20</u>
2030 No Project Total	<del>626</del> <u>626</u>	<del>172</del> <u>172</u>	<del>1,456</del> <u>1,456</u>	<del>122</del> <u>122</u>	<del>36</del> <u>36</u>	<del>34</del> <u>34</u>
Differences (+/-)	<del>-503</del> <u>-474</u> <u>49</u>	<del>25.9</del> <u>27.4</u> <u>3</u>	<del>672</del> <u>681</u> <u>59</u>	<del>50</del> <u>5</u>	<del>19</del> <u>17</u> <u>2</u>	<del>17</del> <u>16</u> <u>2</u>
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	<del>Yes</del> <u>No</u>	Yes	<del>Yes</del> <u>No</u>	<del>Yes</del> <u>No</u>	<del>Yes</del> <u>No</u>

<sup>a</sup> See Table 5-5.8 for explanatory footnotes and abbreviations.

Table 5-5.30

**2015 Proposed Land Use Plan  
Dispersion Modeling Results<sup>a</sup> (µg/m<sup>3</sup>)**

Pollutant	Averaging Time	Maximum Concentration	CAAQS	Potentially Significant? Above CAAQS (Yes/No) <sup>b</sup>
CO	1 hour	16,002	23,000	No
	8-hour	6,245	10,000	No
NO <sub>2</sub>	1 hour	516	338	Yes
	Annual	59	56	Yes
SO <sub>2</sub>	1 hour	303	655	No
	24-hour	42	105	No
PM <sub>10</sub>	24-hour	<del>84</del> <u>86</u>	50	Yes
	Annual	<del>37</del> <u>40</u>	20	Yes
PM <sub>2.5</sub>	24-hour	68	35	Yes
	Annual	<del>46</del> <u>18</u>	12	Yes

<sup>a</sup> See Table 5-5.9 for explanatory footnotes and abbreviations.

<sup>b</sup> The maximum concentrations were compared to the CAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

CAAQS = California Ambient Air Quality Standards (the National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or stricter).



Table 5-5.31  
**2030 Proposed Land Use Plan**  
**Dispersion Modeling Results<sup>a</sup> ( $\mu\text{g}/\text{m}^3$ )**

Pollutant	Averaging Time	Maximum Concentration	CAAQS	Potentially Significant? Above CAAQS (Yes/No) <sup>b</sup>
CO	1 hour	14,770	23,000	No
	8-hour	5,758	10,000	No
NO <sub>2</sub>	1 hour	560	338	Yes
	Annual	65	56	Yes
SO <sub>2</sub>	1 hour	312	655	No
	24-hour	45	105	No
PM <sub>10</sub>	24-hour	<del>80</del> <u>85</u>	50	Yes
	Annual	<del>38</del> <u>41</u>	20	Yes
PM <sub>2.5</sub>	24-hour	68	35	Yes
	Annual	<del>46</del> <u>19</u>	12	Yes

<sup>a</sup> See Table 5-5.9 for explanatory footnotes and abbreviations.

<sup>b</sup> The maximum concentrations were compared to the CAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

CAAQS = California Ambient Air Quality Standards (the National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or stricter).

### 5.5.6.6 No Project Alternative

The results of the No Project Alternative air quality impact analyses are contained in this section.

#### Emissions Inventory

The emissions inventories for the No Project Alternative are summarized in [Tables 5-5.32, through 5-5.33, and 5-5.34](#) for 2010, 2015, and 2030, respectively.<sup>80</sup> ~~As shown, the total estimated emissions do not exceed the CEQA Thresholds of Significance for CO, VOC, SO<sub>x</sub>, and PM<sub>10/2.5</sub> in 2010 and 2015. However, the differences in total emissions associated with this alternative and the Baseline Condition exceed the thresholds for NO<sub>x</sub> in 2010 and 2015 and for VOC, NO<sub>x</sub>, and PM<sub>2.5</sub> for 2030. Therefore, these emissions are considered potentially significant under CEQA.~~

<sup>80</sup> [Appendix E](#) contains the emissions inventories for the No Action Alternative for 2020 and 2025.

Table 5-5.32

**2010 No Project Alternative  
Air Emissions Inventory<sup>a</sup> (tons per year)**

Source	CO	HC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	<del>369</del> <u>368</u>	117	785	75	17	17
GSE/APU	318	12	47	2.3	<del>4.5</del> <u>1.4</u>	1.4
Stationary Sources	3.7	3.3	12	4.0	0.6	0.6
Motor Vehicles (On-site)	40	2.0	4.3	0.0	0.6	0.4
Motor Vehicles (Off-site)	<del>254</del> <u>178</u>	<del>49</del> <u>7.1</u>	<del>62</del> <u>44</u>	<del>0.3</del> <u>0.2</u>	<del>4.4</del> <u>2.9</u>	<del>2.6</del> <u>1.8</u>
2010 No Project Total	<del>984</del> <u>908</u>	<del>144</del> <u>141</u>	<del>940</del> <u>893</u>	82	<del>24</del> <u>23</u>	22
2005 Baseline Totals	<del>1,240</del> <del>1,150</del>	<del>152</del> <u>148</u>	<del>855</del> <u>833</u>	77	<del>22</del> <u>21</u>	20
Differences (+/-)	<del>-260</del> <u>-242</u>	<del>-8.0</del> <u>-7</u>	<del>55</del> <u>59</u>	5	<del>2</del> <u>1</u>	<del>2</del> <u>1</u>
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	No	Yes	No	No	No

<sup>a</sup> See Tables 5-5.7 and 5-5.8 for explanatory footnotes and abbreviations.

Table 5-5.33

**2015 No Project Alternative  
Air Emissions Inventory<sup>a</sup> (tons per year)**

Source	CO	HC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	408	132	1,001	91	22	22
GSE/APU	193	7.4	31	2.3	1.0	<del>1.0</del> <u>0.9</u>
Stationary Sources	3.7	3.5	12	4.0	0.6	0.6
Motor Vehicles (On-site)	32	1.5	3.4	0.0	0.7	0.6
Motor Vehicles (Off-site)	<del>499</del> <u>141</u>	<del>7.7</del> <u>5.4</u>	<del>48</del> <u>34</u>	<del>0.4</del> <u>0.3</u>	<del>4.4</del> <u>3.1</u>	<del>2.8</del> <u>2.0</u>
2015 No Project Total	<del>836</del> <u>778</u>	<del>152</del> <u>150</u>	<del>1,095</del> <del>1,082</del>	<del>98</del> <u>97</u>	<del>29</del> <u>27</u>	<del>27</del> <u>26</u>
2005 Baseline Totals	<del>1,240</del> <del>1,150</del>	<del>152</del> <u>148</u>	<del>855</del> <u>833</u>	77	<del>22</del> <u>21</u>	20
Differences (+/-)	<del>-404</del> <u>-372</u>	<del>-0.2</del> <u>2</u>	<del>240</del> <u>249</u>	20	<del>7</del> <u>6</u>	<del>7</del> <u>6</u>
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	No	Yes	No	No	No

<sup>a</sup> See Table 5-5.8 for explanatory footnotes and abbreviations.

Table 5-5.34

**2030 No Project Alternative  
Air Emissions Inventory<sup>a</sup> (tons per year)**

Source	CO	HC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Aircraft	425	160	1,406	115	30	30
GSE/APU	92	4.1	18	2.4	0.5	0.4
Stationary Sources	3.7	3.7	12	4.0	0.6	0.6
Motor Vehicles (On-site)	18	0.7	1.7	0.0	0.9	0.6
Motor Vehicles (Off-site)	<del>125</del> <u>86</u>	<del>5.2</del> <u>3.6</u>	<del>25</del> <u>18</u>	<del>0.5</del> <u>0.3</u>	<del>4.9</del> <u>3.4</u>	<del>2.9</del> <u>2.0</u>
2030 No Project Total	<del>664</del> <u>626</u>	<del>174</del> <u>172</u>	<del>1,463</del> <u>1,456</u>	122	<del>37</del> <u>36</u>	<del>35</del> <u>34</u>
2005 Baseline Totals	<del>1,240</del> <u>1,150</u>	<del>152</del> <u>148</u>	<del>855</del> <u>833</u>	77	<del>22</del> <u>21</u>	20
Differences (+/-)	<del>-576</del> <u>-524</u>	<del>21.7</del> <u>24</u>	<del>608</del> <u>623</u>	45	<del>15</del> <u>14</u>	<del>15</del> <u>14</u>
CEQA Thresholds	100	13.7	40	40	15	10
Potentially Significant?	No	Yes	Yes	Yes	No	Yes

<sup>a</sup> See Table 5-5.8 for explanatory footnotes and abbreviations.

### **Ambient Concentrations**

The dispersion modeling results for the No Project Alternative are summarized in [Tables 5-5.35, 5-5.36, and through 5-5.37](#) for the years 2010, 2015, and 2030, respectively.<sup>81</sup> As shown, the dispersion modeling results for the No Build Alternative are well within the CAAQS for CO and SO<sub>2</sub>. However, the results for NO<sub>2</sub> and PM<sub>10/2.5</sub> are above the CAAQS and are therefore considered potentially significant under CEQA.<sup>82</sup>

<sup>81</sup> Appendix E contains the emissions inventories for the No Project Alternative for 2020 and 2025.

<sup>82</sup> Again, for PM<sub>10/2.5</sub> these results are to be expected as monitoring data from the San Diego area reveal violations of the CAAQS for these parameters. In the case of NO<sub>2</sub>, (1.) the highest predicted levels occur at only two receptors situated immediately under the flight path to the primary runway at SDIA; (2.) land-uses in these areas located east and west of the runway are vacant (or adjacent to roadways) and not "typical" of human exposures; and (3.) it is likely that EDMS is over-predicting these levels as no violations of the CAAQS for this pollutant have occurred in the San Diego area.

Table 5-5.35  
**2010 No Project Alternative**  
**Dispersion Modeling Results<sup>a</sup> (µg/m<sup>3</sup>)**

Pollutant	Averaging Time	Maximum Concentration	CAAQS	Potentially Significant? Above CAAQS (Yes/No) <sup>b</sup>
CO	1 hour	<del>47,222</del> <u>17,166</u>	23,000	No
	8-hour	<del>6,523</del> <u>6,404</u>	10,000	No
NO <sub>2</sub>	1 hour	<del>468</del> <u>465</u>	338	Yes
	Annual	<del>57</del> <u>53</u>	56	Yes No
SO <sub>2</sub>	1 hour	<del>277</del> <u>276</u>	655	No
	24-hour	40	105	No
PM <sub>10</sub>	24-hour	<del>80</del> <u>84</u>	50	Yes
	Annual	<del>37</del> <u>39</u>	20	Yes
PM <sub>2.5</sub>	24-hour	<del>68</del> <u>65</u>	35	Yes
	Annual	<del>45</del> <u>19</u>	12	Yes

<sup>a</sup> See Table 5-5.9 for explanatory footnotes and abbreviations.

<sup>b</sup> The maximum concentrations were compared to the CAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

CAAQS = California Ambient Air Quality Standards (the National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or stricter).

Table 5-5.36  
**2015 No Project Alternative**  
**Dispersion Modeling Results<sup>a</sup> (µg/m<sup>3</sup>)**

Pollutant	Averaging Time	Maximum Concentration	CAAQS	Potentially Significant? Above CAAQS (Yes/No) <sup>b</sup>
CO	1 hour	<del>45,589</del> <u>15,554</u>	23,000	No
	8-hour	<del>6,183</del> <u>6,066</u>	10,000	No
NO <sub>2</sub>	1 hour	<del>477</del> <u>475</u>	338	Yes
	Annual	<del>59</del> <u>55</u>	56	Yes No
SO <sub>2</sub>	1 hour	<del>292</del> <u>291</u>	655	No
	24-hour	41	105	No
PM <sub>10</sub>	24-hour	<del>84</del> <u>84</u>	50	Yes
	Annual	<del>37</del> <u>40</u>	20	Yes
PM <sub>2.5</sub>	24-hour	<del>68</del> <u>67</u>	35	Yes
	Annual	<del>46</del> <u>18</u>	12	Yes

<sup>a</sup> See Table 5-5.9 for explanatory footnotes and abbreviations.

<sup>b</sup> The maximum concentrations were compared to the CAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

CAAQS = California Ambient Air Quality Standards (the National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or stricter).

Table 5-5.37

**2030 No Project Alternative  
Dispersion Modeling Results<sup>a</sup> ( $\mu\text{g}/\text{m}^3$ )**

Pollutant	Averaging Time	Maximum Concentration	CAAQS	Potentially Significant? Above CAAQS (Yes/No) <sup>b</sup>
CO	1 hour	<del>44,489</del> <u>14,452</u>	23,000	No
	8-hour	<del>5,724</del> <u>5,694</u>	10,000	No
NO <sub>2</sub>	1 hour	511	338	Yes
	Annual	<del>69</del> <u>63</u>	56	Yes
SO <sub>2</sub>	1 hour	<del>280</del> <u>279</u>	655	No
	24-hour	46	105	No
PM <sub>10</sub>	24-hour	<del>79</del> <u>84</u>	50	Yes
	Annual	<del>38</del> <u>40</u>	20	Yes
PM <sub>2.5</sub>	24-hour	68	35	Yes
	Annual	<del>46</del> <u>18</u>	12	Yes

<sup>a</sup> See [Table 5-5.9](#) for explanatory footnotes and abbreviations.

<sup>b</sup> The maximum concentrations were compared to the CAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

CAAQS = California Ambient Air Quality Standards (the National Ambient Air Quality Standards (NAAQS) are not shown as the CAAQS are equal or stricter).

### 5.5.6.7 Emissions Inventory and Ambient Concentrations Summary

As a means of comparing the overall emission inventory and dispersion modeling results between the Proposed Airport Implementation Plan, the Proposed Airport Implementation Plan Alternative, the Land Use Plan, ~~as well as the Baseline~~ and No-Project conditions, this section provides a summary of these data.

The emissions inventory results are listed in [Table 5-5.38](#) and represent total airport-related emissions, by pollutant and year. As shown, CO emissions are predicted to decrease in the future when compared to ~~Baseline (i.e., existing)~~ 2005 Existing conditions. This is largely due to the continued reduction in motor vehicle emissions state-wide. By comparison, airport-related emissions of HC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10/2.5</sub> are predicted to increase in the future. This is due to the forecasted increase in operations at SDIA over time. Compared to the No-Project ~~condition~~ Alternative, there is some variability in these results among the alternatives analyzed with the Airport Implementation Plan - With Parking Structure having the greatest amounts overall. However, these differences are small (i.e., <10 percent) depending on the pollutant and analysis year.

The results of the dispersion modeling are listed in [Tables 5-5.39, 5-5.40, through 5-5.41, 5-5.42, 5-5.43, and 5-5.44](#) for the No Project, Airport Implementation Plan, Implementation Plan Alternative and Airport Land Use Plan ~~scenarios~~ Alternatives and for the years 2010, 2015, and 2030, respectively. Again, these values represent the highest predicted levels (including background) obtained under “worst-case” meteorological conditions at all of the receptors analyzed.

As shown in [Table 5-5.44](#), the results in 2010 for PM<sub>10/2.5</sub> are predicted to be the same for all of the conditions. By comparison, there is some variability in these results for CO, NO<sub>2</sub> and SO<sub>2</sub> among the alternatives analyzed, with the Airport Implementation Plan - With Parking Structure having the highest values overall. However, these differences are reasonably small (i.e., <10 percent). This same pattern is repeated for the years 2015 and 2030 (see [Tables 5-5.42 and 5-5.43](#), respectively).

Table 5-5.38  
**Summary of Air Emissions Inventory<sup>a</sup>**

Condition/Year	Year	Total Airport-Related Emissions (tons per year)					
		CO	HC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Baseline 2005	2005	<del>1,240</del> <u>1,150</u>	<del>152</del> <u>148</u>	<del>855</del> <u>833</u>	77	<del>22</del> <u>21</u>	20
No Project	2010	<del>981</del> <u>908</u>	<del>144</del> <u>141</u>	<del>940</del> <u>893</u>	82	<del>24</del> <u>23</u>	22
	2015	<del>836</del> <u>778</u>	<del>152</del> <u>150</u>	<del>1,095</del> <u>1,052</u>	<del>98</del> <u>97</u>	<del>29</del> <u>27</u>	<del>27</del> <u>26</u>
	2030	<del>664</del> <u>626</u>	<del>174</del> <u>172</u>	<del>1,463</del> <u>1,456</u>	122	<del>37</del> <u>36</u>	<del>35</del> <u>34</u>
Implementation Plan with Parking Structure	2010	<del>1,067</del> <u>916</u>	<del>148</del> <u>142</u>	<del>931</del> <u>893</u>	82	<del>25</del> <u>23</u>	<del>23</del> <u>22</u>
	2015	<del>882</del> <u>786</u>	<del>154</del> <u>150</u>	<del>1,105</del> <u>1,083</u>	98	<del>30</del> <u>27</u>	<del>27</del> <u>26</u>
	2030	<del>710</del> <u>645</u>	<del>177</del> <u>175</u>	<del>1,522</del> <u>1,511</u>	127	<del>39</del> <u>37</u>	<del>37</del> <u>35</u>
Implementation Plan Alternative with Parking Structure	2010	<del>997</del> <u>996</u>	<del>146</del> <u>143</u>	<del>912</del> <u>895</u>	82	<del>24</del> <u>23</u>	<del>23</del> <u>22</u>
	2015	<del>849</del> <u>798</u>	<del>153</del> <u>151</u>	<del>1,098</del> <u>1,085</u>	<del>99</del> <u>98</u>	<del>29</del> <u>28</u>	<del>27</del> <u>26</u>
	2030	<del>700</del> <u>664</u>	<del>177</del> <u>175</u>	<del>1,520</del> <u>1,513</u>	128	<del>39</del> <u>37</u>	<del>36</del> <u>35</u>
Land Use Plan	2015	<del>922</del> <u>821</u>	<del>156</del> <u>152</u>	<del>1,114</del> <u>1,090</u>	98	<del>31</del> <u>28</u>	<del>28</del> <u>27</u>
	2030	<del>737</del> <u>675</u>	<del>178</del> <u>176</u>	<del>1,527</del> <u>1,514</u>	127	<del>41</del> <u>38</u>	<del>37</del> <u>36</u>
<sup>a</sup> See Tables 5-57 and 5-60 <a href="#">Tables 5-5.8</a> and <a href="#">5-5.9</a> for explanatory footnotes and abbreviations.							

Table 5-5.39

Summary of 2010 Dispersion Modeling Results<sup>a</sup> ( $\mu\text{g}/\text{m}^3$ )

Pollutant	Averaging Time	Alternative				
		No Project	PAIP <sup>b</sup>	Change from No Project	AIPA <sup>c</sup>	Change from No Project
CO	1 hour	<del>17,222</del> 17,166	<del>18,638</del> 18,582	<u>1,416</u>	<del>17,329</del> 17,274	<u>108</u>
	8-hour	<del>6,523</del> <u>6,404</u>	<del>6,525</del> <u>6,355</u>	<u>-49</u>	<del>6,525</del> <u>6,317</u>	<u>-87</u>
NO <sub>2</sub>	1 hour	<del>468</del> <u>465</u>	<del>538</del> <u>535</u>	<u>70</u>	<del>473</del> <u>471</u>	<u>6</u>
	Annual	<del>57</del> <u>53</u>	<del>59</del> <u>53</u>	<u>0</u>	<del>57</del> <u>53</u>	<u>0</u>
SO <sub>2</sub>	1 hour	<del>277</del> <u>276</u>	307	<u>31</u>	263	<u>-13</u>
	24-hour	40	38	<u>-2</u>	39	<u>-1</u>
PM <sub>10</sub>	24-hour	<del>80</del> <u>84</u>	<del>80</del> <u>84</u>	<u>0</u>	<del>80</del> <u>84</u>	<u>0</u>
	Annual	<del>37</del> <u>39</u>	<del>37</del> <u>39</u>	<u>0</u>	<del>37</del> <u>39</u>	<u>0</u>
PM <sub>2.5</sub>	24-hour	<del>68</del> <u>65</u>	<del>68</del> <u>65</u>	<u>0</u>	<del>68</del> <u>65</u>	<u>0</u>
	Annual	<del>15</del> <u>19</u>	<del>16</del> <u>19</u>	<u>0</u>	<del>15</del> <u>19</u>	<u>0</u>

Source: KB Environmental Sciences, Inc. 2007.

<sup>a</sup> See Tables 5-57 and 5-60 Table 5-5.9 for explanatory footnotes and abbreviations<sup>b</sup> PAIP = Proposed Airport Implementation Plan<sup>c</sup> AIPA = Airport Implementation Plan Alternative

Table 5-5.40

## Summary of 2010 Dispersion Modeling Results

Pollutant	Averaging Time	Does the Alternative Exceed the CAAQS?		
		No Project	Airport Implementation Plan	Airport Implementation Plan Alternative
CO	1 hour	No	No	No
	8-hour	No	No	No
NO <sub>2</sub>	1 hour	Yes	Yes	Yes
	Annual	No	No	No
SO <sub>2</sub>	1 hour	No	No	No
	24-hour	No	No	No
PM <sub>10</sub>	24-hour	Yes	Yes	Yes
	Annual	Yes	Yes	Yes
PM <sub>2.5</sub>	24-hour	Yes	Yes	Yes
	Annual	Yes	Yes	Yes

Source: KB Environmental Sciences, Inc. 2008.

Table 5-5.401

Summary of 2015 Dispersion Modeling Results<sup>a</sup> (µg/m<sup>3</sup>)

Pollutant	Averaging Time	Alternatives						
		No Project	PAIP <sup>b</sup>	<u>Change from No Project</u>	AIPA <sup>c</sup>	<u>Change from No Project</u>	ALUP <sup>d</sup>	<u>Change from No Project</u>
CO	1 hour	<del>15,589</del> <u>15,554</u>	<del>16,004</del> <u>15,963</u>	<u>409</u>	<del>15,953</del> <u>15,913</u>	<u>359</u>	16,002	<u>448</u>
	8-hour	<del>6,183</del> <u>6,066</u>	<del>6,184</del> <u>6,090</u>	<u>24</u>	<del>6,184</del> <u>6,049</u>	<u>17</u>	6,245	<u>179</u>
NO <sub>2</sub>	1 hour	<del>477 475</del>	<del>516</del> <u>514</u>	<u>39</u>	<del>477 475</del>	<u>2</u>	516	<u>41</u>
	Annual	<del>59 55</del>	<del>58 55</del> <u>0</u>	<u>0</u>	<del>59 55</del>	<u>0</u>	59	<u>4</u>
SO <sub>2</sub>	1 hour	<del>292</del> <u>291</u>	<del>303</del> <u>302</u>	<u>11</u>	297	<u>6</u>	303	<u>12</u>
	24-hour	41	42	<u>1</u>	41	<u>0</u>	42	<u>1</u>
PM <sub>10</sub>	24-hour	<del>84 84</del>	<del>84 84</del> <u>0</u>	<u>0</u>	<del>84 84</del> <u>0</u>	<u>0</u>	<del>84 86</del>	<u>2</u>
	Annual	<del>37 40</del>	<del>37 40</del> <u>0</u>	<u>0</u>	<del>37 40</del> <u>0</u>	<u>0</u>	<del>37 40</del>	<u>0</u>
PM <sub>2.5</sub>	24-hour	<del>68 67</del>	<del>68 67</del> <u>0</u>	<u>0</u>	<del>68 67</del> <u>0</u>	<u>0</u>	68	<u>1</u>
	Annual	<del>46 18</del>	<del>46 18</del> <u>0</u>	<u>0</u>	<del>46 18</del> <u>0</u>	<u>0</u>	<del>46 18</del>	<u>0</u>

Source: KB Environmental Sciences, Inc. 2007g.

<sup>a</sup> See Tables 5-57 and 5-60 Table 5-5.9 for explanatory footnotes and abbreviations<sup>b</sup> PAIP = Proposed Airport Implementation Plan<sup>c</sup> AIPA = Airport Implementation Plan Alternative<sup>d</sup> ALUP = Airport Land Use Plan

Table 5-5.42

## Summary of 2015 Dispersion Modeling Result

Pollutant	Averaging Time	Does the Alternative Exceed the CAAQS?			
		No Project	Airport Implementation Plan	Airport Implementation Plan Alternative	Airport Land Use Plan
CO	1 hour	No	No	No	No
	8-hour	No	No	No	No
NO <sub>2</sub>	1 hour	Yes	Yes	Yes	Yes
	Annual	No	No	No	Yes
SO <sub>2</sub>	1 hour	No	No	No	No
	24-hour	No	No	No	No
PM <sub>10</sub>	24-hour	Yes	Yes	Yes	Yes
	Annual	Yes	Yes	Yes	Yes
PM <sub>2.5</sub>	24-hour	Yes	Yes	Yes	Yes
	Annual	Yes	Yes	Yes	Yes

Source: KB Environmental Sciences, Inc. 2008.



Table 5-4.413

Summary of 2030 Dispersion Modeling Results<sup>a</sup> (µg/m<sup>3</sup>)

Pollutant	Averaging Time	Alternatives						
		No Project	PAIP <sup>b</sup>	Change from No Project	AIPA <sup>c</sup>	Change from No Project	ALUP <sup>d</sup>	Change from No Project
CO	1 hour	<del>44,489</del> 14,452	44,615 14,589	137	44,684 14,659	207	14,770	318
	8-hour	<del>5,724</del> 5,694	5,728 5,725	31	<del>5,737</del> 5,734	40	5,758	64
NO <sub>2</sub>	1 hour	511	560	49	<del>564</del> 560	49	560	49
	Annual	<del>69</del> 63	<del>65</del> 63	0	<del>65</del> 63	0	65	1
SO <sub>2</sub>	1 hour	<del>280</del> 279	312	33	314	35	312	33
	24-hour	46	45	-1	45	-1	45	-1
PM <sub>10</sub>	24-hour	<del>79</del> 84	<del>79</del> 84	0	<del>79</del> 84	0	<del>80</del> 85	1
	Annual	<del>38</del> 40	<del>38</del> 40	0	<del>38</del> 40	0	<del>38</del> 41	1
PM <sub>2.5</sub>	24-hour	68	68	0	68	0	68	0
	Annual	<del>46</del> 18	<del>46</del> 18	0	<del>46</del> 18	0	<del>46</del> 19	1

Source: KB Environmental Sciences, Inc. 2007~~8~~.<sup>a</sup> See Table 5-5.9 for explanatory footnotes and abbreviations.<sup>b</sup> PAIP = Proposed Airport Implementation Plan<sup>c</sup> AIPA = Airport Implementation Plan Alternative<sup>d</sup> ALUP = Airport Land Use Plan

Table 5-5.44

## Summary of 2030 Dispersion Modeling Result

Pollutant	Averaging Time	Does the Alternative Exceed the CAAQS?			
		No Project	Airport Implementation Plan	Airport Implementation Plan Alternative	Airport Land Use Plan
CO	1 hour	No	No	No	No
	8-hour	No	No	No	No
NO <sub>2</sub>	1 hour	Yes	Yes	Yes	Yes
	Annual	Yes	Yes	Yes	Yes
SO <sub>2</sub>	1 hour	No	No	No	No
	24-hour	No	No	No	No
PM <sub>10</sub>	24-hour	Yes	Yes	Yes	Yes
	Annual	Yes	Yes	Yes	Yes
PM <sub>2.5</sub>	24-hour	Yes	Yes	Yes	Yes
	Annual	Yes	Yes	Yes	Yes

Source: KB Environmental Sciences, Inc. 2008.

The results of the ambient concentrations analysis indicate the Airport Implementation Plan, the Airport Implementation Plan Alternative, and the Airport Land Use Plan will have the following significant impacts. As described in 5.5.3, the Proposed Project is compared against the No Project Alternative and there is a significant impact (1) if the Proposed Project causes a violation of CAAQS that would not occur under the No Project Alternative, or (2) if, in the situation in which there would be a violation of CAAQS under the No Project Alternative, the Proposed Project contributes substantially to the existing violation, meaning that the increase caused by the Proposed Project is greater than 5% of the CAAQS standard.

#### Will the Project Cause a CAAQS Violation?

Under the No-Project Alternative there are predicted exceedances of the CAAQS for NO<sub>2</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> in the years 2010, 2015 and 2030. Similarly, under the Airport Implementation Plan, the Airport Implementation Plan Alternative, and the Airport Land Use Plan, there are also predicted exceedances of the CAAQS for NO<sub>2</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> in 2010, 2015 and 2020. Thus, the Airport Implementation Plan, the Airport Implementation Plan Alternative, and the Airport Land Use Plan are not expected to cause a CAAQS violation.

#### Will the Project “Contribute Significantly” to A Projected Violation?

In 2010, 2015 and 2030, the Proposed Airport Implementation Plan, Airport Implementation Plan Alternative and the Airport Land Use Plan are expected to “contribute significantly” to projected violations of the 1 hour CAAQS for NO<sub>2</sub> which were also predicted under the No Project Alternative. Specifically, in 2010, the Airport Implementation Plan is predicted to cause a 70 µg/m<sup>3</sup> increase when compared to the No Project Alternative. This value represents 21% of the 1 hour NO<sub>2</sub> standard and, therefore, is considered a significant impact. In 2015, the Airport Implementation Plan and Airport Land Use Plan are expected to cause a 39 and 41 µg/m<sup>3</sup> increase over when compared to the No Project Alternative. These values represent approximately 12% of the 1 hour NO<sub>2</sub> standard and are also considered to be significant impacts. Finally, in 2030 under the Airport Implementation Plan, Airport Implementation Plan Alternative and the Airport Land Use Plan, 1 hour NO<sub>2</sub> levels are predicted to increase by 49 µg/m<sup>3</sup> when compared to the No Project Alternative. This represents 15% of the 1 hour NO<sub>2</sub> standard and is considered a significant impact. By comparison, in the years 2010, 2015, and 2030 the Airport Implementation Plan, Airport Implementation Plan Alternative and the Airport Land Use Plan will not contribute significantly (i.e., <5%) to any predicted violation as the PM<sub>10</sub> and PM<sub>2.5</sub> concentrations remain practically the same between the No Project and the Project alternatives. (See Section 5.5 pages 36-37).

### **5.5.6.8 CO Hot-Spots Modeling**

Dispersion modeling of potential CO “hot-spots” was also conducted in areas of high motor vehicle traffic volumes (i.e., roadway intersections) and deteriorating levels-of-service (LOS) using models and following guidelines developed by CARB.<sup>83, 84</sup>

For this analysis, traffic volumes prepared in support of Section 5.3 *Traffic and Circulation* were used along with background CO levels obtained from the downtown San Diego air monitoring station. Four different intersections were analyzed: (1) Hawthorn Street/North Harbor Drive, (2) Grape Street/Pacific Highway, (3) Laurel Street/Pacific Highway, and (4) Grape Street/Kettner Boulevard, representing the areas of highest traffic volumes and lowest LOS in the vicinity of SDIA.<sup>85</sup>

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<sup>83</sup> CO is a localized pollutant and tends to become elevated in areas (i.e., “hot-spots”) near high surface traffic volumes and low levels of service. Analyzing intersections with these characteristics reveals potential “worst-case” conditions and it is assumed that CO levels near other intersections are lower, by comparison.

<sup>84</sup> *Transportation Project-Level Carbon Monoxide Protocol*, from the Institute of Transportation Studies, University of California Davis (UCD-ITS-97-21), December 1997.

<sup>85</sup> Appendix E provides additional information regarding the CO intersection analysis including emission factors, receptors, and determination of roadway intersection to be analyzed.

The analysis years (i.e., 2015, 2020, 2025) and alternative (i.e., Land Use Plan) subjected to this assessment are representative of potential “worst-case” conditions among all the available scenarios (including the Airport Implementation Plan, Airport Implementation Plan Alternative, No Project Alternative).

The results of the CO hot-spot modeling are summarized in [Table 5-5.425](#) and values reported are the highest CO levels at any of the receptors analyzed. As shown, these predicted CO levels are well within the CAAQS this pollutant and are, therefore, not considered potentially significant under CEQA.

Table 5-4.425

**CO Hot-Spot Modeling Results<sup>a</sup> (µg/m<sup>3</sup>)**

<b>Roadway Intersection</b>	<b>Year/Condition</b>	<b>1 Hour<sup>b,d</sup></b>	<b>8-Hour<sup>b,c,d</sup></b>	<b>Potentially Significant?</b>
Hawthorn Street/North Harbor Drive	2015 (AM)	7,142	3,011	No
Hawthorn Street/North Harbor Drive	2020 (PM)	7,017	2,930	No
Grape Street/Pacific highway	2020 (PM)	7,079	2,971	No
Hawthorn Street/North Harbor Drive	2025 (PM)	6,955	2,890	No
Laurel Street/Pacific highway	2025 (PM)	6,893	2,849	No
Grape Street/Kettner Blvd	2025 (PM)	7,017	2,930	No

<sup>a</sup> Receptors are about 3 m (10 ft.) from roadway edge-of-pavement and the results are the highest concentrations at all receptors analyzed.

<sup>b</sup> Includes 1-hour background concentration of 12,420 µg/m<sup>3</sup> and 8-hour background concentration of 5,222 µg/m<sup>3</sup>

<sup>c</sup> A persistence factor of 0.7 was used to calculate the 8-hour concentrations from the 1 hour concentrations.

<sup>d</sup> California Ambient Air Quality Standards (CAAQS) for CO = 23,000 (1-hour) and 10,000 ug/m<sup>3</sup> (8-hour).

Source: KB Environmental Sciences, Inc., 2007.

## 5.5.7 Construction Emissions

Construction-related emissions are primarily associated the exhaust from heavy equipment, delivery trucks and construction worker vehicles; dust from site preparation and demolition activities; and fugitive emissions from the storage/transfer of raw materials. Although these emissions are temporary in nature and generally confined to the construction site and the access/egress roadways, they are also quantified in this section to determine if they are potentially significant under CEQA.

For this analysis, the construction schedules and requirements (i.e., work crews, equipment types, etc.) for each project included in the Airport Implementation Plan with the Parking Structure scenario were developed, or estimated, by construction engineers familiar with the airport improvements.<sup>86</sup> From this analysis, the total hours of equipment operation (by equipment type), work crew trips, and daily activity levels were derived for the anticipated five-year construction period. These data and information were then combined with appropriate emission factors obtained from the CARB OFFROAD2007 and EMFAC2007 models to obtain estimates of annual total emissions of CO, NO<sub>x</sub>, VOC, SO<sub>x</sub> and PM<sub>10/2.5</sub>.

The construction period emissions inventory is summarized in [Table 5-5.437](#), by pollutant and year.<sup>87</sup> For comparison, the CEQA Significance Thresholds are also provided for the annual, daily, and hourly periods.

<sup>86</sup> For this assessment, the Airport Implementation Plan with Parking Structure scenario is considered to be representative of potential “worst-case” conditions among all the available scenarios (including the Airport Implementation Plan without Parking Structure and the East Terminal Alternative, both with and without the Parking Structure.

<sup>87</sup> For the purposes of this analysis, it is assumed that the construction requirements for the Airport Implementation Plan and the

Table 5-5.436

Construction-Related Air Emissions Inventory<sup>a</sup>

Construction Period <sup>b</sup>	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Annual (tons)</b>						
2009	4.1	1.1	6.8	<0.1	8.3	4.3
2010	12	3.2	26	<0.1	10	5.9
2011	20	4.7	37	<0.1	12	7.7
2012	12	2.9	22	<0.1	10	5.9
2013	0.2	0.0	0.2	<0.1	2.4	0.4
<b>CEQA Thresholds<sup>c</sup></b>	100	13.7	40	40	15	10
<b>Potentially Significant?<sup>c</sup></b>	No	No	No	No	No	No
<b>Daily (pounds)</b>						
2009	26	7.0	44	<0.1	75	30
2010	79	21	164	0.2	88	40
2011	125	30	234	0.3	100	51
2012	75	19	140	0.2	88	40
2013	1.0	0.2	1.4	<0.1	37	4.7
<b>CEQA Thresholds<sup>c</sup></b>	550	75	250	250	100	55
<b>Potentially Significant?<sup>d</sup></b>	No	No	No	No	No	No
<b>Hourly (pounds)</b>						
2009	2.2	0.6	3.6	<0.1	6.2	2.5
2010	6.6	1.7	14	<0.1	7.3	3.3
2011	10	2.5	20	<0.1	8.3	4.3
2012	6.2	1.5	12	<0.1	7.3	3.3
2013	0.1	0.0	0.1	<0.1	3.1	0.4
<b>CEQA Thresholds<sup>b</sup></b>	100	n.a.	25	25	n.a.	n.a.
<b>Potentially Significant?<sup>c</sup></b>	No	n.a.	No	No	n.a.	n.a.

CO = carbon monoxide, HC = hydrocarbons, NO<sub>x</sub> = nitrogen oxides, SO<sub>x</sub> = sulfur oxides, PM<sub>10/2.5</sub> = particulate matter less than 10 and 2.5 microns, respectively. n.a. = not applicable.

<sup>a</sup> Estimates apply to the Airport Implementation Plan with Parking Structure.

<sup>b</sup> Original calculations were made for the years 2008 through 2012 and later applied to the period 2009 through 2013. This is justified as the results from the initial analysis are conservatively high compared to the updated assessment.

<sup>c</sup> See Section 5.5.3, *Significance Criteria* for bases of these quantitative CEQA Thresholds.

<sup>d</sup> "No" means the totals are less than the quantitative CEQA thresholds and therefore not considered potentially significant under CEQA and "Yes" means the differences are greater than the quantitative thresholds and are potentially significant under CEQA.

Source: KB Environmental Sciences, 2007.

Implementation Plan Alternative are essentially the same.

As shown, construction-related emissions of CO, VOC, NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10/2.5</sub> are within the CEQA Thresholds for the entire construction period, although NO<sub>x</sub> and PM<sub>10/2.5</sub> are within 10 percent of the prescribed values.

## 5.5.8 Cumulative Impacts

The air emissions inventory prepared for the proposed improvements to SDIA are inclusive of all airport-related sources of emissions (i.e., aircraft, GSE, on- and off-site motor vehicles, etc.) under ~~Baseline (existing)~~ 2005 Existing conditions as well as the Proposed Project (Preferred Alternative) and the East Terminal Alternative (With and Without the Parking Facility), the Land Use Plan, and the No Project Alternative.

For the dispersion modeling analyses, the same comprehensive set of input data used for the emissions inventory was also used. In addition, non-airport traffic operating on the adjoining roadway/freeway networks were included. Conservatively high “background” levels were also added to the modeling results to account for air emission sources located outside the study area. In this way, the outcome is reflective of the combined impacts from both airport and non-airport sources of air emissions on existing and future-year ambient air quality conditions.

Emissions associated with the closure of the former NTC Landfill were not included as this project will be completed before the construction and operation of the planned improvements to SDIA begin.

Finally, the estimated amounts of NO<sub>x</sub>, VOC, and CO emissions from aircraft and GSE associated with SDIA under both Baseline and future year conditions are well within the amounts contained in the current *Ozone SIP* and *CO Maintenance Plan* for San Diego County (see [Table 5-5.2](#)). Therefore, the emissions associated with the planned improvements to SDIA, in combination with all the emissions from other sources in the area, are fully accounted for and are not expected to impede the area’s progress to attaining the NAAQS/CAAQS for these pollutants.

## 5.5.9 Mitigation Measures/Other Improvements

~~As discussed in Section 5.5.6, *Impact Analysis* the differences in total emissions between the Proposed Project (Preferred Alternative) - Airport Implementation Plan and the Baseline Conditions No Project Alternative exceed the CEQA thresholds for NO<sub>x</sub> in 2010 and 2015 and for NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10/2.5</sub>, and VOC in 2030. This outcome is due to the forecasted growth in operations at SDIA over this timeframe, with or without the planned improvements. Because the exceedance in NO<sub>x</sub> is produced by operations that are not controlled by the SDCRAA (i.e. increased aircraft operations) there is no mitigation that can be applied to reduce this specific pollutant and this impact for the Airport Implementation Plan in 2030 is considered unavoidable.~~

~~Violations of the CAAQS for PM<sub>10/2.5</sub> and NO<sub>2</sub> are also predicted over these same timeframes – again, with or without the planned improvements to SDIA. For PM<sub>10/2.5</sub> these results are to be expected as monitoring data from the San Diego area reveal violations of the CAAQS for these parameters. In the case of NO<sub>2</sub> (1) the highest predicted levels occur within two areas situated immediately under the flight paths to the primary runway at SDIA; (2) land uses in these areas located east and west of the runway are vacant (or adjacent to roadways) and not “typical” of human exposures; and (3) it is likely that EDMS is over-predicting these levels as there have been no violations of the CAAQS for this pollutant in the San Diego area. Also the Proposed Airport Implementation Plan expected to “contribute significantly” to projected violations for the NO<sub>2</sub> (1 hour averaging time) standard in 2010, 2015, and 2030. The Proposed Airport Land Use Plan, considered on a program level, also exceeds the NO<sub>2</sub> (1 hour averaging time) significance threshold for 2030 due specifically to increased vehicular traffic and are again not controlled by the SDCRAA. As the elements of the Proposed Airport Land Use Plan become specific projects they will undergo project level analysis within CEQA documentation to determine specific impacts and potential mitigation.~~

The findings also show that airport-related emission totals are comparable (e.g., within 10 percent) to the No Project Alternative. This is because the proposed improvements to SDIA will help to reduce delays and conflicts on both the airside and landsides of the airport and also serve to mitigate air quality impacts. These benefits include the following:

- By improving taxiways, the number of runway crossings by aircraft can be reduced to increase the overall efficiency of the airfield system.
- Reconstructing taxiways and hold aprons to better meet the current and future fleets of aircraft will improve operational performance of the airfield (i.e., large aircraft will be able to taxi unimpeded past other aircraft, ground vehicles and ground obstructions).
- Reconstructing Taxiway C, adding new apron hold pads and a new taxiway east of Taxiway D allows aircraft to bypass those on the existing aprons and provide more efficient access to new GA facilities.
- The new access/egress roadway configurations and expanded curbsides in the main terminal area will help to improve surface traffic circulation, lessen stop-and-go driving and reduce excess motor vehicle idling.
- The new multi-level parking structure will also include dedicated departure curbs and a transit plaza accommodating high-occupancy shuttles, buses and vans. New access roadways from Harbor Drive directly into the structure also eliminate the need for vehicles to utilize the curbside roadways. Combined with the elevated pedestrian walkways connecting the parking structure with the terminal, all these improvements will also help to enhance surface traffic circulation, lessen stop-and-go driving and reduce excess motor vehicle idling.

In consideration of these benefits and the fact that operations that are not controlled by the SDCRAA (i.e. vehicular and aircraft operations) there is no mitigation that can be applied to reduce the emissions of NO<sub>2</sub> and this impact for the Airport Implementation Plan is considered unavoidable. The Proposed Airport Land Use Plan, considered on a program level, also exceeds NO<sub>2</sub> significance thresholds. As the elements of the Proposed Airport Land Use Plan become specific projects they will undergo project level analysis within CEQA documentation to determine specific impacts and potential mitigation.

The emissions inventory for construction-related emissions indicates that NO<sub>x</sub> and PM<sub>10/2.5</sub> emissions will not exceed the CEQA threshold, but are within 10 percent of these criteria. Therefore, as a means of further reducing this potential impact, the following ~~mitigation measures~~ additional actions will be implemented as part of the construction plans and process:

- ~~MM5.5-1~~           ▪ Prevent construction equipment and delivery trucks from excess idling during periods of inactivity.
- ~~MM5.5-2~~           ▪ Substitute low- and zero-emitting equipment whenever possible.
- ~~MM5.5-3~~           ▪ Implement a construction-employee shuttle service, rideshare program and/or on-site food service to reduce vehicle trips.
- ~~MM5.5-4~~           ▪ Use electrical drops in place of temporary electrical generators wherever possible.
- ~~MM5.5-5~~           ▪ Modify the construction schedule so that total annual emissions of NO<sub>x</sub> are more evenly distributed over the entire construction period and do not exceed the CEQA quantitative thresholds in any one year.

Other construction-related air quality mitigation measures are aimed at reducing the occurrence and potential impacts from “fugitive” dust. These ~~measures~~ additional actions include (but are not necessarily limited to) the following:

- ~~MM5.5-6~~           ▪ Apply non-toxic soil stabilizers to all inactive construction areas including areas with disturbed soils and stockpiles of raw materials.
- ~~MM5.5-7~~           ▪ Stabilize on-site truck haul routes and staging areas with dust-prevention materials.
- ~~MM5.5-8~~           ▪ Reduce truck speeds on haul routes to minimize dust entrainment.
- ~~MM5.5-9~~           ▪ Remove mud and dirt from haul truck wheels and cover truck bodies before leaving the construction site(s).
- ~~MM5.5-10~~          ▪ Permanently cover all ground surfaces with vegetation or impervious materials as

soon as practicable.

- MM5.5-11     ▪   Curtail and/or modify construction activities on extremely windy days.
- MM5.5-12     ▪   Post a publicly visible sign with the contact information for reporting dust complaints.

### **5.5.10        Level of Significance after Mitigation Measures**

No mitigation measures are proposed for the air quality impacts. However Bbased upon these findings the Proposed Project will not:

- Conflict with or obstruct implementation of an applicable air quality plan;
- Expose sensitive receptors (i.e., schools, hospitals, resident- or day-care facilities, etc.) to substantial concentrations including hazardous air pollutants such as diesel particulates;
- Create objectionable odors affecting a substantial number of people;
- Generate more than 100 tons/day of PM<sub>10</sub> (airborne dust);
- Release substantial quantities of air contaminants beyond the boundaries of the premises upon which a (stationary) source emitting the contaminants is located; or
- Create potential CO “hotspots” associated with motor vehicle exhaust.

The predicted increases of ~~PM<sub>10</sub> and the ozone precursors of NO<sub>x</sub> and VOC~~ are due to the forecasted increase in operations at SDIA in the future - with or without the planned improvements. Compared to the No Project condition, there is some variability in these results among the alternatives analyzed, but these differences are small (i.e., <10 percent). Therefore, these impacts are considered unavoidable.

~~With respect to the predicted violations of the CAAQS for the pollutants PM<sub>10/2.5</sub> and NO<sub>2</sub>— again, these are also predicted exceedances with or without the planned improvements to SDIA. For PM<sub>10/2.5</sub> these results are to be expected as monitoring data from the San Diego area reveal violations of the CAAQS for these parameters. In the case of NO<sub>2</sub> (1) the highest predicted levels occur in only two areas situated immediately under the flight path to the primary runway at SDIA; (2) land-uses in these areas located east and west of the runway are vacant (or adjacent to roadways) and not “typical” of human exposures; and (3) it is likely that EDMS is over-predicting these levels as there has been no violation of the CAAQS for this pollutant in the San Diego area. Therefore, these impacts are still considered significant, but unavoidable.~~





## 5.6 Hydrology and Water Quality

This section describes the general approach and methodology, regulatory framework, significance criteria, environmental setting, as well as considers potential hydrology and water quality impacts associated with the Proposed Project and alternatives to the Proposed Project. Additionally, this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts. There were no comments in response to the NOP or previously circulated Draft EIR specific to potential hydrology and water quality impacts.

### 5.6.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

The purpose of this section is to describe the existing hydrologic and water quality environment and analyze potential project impacts from the Proposed Project. The following hydrology and water quality assessment relies on previous evaluations and reports with references provided in Chapter 2, Section 2.4, *Incorporation by Reference*.

The potential hydrology and water quality of the Proposed Project and its alternatives were determined by reviewing the Municipal Stormwater Permit Annual Report (January 2006) and applying basic hydrology and water quality engineering principals to assess potential impact. Because the Proposed Project and its alternatives are developed to a conceptual level, the analysis is mostly qualitative rather than quantitative. This analysis assumes that SDCRAA will design all improvements to meet water quality permitting requirements.

Potential floodplain impacts were evaluated by comparing the location of Proposed Project elements with floodplain mapping prepared by the Federal Emergency Management Agency (FEMA).

The changes to the Proposed Project and alternatives that are included in this ~~recirculated-Draft Final~~ EIR do not affect the results of the hydrology and water quality analysis presented in the previously circulated Draft EIR. Specifically, the changes to the Proposed Project and alternatives do not include any new facilities that would increase impervious areas. Extending the horizon year to 2030 would not change the findings of the previously circulated analysis of impacts.

### 5.6.2 Regulatory Framework

The principal federal and state laws pertaining to the regulation of water quality are the 1972 Federal Water Pollution Control Act (also known as the Clean Water Act [CWA]) and Division 7 of the 1969 California Water Code (also known as the Porter-Cologne Water Quality Control Act). Although the EPA has oversight, the RWQCB–San Diego Region has been granted the authority to implement and enforce these laws.

#### 5.6.2.1 The Clean Water Act

The discharge of any pollutant to navigable water is governed by the Federal Water Pollution Control Act (referred to as the Clean Water Act or CWA) of 1972 and its subparts, which include the National Pollutant Discharge Elimination System (NPDES). More recently, the NPDES permit was further

strengthened by the Water Quality Act (WQA) of 1987, which included three provisions addressing stormwater discharges. Inside this legislation, five types of stormwater discharges were identified and subjected to NPDES permits, including discharges associated with industry activity.

### **Total Maximum Daily Load Designation**

The Total Maximum Daily Load (TMDL) program, established under Section 303(d) of the Clean Water Act, identifies and attempts to restore waters that do not meet water quality standards, even though the discharges received are in compliance with existing pollution controls. The TMDL is the maximum amount of pollutants that a waterbody can accept and still meet water quality standards. EPA has established regulations requiring that NPDES permits be revised to be consistent with any approved TMDL. In the case of a select few airports, the NPDES permit incorporates limits based on TMDL, in which waste loads are specifically matched to the receiving body of water.<sup>88</sup>

Federal regulations require that development of the TMDL consider contributions from point sources (federally permitted discharges) and nonpoint sources. TMDLs are established at the level necessary to implement the applicable water quality standards. Point sources are defined in the CWA, Section 502. Nonpoint sources are not defined in the statute, but are considered to be any source that is not covered under the point source definition. A typical example of a nonpoint sources is storm water.

### **Construction Stormwater Permit**

In response to NPDES regulations, the California State Water Resources Control Board (SWRCB) has issued the General Permit for Stormwater Discharges Associated with Construction Activity, NPDES General Permit No. CAS000002, which was revised by SWRCB on August 27, 2004. With this revision the SWRCB elected to adopt only one statewide General Permit for construction activities. It should be noted that this General Permit does not include Tribal Lands, the Lake Tahoe Hydrologic Unit, or construction activities performed by California Department of Transportation (Caltrans). The permit now includes requirements for construction sites that disturb one (1) or more acres. All projects involving one (1) acre or more of soil disturbance will require NPDES permits. The NPDES permit requires that the owner provide a Notice of Intent, a Stormwater Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs), elimination or reduction of nonstorm water discharge to stormwater systems and other waters of the nation, and lastly that the owner perform inspections of all BMPs.

### **Industrial Stormwater Discharge Permit**

SDIA operates under SWRCB Water Quality, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities, generally referred to as the General Industrial Storm Water Permit. Under the General Industrial Storm Water Permit, SDIA is required to control and eliminate sources of pollution in storm water through development and implementation of a SWPPP. The SDCRAA developed a comprehensive plan for controlling and elimination of pollution sources entitled SDIA's Storm Water Management Plan (SWMP) which serves as SDIA's SWPPP. More information on SDIA's SWMP is found in the Storm Water Plan.<sup>89</sup>

### **Municipal Stormwater Discharge Permit**

Also in response to NPDES requirements, SDIA operates under California Regional Water Quality Control Board, San Diego Region (RWQCB), NPDES No. CAS0108758, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego (County), the Incorporated Cities of San Diego County, and the Port, referred to commonly as the San Diego Municipal Permit. As of August 2003, the San Diego RWQCB required the SDCRAA to demonstrate compliance with the San Diego Municipal Permit by developing a Jurisdictional Urban Runoff Management Program (JURMP). As part of the JURMP each

<sup>88</sup> J.B. Plater, Robert Abrams, William Goldfarb. Environmental Law and Policy: Nature, Law, and Society, West Publishing Company, St. Paul, MN, 1992.

<sup>89</sup> "Storm Water Management Plan" San Diego County Regional Airport Authority: January 2005 Revision. Accessed August 2007, <[http://www.san.org/airport\\_authority/environmental\\_affairs/environmental\\_protection/stormwater\\_plan.asp](http://www.san.org/airport_authority/environmental_affairs/environmental_protection/stormwater_plan.asp)>

copermitttee is required to develop a construction component to reduce pollution during all stages of construction. The SDCRAA has met this requirement by developing a Standard Urban Stormwater Mitigation Plan (SUSMP) although the SDCRAA still relies on the completion of the California's General NPDES Permit for Storm Water Discharges Associated with Construction Activities.

### **5.6.2.2 Porter-Cologne Water Quality Act**

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), the SWRCB has the ultimate authority over state water rights and water quality policy. The Porter-Cologne Act established nine RWQCBs to oversee water quality at the local and regional level.

### **5.6.2.3 Coastal Zone Management Act**

In 1990, the United States Congress amended the Coastal Zone Management Act (CZMA) by adding the Coastal Zone Act Reauthorization Amendments (CZARA). Section 6217 of CZARA established the Coastal Nonpoint Pollution Control Program, which requires EPA to develop and implement BMPs to control nonpoint source pollution in coastal water. The definition of coastal waters in California was expanded to include the entire state. Pursuant to Section 6217(g) of CZARA, six major categories of nonpoint sources addressed by CZARA include agriculture, forestry, urban areas, marinas, hydromodification projects, and wetlands. In summary, while the NPDES permitting program essentially regulates stormwater and urban runoff, virtually all other nonpoint sources of coastal water pollution are subject to the Coastal Nonpoint Pollution Control Program under CZARA (District, December 1999a).

## **5.6.3 Significance Criteria**

Significance criteria were developed from CEQA and RWQCB guidelines. This section initially provides the RWQCB's water quality objectives and CEQA's guidelines upon which the specific significance criteria for hydrology, water quality, and urban runoff are defined.

### **5.6.3.1 Water Quality Objectives**

The California Water Code defines water quality objectives as: "The limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area."

The Porter-Cologne Water Quality Control Act<sup>90</sup> requires that water quality objectives and beneficial uses be established for surface waters and groundwaters of the state. The establishment of water quality objectives and beneficial uses for surface water are also mandated by the federal CWA.<sup>91</sup>

In establishing water quality objectives, the RWQCB must provide for the reasonable protection of all beneficial uses that are designated for protection, taking into account existing water quality, as well as environmental and economic considerations. California Water Code Section 13241 provides that RWQCB shall consider at least the following factors in establishing water quality objectives:

- Past, present, and probable future beneficial uses of water;
- Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto;
- Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area;
- Economic considerations;
- The need for developing housing within the region; and
- The need to develop and use recycled water.

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<sup>90</sup> California Water Code, Division 7, Chapter 2, Sections 13000-13002.

<sup>91</sup> 33 USC, Chapter 26.

The Basin Plan's water quality objectives are numerical or narrative limits on constituents or characteristics of water designed to protect designated beneficial uses of the water. Water quality objectives are primarily achieved through the establishment of waste discharge requirements and implementation of the Basin Plan. Numerical limits represent the maximum level of constituents that would allow for the beneficial use to continue unimpaired. An objective may allow for natural, or "background," levels of a constituent or characteristic, but prohibit any increase above these levels, or it may simply express the objective of not adversely impacting beneficial uses (i.e., a narrative limit).

Water quality objectives applying to all inland surface waters and coastal waters of San Diego Bay are specified in Chapter 3 of the San Diego Basin Region 9 (Basin Plan). Specific numerical water quality objectives are presented by hydrologic area, subarea, and watershed in Tables 3.1 and 3.2, Chapter 3 of the Basin Plan.<sup>92</sup>

These criteria were quantified to the following specific significance criteria using guidance from the City of San Diego.<sup>93</sup>

### **5.6.3.2 CEQA Guidelines**

Criteria for significance determination were obtained from CEQA Guidelines (last amended October 2005). The following relevant criteria are used to determine whether potential impacts associated with hydrology and water quality are considered significant for the Proposed Project. A project would have significant impacts to hydrology and water quality if the project were to:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or substantially interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., if the production rate of pre-existing nearby wells were to drop to a level that would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite;
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary of a Flood Insurance Rate Map or other flood hazards delineation map;
- Place structures within the 100-year flood zone that would impede or redirect flood flows; or
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam or inundation by seiche, tsunami, or mudflow.

### **5.6.3.3 Hydrology Criteria**

The significance criteria for hydrology include significance determinations for flooding, stormwater runoff, drainage patterns, and aquifers.

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<sup>92</sup> San Diego Regional Water Quality Control Board, San Diego Region. Water Quality Control Plan for the San Diego Basin. September 8, 1994.

<sup>93</sup> Significance Determination Thresholds California Environmental Quality Act, City of San Diego, Development Services Department, Land Development Review Division, Environmental Analysis Section, May 1999 (Draft Revisions May 2004).

## **Flooding**

A project would have a significant impact if it imposed flood hazard potential on other properties or would result in a substantial increase in runoff or modification of existing drainage patterns.<sup>94</sup>

## **Runoff**

A project would have a significant runoff impact if the aquifer recharge area were reduced by moderate- to large-scale development projects in areas using well water. A project also would have significant runoff impacts if moderate- to large-scale grading during the rainy season caused uncontrolled runoff, resulting in erosion and subsequent sedimentation in downstream water bodies.<sup>95</sup>

## **Drainage Patterns**

A project would have significant impacts if it modified existing drainage patterns resulting in impacts to biological communities, substantially changed stream-flow velocities, or influenced drainage patterns such that existing vegetation would decline because long- or short-term, soil-plant-water relationships would no longer meet habitat needs.<sup>96</sup>

## **Aquifers**

A project would have a significant impact if it resulted in extraction of water from an aquifer such that there would be a net deficit in the aquifer volume or reduction in the local groundwater table.<sup>97</sup>

### **5.6.3.4 Water Quality Criteria**

The significance criteria for water quality include significance determinations for construction and grading, pollution and contamination, and erosion and sedimentation.

## **Construction and Grading**

A project would have a significant impact if it involved more than one (1) acre of earthwork without implementation of adequate BMPs.

## **Pollution and Contamination**

A project would have a significant impact if it resulted in significant human safety risks, such as the generation of any amount of highly noxious substance or large amounts of substances that are cumulatively hazardous, or if it resulted in the deterioration of the quality of a drinking water source.<sup>98</sup>

In addition, a project would have a significant impact if it affected biological communities by generating or resulting in the accumulation of substances that affected health or caused genetic defects to wildlife by direct physical contact with contaminated water, or by changes in water quality that caused declines in riparian or lacustrine vegetation/wildlife habitat.<sup>99</sup>

## **Erosion and Sedimentation**

A project would have a significant impact if it resulted in erosion and sedimentation of water bodies from moderate- to large-scale grading projects (i.e., greater than 2,000 cubic yards per graded acre), or resulted in the loss of vegetation on slopes without implementation of adequate BMPs.<sup>100</sup>

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<sup>94</sup> Ibid.

<sup>95</sup> Ibid.

<sup>96</sup> Ibid.

<sup>97</sup> Ibid.

<sup>98</sup> Ibid.

<sup>99</sup> Ibid.

<sup>100</sup> Ibid.

### **5.6.3.5 Urban Runoff Criteria**

In addition to the above criteria, the Municipal Stormwater Discharge Permit requires the implementation of a Standard Urban Stormwater Mitigation Plan (SUSMP) for specific categories of development projects as specified in the permit.<sup>101</sup> A project would have a significant impact if the required provisions of the JURMP adopted by SDCRAA could not be implemented.

## **5.6.4 Environmental Setting**

### **5.6.4.1 Hydrology**

This section describes the existing hydrologic conditions at SDIA and the vicinity. These conditions include a description of the local topography, regional hydrologic units, ground water, and surface water conditions.<sup>102</sup>

### **5.6.4.2 Topography**

SDIA is generally flat with local minor elevation variations due to landscaping. Elevations across the area range from approximately 7 to 15 feet above msl.<sup>103</sup>

### **5.6.4.3 Hydrologic Units**

The project area is situated within the Pueblo San Diego Hydrologic Unit (HU) listed in the San Diego Basin Plan.<sup>104</sup> The average annual precipitation at SDIA is approximately 12 inches.<sup>105</sup>

### **5.6.4.4 Groundwater**

Depths to groundwater ranges from approximately 7 to 12 feet below ground surface.<sup>106</sup> Flow rate is low due to flat topography, and low permeability. Recharge of the groundwater is limited since most of the land surface at SDIA is paved or semi-paved and, therefore, impervious. Groundwater flow is assumed to be southward toward the Bay.<sup>107</sup>

The general hydrologic regime includes: freshwater underflow from the regional groundwater system toward San Diego Bay; freshwater recharge from water and wastewater distribution, collection, and transmission lines; saline water encroachment from the ocean, and potentially from the larger, deeper storm drains; and brackish to saline native groundwater beneath the artificial fill. The San Diego Formation in the area south of SDIA is the principal aquifer that provides groundwater recharge. Because of SDIA's proximity to San Diego Bay, diurnal changes in sea level caused by lunar tides would cause concurrent changes in the level of groundwater elevations in the near-shore groundwater.

### **5.6.4.5 Surface Water**

In 2005 approximately 85-90% of Airport property is considered impervious area as the surface is covered by buildings and paved surfaces.<sup>108</sup>

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<sup>101</sup> RWQCB, 2001.

<sup>102</sup> San Diego Regional Water Quality Control Board, San Diego Region. Water Quality Control Plan for the San Diego Basin. September 8, 1994.

<sup>103</sup> Ibid.

<sup>104</sup> Hydrology Report for Storm Drainage System BMP Program at San Diego International Airport. MACTEC, April 2005.

<sup>105</sup> Fiscal-year 2004-2005 Municipal Stormwater Permit Annual Report. San Diego County Regional Airport Authority, January 2006.

<sup>106</sup> Redevelopment Agency of the City of San Diego. November 1999.

<sup>107</sup> San Diego Regional Water Quality Control Board, San Diego Region. Water Quality Control Plan for the San Diego Basin. September 8, 1994.

<sup>108</sup> Hydrology Report for Storm Drainage System BMP Program at San Diego International Airport. MACTEC, April 2005.

Surface water in the vicinity of SDIA is dominated by San Diego Bay to the south and a leg of the bay called the boat channel, which runs north-south along the western boundary of the airport. Drainage typically flows in a southerly direction toward the Bay and a southwesterly direction toward the boat channel. The largest body of fresh water in proximity to SDIA is the San Diego River, which flows in an east-west direction and drains into the Pacific Ocean approximately 1 mile to the north. The storm drain system for SDIA is illustrated in [Figure 5.6-1](#).

San Diego Bay is the largest marine and bay estuary in Southern California. Depths range from 20 feet at narrow areas to 40 feet in the northern portion with an average depth of 15 feet. As a working harbor, the bay includes recreational boating areas and commercial docks. The boat channel formerly was a portion of the San Diego River Channel, which was diverted to its present location in the 1800s. The channel measures approximately 4,922 feet long by 558 feet wide with an average depth of 15 feet. As a result of shoaling (i.e., sediment accumulation/deposition), the boat channel entrance to the Bay may be shallow.<sup>109</sup>

Portions of San Diego Bay in the vicinity of SDIA are listed under Section 303(d) for impacts due to coliform bacteria and metals. Of the four Toxic Hot Spots in the San Diego Bay, the one located between the foot of Grape Street and the foot of Laurel Street receives stormwater runoff from local urbanized areas of the City of San Diego as well as SDIA.<sup>110</sup>

#### **5.6.4.6 Water Quality**

Rainfall on runways, taxiways, as well as industrial and commercial sites picks up a multitude of pollutants. These pollutants dissolve in the runoff or adsorb onto soil particles and are quickly transported by gravity flow through the network of concrete channels and underground pipes that comprise the SDIA storm drain conveyance systems. These systems ultimately discharge the polluted runoff, without treatment, directly to the San Diego Bay, or indirectly through the boat channel.

Beneficial uses of surface water and groundwater have been established for each body of water within the San Diego County region. According to the Basin Plan, beneficial uses are defined as the uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals of mankind and include drinking, swimming, industrial, and agricultural water supply, as well as the support of fresh and saline aquatic habitats.

Beneficial uses have been designated for specific coastal bodies of water, inland surface waters, and groundwaters.<sup>111</sup> There are no surface bodies of water located on SDIA property or near the project site; therefore, contaminated discharges or runoff would not directly degrade or adversely affect beneficial uses onsite. The waters near SDIA are the coastal waters of the San Diego Bay and groundwater of the San Diego Mesa Hydrologic Area.

#### **5.6.4.7 Surface Water Quality**

The designated “existing beneficial uses” of the coastal waters of San Diego Bay are:

- Industrial Service Supply (IND) comprises uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization.
- Contact Water Recreation (REC-1) includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.

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<sup>109</sup> Redevelopment Agency of the City of San Diego. November 1999.

<sup>110</sup> Hydrology Report for Storm Drainage System BMP Program at San Diego International Airport. MACTEC, April 2005.

<sup>111</sup> California Regional Water Quality Control Board, San Diego Region. Water Quality Control Plan, Chapter 2, “Beneficial Uses”, September 1994.

- Noncontact Water Recreation (REC-2) includes the uses of water for recreational activities involving proximity to water, but not normally involving body contact with water so that ingestion of water is not reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beach combing, camping, boating, tide pool and marine-life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- Wildlife Habitat (WILD) comprises the uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates) or wildlife water and food sources.
- Commercial and Sport Fishing (COMM) comprises the uses of water for commercial or recreational collection of fish, shellfish, or other organisms including, but not limited to, uses involving organisms intended for human consumption or bait purposes.
- Estuarine Habitat (EST) comprises uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds).
- Marine Habitat (MAR) comprises uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).
- Rare, Threatened, or Endangered Species (RARE) includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.
- Migration of Aquatic Organisms (MIGR) includes uses of water that support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms, such as anadromous fish.
- Shellfish Harvesting (SHELL) includes uses of water that support habitats suitable for the collection of filter-feeding shellfish (e.g., clams, oysters and mussels) for human consumption, commercial, or sport purposes.
- Preservation of Biological Habitats of Special Significance (BIOL) includes uses of water that support designated areas of habitats, such as established refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance where the preservation or enhancement of natural resources requires special protection.
- Navigation (NAV) includes uses of water for shipping, travel or other transportation by private, commercial, or military vessels.

Currently, there are no “potential beneficial uses” designated for the coastal waters of the San Diego Bay.<sup>112</sup>

The closest identified coastal stream is Powerhouse Canyon located in Balboa Park, more than one (1) mile northeast of the site. Existing beneficial uses for inland surface waters of the Powerhouse Canyon include non-contact water recreation, warm freshwater habitat, and wildlife habitat. Currently, the potential beneficial use of inland surface water for the Powerhouse Canyon is contact water recreation. Powerhouse Canyon does not drain onto SDIA, nor does SDIA drain into Powerhouse Canyon.

Due to poor quality, groundwater underlying SDIA and the former NTC is not used for drinking, irrigation, or industrial supply purposes. No existing or potential beneficial uses for groundwater are designated for the San Diego Mesa Hydrologic Area. According to the Basin Plan, groundwater within this Hydrologic Area has been exempted by RWQCB from the municipal use designation under the terms and conditions of State Board Resolution No. 88-63, “Sources of Drinking Water Policy.”

Groundwater testing at the former NTC indicates that metals and minerals did not exceed total threshold limit concentration limits; however, concentration of chromium, copper, lead, nickel, and zinc exceeded

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<sup>112</sup> Ibid. See Table 2-3.



San Diego RWQCB standards for protection of marine resources in San Diego Bay. Groundwater exceeding these standards, removed as part of construction site dewatering, is subject to NPDES permitting and would require either discharge into the sanitary sewer system or treatment before discharge into the Bay.<sup>113</sup>

#### **5.6.4.8 Stormwater Quality**

Pollutants typically found in SDIA runoff include sediment, nutrients (e.g., fertilizers), oxygen-demanding substances (e.g., decaying vegetation), bacteria, heavy metals, synthetic organics (e.g., fuels, oils, solvents, lubricants), pesticides, and other toxic substances.<sup>114</sup>

In addition to the pollutants contributed by stormwater or wet weather flows, dry weather runoff can also seriously degrade the quality of the receiving water. Dry weather flows conveyed by the stormwater conveyance system, which can be substantial, consist of flows from groundwater infiltration and accidental, improper, or illegal discharges to the stormwater conveyance system. Common examples of the latter are illegally disposed used motor oil and antifreeze, or spilled jet fuel. These pollutants can severely degrade the beneficial uses of receiving surface waters.

#### **5.6.4.9 Flood Plains**

SDIA and its vicinity are included on Panels 1877 and 1881 of Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map, San Diego County, California and Incorporated Areas.<sup>115</sup> **Figure 5.6-2** illustrates the mapped floodplain at SDIA. **Figure 5.6-2** illustrates that virtually all of SDIA, including the 52-acre former Naval Training Center property and the North Area Proposed Project, is mapped as Zone X, "areas determined to be outside the 500-year floodplain." An approximately 2.9-acre portion of SDIA, located near the southeastern edge of the Airport and adjacent to the former Teledyne Ryan property, is within an area mapped as Zone X and designated "areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood." The former Teledyne Ryan portion of SDIA Master Plan study area also is predominately outside the 500-year floodplain, but it also includes approximately 8.9 acres mapped as Zone X, "areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood", which is contiguous with the portion of SDIA having the same Zone X designation (see **Figure 5.6-3**). None of the proposed Implementation Plan sites is within the 100-year mapped floodplain.

Tsunamis, associated with seismic activity, are a potential flood hazard; however, the highest recorded tsunami in San Diego Bay was approximately 5 feet from peak to trough, which would not affect SDIA.<sup>116</sup>

### **5.6.5 Impact Analysis**

This section considers potential hydrology, water quality, and urban runoff impacts associated with the Proposed Project and alternatives to the Proposed Project.

#### **5.6.5.1 Proposed Project - With and Without Parking Structure**

##### **Proposed Airport Land Use Plan**

##### **Hydrology**

Approximately 8.9 acres of the former Teledyne Ryan property is within the mapped 100-year floodplain and could experience up to one foot of flooding during a 100-year storm. This area is designated as "Airport Support" on the Proposed Airport Land Use Plan. Any proposed redevelopment of this portion of

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<sup>113</sup> Redevelopment Agency of the City of San Diego, November 1999.

<sup>114</sup> San Diego County Regional Airport Authority, Storm Water Management Plan, January 2005.

<sup>115</sup> Panel 1877, Map Number 06073C1877 F, FEMA, 6/19/1997. Panel 1881, Map Number 06073C1881 F, FEMA, 6/19/1997.

<sup>116</sup> Redevelopment Agency of the City of San Diego, 1999. Naval Training Center Redevelopment Project. Draft Environmental Impact Report, SCH #99081140. Prepared by Ogden Environmental and Energy Services Co., Inc. November.

the former Teledyne Ryan property with Airport Support uses would take into account the potential for minor (up to one foot) flooding during design and construction. Potential measures to address this constraint would include raising the base elevation of structures out of the 100-year floodplain. Because no specific developments for this area have been identified, however, it is not possible to state the specific design measures that would be used to accommodate the flood risk. Nonetheless, based on the minimal area involved, the minor projected flood elevation and the availability of design and construction measures to accommodate this constraint, floodplain impacts would be less than significant.

The Proposed Airport Land Use Plan development is proposed for areas already considered impervious surface as such there would be less than significant impact to aquifer recharge and existing drainage patterns. The Proposed Airport Land Use Plan would not require extensive grading and standard construction practices would require erosion and sediment control thereby reducing potential for sedimentation in San Diego Bay.

### **Water Quality**

All future development is subject to the Airport Stormwater Management Plan (SWMP). The SWMP incorporates the terms of the General Industrial Storm Water Permit which satisfies construction general permit requirements. The SWMP requires that all municipal activities, inclusive of new development, to provide for Best Management Practices (BMPs); therefore, impacts relative to construction, grading, as well as erosion and sedimentation would be less than significant.

The Proposed Airport Land Use Plan includes area within the former Teledyne-Ryan Facility and the former General Dynamics (Lindbergh Field Plant) Facility. Both sites have the potential for existing soil contamination as described in Section 5.15, *Hazards and Hazardous Materials*. Any improvements to these areas will require additional coordination with review agencies to limit potential for surface, aquifer, and ground water contamination.

### **Urban Runoff**

The Proposed Airport Land Use Plan would be implemented by the SDCRAA and, therefore, would include provisions to meet the requirements of the SDIA SWMP and, thereby would have a less than significant impact on urban runoff.

## **Proposed Airport Implementation Plan**

### **Hydrology**

Virtually all of SDIA is outside the 100-year floodplain and none of the Airport Implementation Plan projects are within the mapped 100-year floodplain. Therefore, the Proposed Airport Implementation Plan would not impact flood plains.

The Proposed Airport Implementation Plan development includes approximately 39 acres of newly created impervious area associated with surface parking, aircraft parking, and additional terminal roof expansion. However, 85-90 percent of the existing Airport property is already considered impervious surface; as such, an increase of approximately 6 percent in total impervious area would be less than significant impact to aquifer recharge and existing drainage patterns. The Proposed Airport Implementation Plan would require extensive grading on the former NTC site; however, standard construction practices would require erosion and sediment control thereby reducing potential for sedimentation in San Diego Bay.

### **Water Quality**

All future development is subject to the Airport SWMP. The SWMP requires that all municipal activities provide for BMPs; therefore, impacts relative to construction and grading and erosion and sedimentation would be less than significant. In order to seek a General NPDES Permit for Storm Water Discharges Associated with Construction Activities the SDCRAA must include all construction activities (including monitoring, etc.) within their SWMP.

## **Urban Runoff**

The Proposed Airport Implementation Plan would be implemented by the SDCRAA and, therefore, would include provisions to meet the requirements of the SDIA SWMP and thereby would have a less than significant impact on urban runoff.

### **5.6.5.2 East Terminal Alternative - With and Without Parking Structure**

The East Terminal Alternative also includes two components, an Airport Land Use Plan and an Airport Implementation Plan Alternative.

#### **Airport Land Use Plan**

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the proposed Airport Land Use Plan see Chapter Four, section 4.2.1, *Airport Land Use Plan*, for a detailed explanation. Therefore, the East Terminal Alternative includes the Proposed Airport Land Use Plan. As under the Proposed Project (Preferred Alternative), the East Terminal Alternative would have no significant impact to hydrology, water quality, and urban runoff.

#### **Airport Implementation Plan Alternative**

##### **Hydrology**

Virtually all of SDIA is outside the 100-year floodplain, and none of the Airport Implementation Plan Alternative projects are within the mapped 100-year floodplain. Therefore, the Airport Implementation Plan Alternative would not impact flood plains.

The Airport Implementation Plan Alternative development also includes approximately 39 acres of newly created impervious area associated with surface parking, aircraft parking, and minimal terminal roof expansion. Eighty-five to ninety percent of the existing Airport property is already considered impervious surface. As such, an increase of approximately 6% in impervious area would be less than significant impact to aquifer recharge and existing drainage patterns. The Airport Implementation Plan Alternative would require extensive grading on the former NTC site; however, standard construction practices would require erosion and sediment control, thereby reducing potential for sedimentation in San Diego Bay.

##### **Water Quality**

All future development is subject to the Airport SWMP. The SWMP requires that all municipal activities provide for BMPs; therefore, impacts relative to construction and grading and erosion and sedimentation would be less than significant. In order to seek a General NPDES Permit for Storm Water Discharges Associated with Construction Activities the SDCRAA must include all construction activities (including monitoring, etc.) within their SWMP.

##### **Urban Runoff**

The Airport Implementation Plan Alternative would be implemented by the SDCRAA and, therefore, would include provisions to meet the requirements of the SDIA SWMP and thereby would have a less than significant impact on urban runoff.

### **5.6.5.3 No Project Alternative**

#### **Hydrology**

Since most of SDIA is outside of the 100-year flood plain there would be not increased potential for floodplain impacts under the No Project Alternative. Under the No Project Alternative there would be no change to the impervious surface area and, therefore, no potential for additional impact to aquifer recharge. The No Project Alternative would not involve grading; therefore, there is no potential for downstream erosion or sedimentation or modified drainage patterns.

#### **Water Quality**

There is no earthwork associated with the No Project Alternative and accordingly no potential for pollution and contamination impacts nor need for sediment and erosion control.

## **Urban Runoff**

The No Project Alternative would not impact any of the SDIA SWMP provisions.

### **5.6.6 Construction Impacts**

Any potential construction impacts to water quality and hydrology would be less than significant as all improvements/projects undertaken at SDIA must comply with the SDIA SWMP. The SWMP mandates BMPs and other stormwater pollution prevention measures to minimize potential impact to surface and ground waters inclusive of construction activities.

### **5.6.7 Cumulative Impacts**

From a hydrology perspective SDIA receives a significant amount of flow from off-site. The SDIA Hydrology Report approximates that during the 10-year storm 1,638 cubic feet per second of stormwater flows onto the Airport property.<sup>117</sup> The conversion of approximately 39 acres of pervious surface to impervious surface in the area located west of Terminal 2 would have a less than significant impact on hydrology. Since all projects must adhere to SDIA's SWMP any potential water quality impacts would be less than significant and, therefore, no water quality cumulative impacts are expected.

The SDCRAA has completed a hydraulic analysis of the storm drain system in place at the Airport in 2005. This analysis indicates that many of the storm drains at SDIA have inadequate capacity when evaluated using the San Diego County Hydrology Manual procedures. The Hydraulic Report<sup>118</sup> recommended that SDCRAA perform further analysis on existing pipe sizes, slopes, and peak flow before any future design is undertaken. Any additional runoff would potentially exacerbate this condition.

### **5.6.8 Mitigation Measures/Other Improvements**

No mitigation measures are required beyond those mandated by provisions in the SDIA SWMP. The SWMP meets the requirements of the NPDES permit program of the CWA and serves as the Airport's SWPPP to meet the General Industrial Storm Water Permit and JURMP to meet the San Diego Municipal Permit.<sup>119</sup> Conformance with the SWMP does not represent mitigation as they are considered a component of project design. No mitigation measures are required beyond those mandated by provisions in the SDIA SWMP and the General Construction Storm Water Permit.

### **5.6.9 Level of Significance after Mitigation Measures**

Hydrology and water quality changes due to the Proposed Project are less than significant; therefore, mitigation measures would not be applied for this impact category. The level of significance specific to hydrology and water quality impacts remains less than significant.

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<sup>117</sup> Hydrology Report for Storm Drainage System BMP Program at San Diego International Airport. MACTEC, April 2005.

<sup>118</sup> Hydrology Report for Storm Drainage System BMP Program at San Diego International Airport. MACTEC, April 2005.

<sup>119</sup> San Diego County Regional Airport Authority, Storm Water Management Plan, January 2005.

## 5.7 Historic, Architectural, Archaeological, Paleontological, and Cultural Resources

This section describes the general approach and methodology, significance criteria, environmental setting, as well as considers potential historic, architectural, archaeological, paleontological, and cultural resource impacts associated with the Proposed Project (Preferred Alternative) and its alternatives. Additionally, this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts. Comments in response to the NOP specific to potential historic, architectural, archaeological, Paleontological, and cultural resource impacts were received from the following agencies and individuals:

- Native American Heritage Commission – recommended following CEQA Guidelines (15603(d)(3)) to identify and mitigate project-related impacts on cultural resources
- Richard S. Phillips – consider noise and vibration impacts to historically designated properties, neighborhoods, and potential districts in the Golden Hill area.

All written and oral comments during the NOP process are provided in [Appendix A](#). Comments received specific to historic, architectural, archaeological, paleontological, and cultural resource impacts are addressed within this section of the EIR.

One comment was received on the previously circulated Draft EIR for this impact category. The comment requested that structures that are 45+ years old be reviewed when proposed for demolition.

### 5.7.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

#### 5.7.1.1 Historic Architectural Resources

Prior to undertaking field studies, the National Register of Historic Place's database, the California Inventory of Historic Resources, and California Historical Landmarks were reviewed through a record search obtained from the South Coastal Information Center at San Diego State University to determine the presence of previously identified resources within the study area. In addition, SDCRAA provided historic survey information for the former Teledyne-Ryan Aeronautical Complex. Research was conducted at the archives of the San Diego Aerospace Museum and the San Diego Historical Society, to prepare a historical overview that would identify important themes and contexts against which to evaluate buildings and structures located in the study area. These included: (1) early airport development, (2) development of the airline industry, (3) development of the aircraft manufacturing industry at Lindbergh Field, and (4) contributions of Lindbergh Field aircraft manufacturers to World War II and the early Cold War.

SDCRAA provided dates of construction for buildings and structures in the study area. This information was augmented by research conducted for the historic background study. ~~Properties 50 years old or older, as well as those that will become~~ All buildings older than 45 years old or that would be 50 years old

by 2015 were recorded and assessed for significance as historic resources based on their potential eligibility for listing on the National Register of Historic Places, California Register of Historical Resources, or local City of San Diego Historic Resources Board List. A qualified historian inspected each potentially significant historic resource within the study area and took field notes and photographs. State of California Department of Parks and Recreation Primary and District, or Building, Structure, and Object Record forms were completed for each of the buildings evaluated.

The Historic Architectural Survey Report is included in [Appendix F](#), *Historic Resources*.

The changes to the Proposed Project and alternatives that are included in this ~~recirculated Draft~~ Final EIR do not affect the results of the historic, architectural, archaeological, paleontological, and cultural resource impacts analysis presented in the previously circulated Draft EIR. Specifically, the changes to the Proposed Project (Preferred Alternative) and alternatives do not include any new facilities that would affect any of the resources considered in this impact category. Extending the horizon year to 2030 would not change the findings of the previously circulated analysis of impacts as improvements associated with the alternatives for implementation do not include improvements beyond 2015.

### **5.7.1.2 Archaeological Resources**

Records searches were conducted at the South Coastal Information Center at San Diego State University for the SDIA Master Plan Area and its immediate vicinity. The senior archaeologist reviewed archaeological reports for other projects in the vicinity, including the former Naval Training Center (NTC). The location of SDIA was originally mudflats and bay. Decades of dredging and placement of fill soils have built up the airport area to its current topography. Due to this history of reclamation of the area from bay and mudflats, as well as the developed nature of the project area, a full pedestrian survey was not warranted. The senior archaeologist did a driving tour of the airport grounds with airport personnel.

The Archaeological Survey Report is included in [Appendix F](#).

### **5.7.1.3 Paleontological Resources**

Geologic maps were consulted to determine the potential for impacts to paleontological resources.

### **5.7.1.4 Cultural Resources**

The senior archaeologist contacted the State Native American Heritage Commission (NAHC) to request a check of their sacred lands files. That check indicated that no Native American sacred lands are recorded within or in proximity to the Master Plan area. Letters were also sent to the Native American entities (Bands and individuals) identified by the NAHC as interested parties, in order to solicit their comments and potential concerns regarding the project.

## **5.7.2 Significance Criteria**

Potential historical and architectural significance of buildings, structures and historic archaeological sites, as well as potential significance of prehistoric archaeological resources, was determined by applying criteria of the National Register of Historic Places and the California Register of Historical Resources.

### **5.7.2.1 National Register Criteria**

In order to be eligible for nomination to the National Register of Historic Places, a building, structure, or site must be significant within a historic context and meet certain other criteria. According to the National Park Service:

. . . the significance of a historic property can be judged and explained only when it is evaluated within its historic context. Historic contexts are those patterns, themes, or trends in history by which a specific occurrence, property, or site is understood and its meaning made clear.<sup>120</sup>

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<sup>120</sup> U.S. Department of the Interior, National Park Service, National Register Bulletin, Section V. How to Evaluate a Property within its Historic Context. 2002.

The National Park Service has defined three main categories of historic contexts: local, state and national. A local historic context "represents an aspect of the history of a town, city, county, cultural area, or region, or any portion thereof."<sup>121</sup> A state historic context represents "an aspect of history of the state as a whole."<sup>122</sup> Properties important within a national context represent "an aspect of the history of the United States as a whole."<sup>123</sup>

In order to be eligible for the National Register when evaluated within its historic context, a property must be demonstrated to be significant under one or more of the following criteria:<sup>124</sup>

- a) Is associated with an event, or series of events that have made a significant contribution to the broad pattern of history.
- b) Has an unequivocal association with the lives of people significant in the past.
- c) Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction.
- d) Has yielded or may be likely to yield information important in prehistory or history.

An additional requirement for the National Register is the retention of integrity or "the ability of a property to convey its significance." Assessment of integrity includes seven criteria, which are: location, design, setting, materials, workmanship, feeling, and association.<sup>125</sup>

Generally the National Register criteria exclude properties that are less than 50 years of age unless it can be demonstrated that they are of "exceptional importance," which is defined as "the extraordinary importance of an event or . . . an entire category of resources so fragile that survivors of any age are unusual."<sup>126</sup>

### **5.7.2.2 California Register Criteria**

Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources<sup>127</sup> including the following:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values, or:
- Has yielded or may be likely to yield information important in prehistory or history.

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<sup>121</sup> Ibid.

<sup>122</sup> Ibid.

<sup>123</sup> Ibid.

<sup>124</sup> U.S. Department of the Interior, National Park Service, National Register Bulletin, Section VI, How to Identify the Type of Significance of a Property. 2002.

<sup>125</sup> U.S. Department of the Interior, National Park Service, National Register Bulletin, Section VII, How to Evaluate the Integrity of a Property. 2002.

<sup>126</sup> U.S. Department of the Interior, National Park Service, National Register Bulletin, Section I: Introduction.

<sup>127</sup> Pub. Res. Code §5024.1, Title 14 CCR, Chapter 3, Section 15064.5.

## 5.7.3 Environmental Setting

### 5.7.3.1 Architectural Resources

**Table 5-7.1** lists the buildings evaluated for significance (shown in **Figure 5.7-1**); that is, those properties ~~50 years old or older, as well as those that will become older than 45 years old or that would be 50 years old by 2015~~, which is the year of future analysis for the EIR. There are five buildings on the Airport area that will be at least 50 years old by 2015: Southwest Airlines Cargo/US Airways Building, the two former Sky Chefs Buildings, the Aircraft Service International Group (ASIG) Building, and the Allied Aerospace Building. A complex of buildings at the Teledyne Ryan property (Future Planning Area) is over 50 years old. All these buildings are discussed in this section.

The two former Sky Chefs Buildings were constructed between 1956 and 1966. They are not shown in a 1956 Sanborn Fire Insurance map, but they are present on the USGS topographic map, prepared in 1966. These two buildings are on a parcel owned by the Port Authority that is surrounded by Airport property and the Teledyne Ryan property. The Southwest Airlines Cargo/US Airways Building was built in 1960. These three buildings all lack any significant historical associations or architectural distinction, and so are not eligible for listing on the National or California Registers or the City of San Diego's Historical Resources Board list. Although started in 1965, Terminal 1 was not completed until 1967. It, therefore, will not be 50 years old until 2017 and for this reason was not included in the building assessments.

The ASIG building is the original United Airlines hangar and terminal, constructed along Pacific Highway at the southeast corner of the airfield in May 1931. It was the second building constructed at Lindbergh Field. The building is significant under National Register Criterion C. Its design reflects early aircraft hangar and terminal construction typical of the late 1920s and early 1930s. The building shows very little modification from its original design and retains excellent integrity of design, workmanship, and materials which still convey a strong feeling and association for the early airport development at Lindbergh Field and the early pioneering development of airline industry. The building is also significant under National Register Criterion A, due to the fact that it was the second building constructed at the airport and was used by United Airlines as its hangar and terminal when San Diego was United's hub during the early years of passenger aviation. As such, it has strong associations with the development of the airline industry at Lindbergh Field and along the west coast. United Airlines was instrumental in the growth passenger aviation on the west coast. Although it has been moved from its original location, the building meets National Register Criteria Consideration B. This allows moved properties that are significant primarily for their architectural value, or as a surviving property most importantly associated with historic persons or events, to be considered eligible for the National Register, even though they are no longer located where they stood during their period of significance.<sup>128, 129</sup> The original United Terminal meets this consideration in that the building retains its original architectural design and integrity and is the only surviving building from the earliest period of development at Lindbergh Field between 1928 and 1933. In addition, the building would qualify for listing as an important resource by the City of San Diego's Historic Resources Board and is eligible for listing on the California Register of Historic Places.

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<sup>128</sup> 1990 National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation. U.S. Department of the Interior, National Park Service, Interagency Resources Division, Washington D.C.

<sup>129</sup> 1993 National Register Bulletin 36: Guidelines for Evaluating and Registering Historical Archaeological Sites and Districts. U.S. Department of the Interior, National Park Service, Interagency Resources Division, Washington D.C.



Table 5-7.1

## Evaluated Buildings and Structures

Area	Facility No.	Current Function	Original Function	Date of Construction	Significance
<b>Main Airport Area</b>					
	2412	Southwest Airlines Cargo / US Airways Building	PSA Headquarters	1960	Not significant
	2415 & 2417	Vacant	Sky Chefs Buildings	1956-1966	Not significant
	2340 A-D	ASIG Building	United Airlines 1931 Hangar & Terminal	1931, moved 1957	Eligible for local City of San Diego Historic Resources Board listing, and National and California Register listing
	NA	Allied Aerospace Building	Consolidated Aircraft Wind Tunnel	1945	Eligible for National and California Register listing
<b>Future Planning Area (Teledyne-Ryan Complex)</b>					
	100	Vacant	Ryan Aeronautical Administration Building	1940	Eligible for National and California Register listing as an element of a district
	102	Vacant	Ryan Aeronautical Contracts and Pricing Office	1944	Eligible for National and California Register listing as an element of a district
	104	Vacant	Ryan Aeronautical Engineering Building	1943	Eligible for National and California Register listing as an element of a district
	105	Vacant	Ryan Aeronautical Materials & Processing Laboratory & Engineering Building	1957	Eligible for National and California Register listing as an element of a district
	111	Vacant	Ryan Aeronautical Welding Shop	After 1956	Eligible for National and California Register listing as an element of a district
	110/112 (122)	Vacant	Ryan Aeronautical Planishing (Metal Finishing) Shed	c. 1940s	Not significant
	115	Vacant	Ryan Aeronautical Ancillary Building	After 1956	Not significant
	120	Vacant	Ryan Aeronautical Main Factory Building	1939	Eligible for National and California Register listing as an element of a district
	121	Vacant	Ryan Aeronautical Receiving Warehouse	1939-1940	Eligible for National and California Register listing as an element of a district
	123	Vacant	Ryan Aeronautical Pump Headquarters associated with Standby Water Tank	1943	Not significant
	125	Vacant	Ryan Aeronautical Paint & Oil Storage Building	1941	Not significant
	126	Vacant	Ryan Aeronautical Paint Shop Building	1941	Not significant

Table 5-7.1

**Evaluated Buildings and Structures**

<b>Area</b>	<b>Facility No.</b>	<b>Current Function</b>	<b>Original Function</b>	<b>Date of Construction</b>	<b>Significance</b>
	127	Vacant	Ryan Aeronautical Office & Photo Lab	c. 1940s	Not significant
	129	Vacant	Ryan Aeronautical Sandblasting Shed	c. 1950s	Not significant
	130	Vacant	Ryan Aeronautical Ancillary Building	After 1956	Not significant
	131	Vacant	Ryan Aeronautical Factory Building	1956-1966	Eligible for National and California Register listing as an element of a district
	140	Vacant	Ryan Aeronautical Final Assembly Building	1943	Eligible for National and California Register listing as an element of a district
	142	Vacant	Ryan Aeronautical Repair Building	c. 1940s	Not significant
	146	Vacant	Ryan Aeronautical Engineering & Manufacturing Building	1945	Eligible for National and California Register listing as an element of a district
	147	Vacant	Ryan Aeronautical Ancillary Building		Not significant
	148/149	Vacant	Ryan Aeronautical Ancillary Building		Not significant
	150	Vacant	Ryan Aeronautical Ancillary Building		Not significant
	152	Vacant	Ryan Aeronautical Jet Engine Drone Assembly Building	1952/1952	Eligible for National and California Register listing as an element of a district
	153	Vacant	Ryan Aeronautical Burner Shed	c. 1950s	Not significant
	154	Vacant	Ryan Aeronautical Ancillary Building	c. 1950s	Not significant
	156	Vacant	Ryan Aeronautical Warehouse. Identified as Building # 154 on 1956 Sanborn Fire Insurance Map (Sanborn 1956)		Eligible for National and California Register listing as an element of a district
	157	Vacant	Ryan Aeronautical - use undetermined	c. 1950s	Not significant
	158	Vacant	Ryan Aeronautical Test Building associated with Final Assembly Building	c. 1950s	Not significant
	159	Vacant	Ryan Aeronautical Storage Building	c. 1950s	Not significant
	160	Vacant	Ryan Aeronautical Foundry and Plaster Shop	1940	Eligible for National and California Register listing as an element of a district
	161	Vacant	Ryan Aeronautical Carpenter Shop	1941	Not significant
	166	Vacant	Ryan Aeronautical Salvage Headquarters	1940-1941	Not significant
	167	Vacant	Ryan Aeronautical Acid Storage Building	c. 1940s	Not significant
	168	Vacant	Ryan Aeronautical Warehouse Addition Building	c. 1950s	Not significant

Table 5-7.1

**Evaluated Buildings and Structures**

<b>Area</b>	<b>Facility No.</b>	<b>Current Function</b>	<b>Original Function</b>	<b>Date of Construction</b>	<b>Significance</b>
	169	Vacant	Ryan Aeronautical Plaster Pattern Staging Building	c. 1940s	Not significant
	170	Vacant	Ryan Aeronautical Parts/Drop Hammer Structures	c. 1950s	Not significant
	180	Vacant	Ryan Aeronautical Experimental/Receiving & Assembly Building	1932, moved 1944	Eligible for National and California Register listing as an element of a district
	181	Vacant	Ryan Aeronautical Airplane Storage Building	1937-1938, moved 1944	Eligible for National and California Register listing as an element of a district
	182	Gone	Ryan Aeronautical Old Record Storage Building	c. 1940s	Not significant
	183	Vacant	Ryan Aeronautical Tool Storage Building	1951	Eligible for National and California Register listing as an element of a district
	221	Vacant	Ryan Aeronautical Covered Walkway	c. 1950s	Not significant
	230	Vacant	Ryan Aeronautical - use undetermined	c. 1950s	Not significant
	236	Vacant	Ryan Aeronautical Ancillary Building		Not significant
	240	Vacant	Ryan Aeronautical Ancillary Building		Not significant
	242	Vacant	Ryan Aeronautical Storage Shed	c. 1950s	Not significant
	513	Vacant	Ryan Aeronautical associated with Jet Engine/Drone Assembly Building	c. 1950s	Not significant
	NA	Abandoned	Ryan Aeronautical Company Standby Water Tank	1943	Not significant

The Allied Aerospace building was built in 1945 and was part of the Consolidated (later Convair, and finally General Dynamics) complex. Currently, the San Diego Air & Space Museum has assumed control over the Allied Aerospace building. This building is significant for its association with the Consolidated Aircraft Plant and the aircraft manufacturing industry at Lindbergh Field's contribution to World War Two. This building was identified as part of the Consolidated Historic District Complex in 1996, when General Dynamics vacated the former Consolidated site. It was not included in the HABS/HAER level documentation conducted as mitigation for the demolition of the buildings at that time, as it was outside of the project footprint. The Allied Aerospace building retains integrity of design, materials, workmanship, feeling, and association and is, therefore, significant and National Register and California Register eligible, as well as eligible for local listing.

As a result of the current study, 17 buildings at the former Teledyne-Ryan Aeronautical Complex, listed on [Table 5-7.2](#), have been determined to be eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, and the City of San Diego Historical Resources Board list, as contributing elements to a Ryan Aeronautical Company Historic District. The buildings that constitute contributing elements to the district are described in detail on the accompanying California Department of Parks and Recreation District Form included in [Appendix F-1](#). Non-contributing elements are listed in [Table 5-7.3](#).

These buildings constitute a district that is eligible at a regional level for a period of significance between 1939 and 1969. It was during this 30 year span that the site was directly associated with aviation pioneer

T. Claude Ryan and his management of the company, as well as Ryan Aeronautical's ~~significant~~ contributions to national defense production during the Second World War and important developments in aerospace research and development during the 1950s and 1960s. The buildings and structures have been chosen because of all the resources on the 43-acre complex, they architecturally embody the distinctive design characteristics of aircraft manufacturing plants in southern California during the period of significance. They ~~are important~~ serve as representations of the Ryan Aeronautical Company manufacturing plant during the time when numerous advances in aviation technology were made and are directly associated with T. Claude Ryan's important contributions in aviation during that time, as well as his role in the establishment of the aircraft industry in San Diego. The buildings also represent the ~~remarkable~~ accomplishments of the aircraft industry at Lindbergh Field and the ~~important~~ contribution to defense production these aircraft manufacturing plants made during the Second World War.

Teledyne-Ryan conducted aeronautical manufacturing operations using a variety of chemicals and hazardous substances during its years of operation. Subsequent to evidence of polychlorinated biphenyls (PCB) contamination found in sediment in Convair Lagoon, a nearby off-airport property site, environmental investigation and testing indicated that the former Teledyne-Ryan Facility was the primary source of the contaminants (See Section 5.15, Hazardous Materials). In 2004, a Clean Up and Abatement Order (CAO) was issued by the California Regional Water Quality Control Board that requires the clean up and remediation of hazardous substances at the site.<sup>130</sup> Under the CAO, the full extent of any involvement with asbestos containing materials (ACM) and/or lead-based paints (LBP), as well as the delineation of underlying environmental contamination will be determined. Due to the extensive contamination of the buildings, it is unlikely the buildings could be remediated to a usable state, and would therefore necessitate demolition.

Until these requirements are further identified and achieved, no actions or projects associated with the site will be undertaken that could potentially interfere with these abatement and clean up actions.

Table 5-7.2  
**Ryan Aeronautical Company Historic District Contributing Elements**

Building No.	Function
100	Ryan Aeronautical Administration Building
102	Ryan Aeronautical Contracts and Pricing Office
104	Ryan Aeronautical Engineering Building
105	Ryan Aeronautical Materials & Processing Laboratory & Engineering Building
110/112	Ryan Aeronautical Planishing (Metal Finishing) Shed
111	Ryan Aeronautical Welding Shop
120	Ryan Aeronautical Main Factory Building
121	Ryan Aeronautical Receiving Warehouse
131	Ryan Aeronautical Factory Building
140	Ryan Aeronautical Final Assembly Building
146	Ryan Aeronautical Engineering & Manufacturing Building
152	Ryan Aeronautical Jet Engine Drone Assembly Building
156	Ryan Aeronautical Warehouse
160	Ryan Aeronautical Foundry and Plaster Shop
180	Ryan Aeronautical Experimental/Receiving & Assembly Building
181	Ryan Aeronautical Airplane Storage Building
183	Ryan Aeronautical Tool Storage Building

<sup>130</sup> Clean Up and Abatement Order (CAO) No. R9-2004-0258 from the California Regional Water Quality Control Board.

In addition to the historic district, Buildings 180 and 181 are significant as the original Ryan hangars, built on Pacific Highway in the early 1930s. These two hangars, along with the United Airlines hangar/terminal (the ASIG building) formed the core of the original Lindbergh Field. Although no longer at their original location, these buildings represent the first aircraft manufacturing plant at Lindbergh Field. They are significant for their association with T. Claude Ryan and his participation in the early development of Lindbergh Field and for their representation of shops typically used during the earlier phases of aircraft manufacturing, when it was still a craft industry and had not yet developed into the large-scale mass production required by the Second World War, which necessitated much larger buildings.

Table 5-7.3

**Ryan Aeronautical Company Historic District Non-Contributing Elements**

<b>Building No.</b>	<b>Function</b>
115	Ryan Aeronautical Ancillary Building
123	Ryan Aeronautical Pump Headquarters associated with Standby Water Tank
125	Ryan Aeronautical Paint & Oil Storage Building
126	Ryan Aeronautical Paint Shop building
127	Ryan Aeronautical Office & Photo Lab
128	Ryan Aeronautical Ancillary Building
129	Ryan Aeronautical Sandblasting Shed
130	Ryan Aeronautical Ancillary Building
142	Ryan Aeronautical Repair Building
147	Ryan Aeronautical Ancillary Building
148-149	Ryan Aeronautical Ancillary Building
150	Ryan Aeronautical Ancillary Building
153	Ryan Aeronautical Burner Shed
154	Ryan Aeronautical Ancillary Building
157	Ryan Aeronautical - Use Undetermined
158	Ryan Aeronautical Test Building Associated with Final Assembly Building
159	Ryan Aeronautical Storage Building
161	Ryan Aeronautical Carpenter Shop
166	Ryan Aeronautical Salvage Headquarters
167	Ryan Aeronautical Acid Storage Building
168	Ryan Aeronautical Warehouse Addition Building
169	Ryan Aeronautical Plaster Pattern Staging Building
170	Ryan Aeronautical Parts/Drop Hammer Structures
182	Ryan Aeronautical Old Record Storage Building
221	Ryan Aeronautical Covered Walkway
230	Ryan Aeronautical - Use Undetermined
236	Ryan Aeronautical Ancillary Building
240	Ryan Aeronautical Ancillary Building
242	Ryan Aeronautical Storage Shed
513	Ryan Aeronautical Building Associated with Jet Engine/Drone Assembly Building

### **5.7.3.2 Archaeological Resources**

Thirteen archaeological sites have been recorded within a one-mile radius of the SDIA Master Plan project area, none within the project area itself. Four of these sites were recorded in the early part of the 20<sup>th</sup> century and were already quite disturbed at that time. Three of the sites (CA-SDI-36, CA-SDI-37, and CA-SDI-53) were described as traces of probable camp sites. The fourth site (CA-SDI-54) was described as traces of a refuse heap on a bluff, which washed away as the bluff receded. The site's documentation was based on observations of a gully. The only other prehistoric or Native American site in the vicinity is a light shell scatter that may have been redeposited from SDM-W-291, which Malcolm Rogers considered to be associated with the ethnohistoric village of Kosoy.

Eight historic archaeological sites have been documented within one mile of the project area. These include a sparse deposit of historic debris, redeposited from another area; the Barth Foundry Dump site; two historic period graves at the former NTC; World War II foundations at the former NTC; a 1930s dump at the former NTC; a historic artifact scatter from the early part of the 20<sup>th</sup> century; a historic dump used circa 1900-1930; and a small historic refuse deposit encountered during monitoring at the former NTC. A number of historic structures have been recorded within one mile of the SDIA Master Plan project area, including buildings at NTC and MCRD, as well as buildings and structures associated with the Consolidated Aircraft Plant No. 1, almost all of which have been removed.

No archaeological sites have been identified within the SDIA Master Plan project area. The current topography of the project area has been achieved through decades of dredging and placement of fill soils in an area of bay and mudflats. In addition, the project area supports the existing SDIA. Based on this, archaeological resources would not be anticipated in the project area.

### **5.7.3.3 Paleontological Resources**

The SDIA Master Plan area is built on what was originally mudflats and bay. Decades of dredging and placement of fill soils have built up the airport area to its current topography. Kennedy (1975) maps the project area, as well as the adjacent MCRD and the majority of NTC, as artificial fill. Based on this, there is no potential for paleontological resources within the project area.

### **5.7.3.4 Cultural Resources**

No traditional cultural properties, Native American heritage sites or other culturally important sites or areas have been identified within the SDIA Master Plan project area. The NAHC sacred lands files do not list any sacred sites in proximity to the project area.

## **5.7.4 Impact Analysis**

This section considers potential historic, architectural, archaeological, paleontological, and cultural resource impacts associated with the Proposed Project (Preferred Alternative) and its alternatives.

### **5.7.4.1 Proposed Project - With and Without Parking Structure**

#### **Proposed Airport Land Use Plan**

The Proposed Airport Land Use Plan designates the proposed land uses under which future development could occur. There are no direct impacts from the Proposed Airport Land Use Plan, but the Proposed Airport Land Use Plan sets the stage for potential future impacts. Future projects are unknown and addressing the impacts of such future projects would be speculative at this time. Project-specific review would be conducted when future actions are proposed.

No archaeological resources have been identified within the SDIA Master Plan area, so the Proposed Airport Land Use Plan would have no impacts to archaeological resources.

Under the Proposed Airport Land Use Plan, the ASIG Building (the original United Airlines Hangar and Terminal) is shown as Airport Support. Although there would be no direct impacts from approval of the Proposed Airport Land Use Plan and future actions under that Airport Land Use Plan would not affect the ASIG Building as the area is designated for airport support uses, consistent with its current plan.

Under the Proposed Airport Land Use Plan, the Allied Aerospace Building is designated as ground transportation. There would be no direct impacts from approval of the Airport Land Use Plan. Based on this, the Proposed Airport Land Use Plan would have no impacts to this significant resource, and no mitigation measures are required.

A historic district has been identified for the former Teledyne-Ryan complex: the Ryan Aeronautical Company Historic District. The former Teledyne-Ryan complex is designated under the Proposed Airport Land Use Plan to be used for both ground transportation and airport support. Again, the Airport Land Use Plan itself would have no direct impacts to these resources, but future development may affect the historic properties. If future actions are proposed, appropriate project-specific mitigation measures must be developed and implemented.

### **Proposed Airport Implementation Plan**

No archaeological resources have been identified within the SDIA Master Plan area, so the Proposed Airport Implementation Plan would have no impacts to archaeological resources.

No specific project element is proposed for the ASIG Building (the original United Airlines Hangar and Terminal) under the Proposed Airport Implementation Plan. Therefore, the Proposed Airport Implementation Plan would have no direct impacts to this significant resource and no mitigation measures are required.

Under the Proposed Airport Implementation Plan no specific project component is proposed to be implemented that would affect the Allied Aerospace Building. Based on this, the Proposed Airport Implementation Plan would have no impacts to this significant resource and no mitigation measures are required.

The Proposed Airport Implementation Plan does not include any project components proposed for the Teledyne-Ryan complex and the Ryan Aeronautical Company Historic District. If future actions are proposed for this area, appropriate project-specific mitigation measures must be developed and implemented.

### **5.7.4.2 East Terminal Alternative - With and Without Parking Structure**

#### **Airport Land Use Plan**

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the Proposed Airport Land Use Plan see Chapter Four, Section 4.2.1, *Airport Land Use Plan*, for a detailed explanation. Therefore, the East Terminal Alternative includes the Proposed Airport Land Use Plan. Under the Airport Land Use Plan, the ASIG Building would be designated for Terminal Uses. If the ASIG Building were removed due to future development under the Airport Land Use Plan, this would result in a significant impact to this historic resource. Project-specific evaluation of impacts must be conducted when a project is proposed for this area and mitigation measures would be developed and implemented at that time.

Under the Proposed Airport Land Use Plan, the Allied Aerospace Building is designated as Ground Transportation. There would be no direct impacts from approval of the Airport Land Use Plan. Based on this, the Proposed Airport Land Use Plan would have no impacts to this significant resource and no mitigation measures are required.

As with the Proposed Project (Preferred Alternative) the Airport Land Use Plan itself would have no direct impacts to these resources, but future development may affect the historic properties. If future actions are proposed, appropriate project-specific mitigation measures must be developed and implemented.

#### **Airport Implementation Plan Alternative**

Under the Airport Implementation Plan Alternative, the ASIG Building is designated for Terminal Uses. If the ASIG Building was removed as part of the East Terminal Alternative, it would have significant impacts, as this is a significant historic resource. Project-specific evaluation of impacts must be conducted when a project is proposed for this area and mitigation measures would be developed and implemented at that time.

No specific project components are proposed for the Allied Aerospace Building under Airport Implementation Plan Alternative. Based on this, the Airport Implementation Plan Alternative would have no impacts to this significant resource and no mitigation measures are required.

No project components are proposed for the former Teledyne-Ryan complex under the Airport Implementation Plan Alternative. Therefore, there would be no direct impacts to the Ryan Aeronautical Company Historic District from this alternative. If specific actions are proposed at a future date, appropriate project-specific mitigation measures must be developed and implemented.

#### **5.7.4.3 No Project Alternative**

Under the No Project Alternative, ongoing land uses would continue. There would be no impacts to any of the identified significant historic resources and no impacts to archaeology.

### **5.7.5 Construction Impacts**

All impacts identified for the Preferred Project (Preferred Alternative) and the East Terminal Alternative would be the result of construction (as opposed to operation). Impacts would result from the removal or alteration of the buildings identified as significant resources.

### **5.7.6 Cumulative Impacts**

Eventual demolition of the ASIG Building under the Proposed Airport Land Use Plan or the East Terminal Alternative, if such is proposed, would constitute a significant cumulative impact, in that this and the original Ryan Hangars are the only remaining buildings from the original Lindbergh Field. Demolition of the Allied Aerospace Building would also constitute a significant cumulative impact. Again, no specific land use or project element has been identified for this building, so no impacts are anticipated. Loss of the buildings in the Ryan Aeronautical Company Historic District (which is not proposed at this time but may occur in the future) would also create significant cumulative impacts. This complex is all that remains of a once-thriving aircraft and aerospace industry that included not only Ryan Aeronautical Company, but Consolidated (later Convair, then General Dynamics). Only a few of the dozens of buildings of the Consolidated complex remain (Allied Aerospace being one of them). The Teledyne-Ryan complex is designated to be used for both ground transportation and airport support with the Proposed Airport Land Use Plan.

### **5.7.7 Mitigation Measures/Other Improvements**

#### **5.7.7.1 Proposed Airport Land Use Plan**

No archaeological resources have been identified within the SDIA Master Plan area, so no mitigation measures are required for archaeology.

A historic district has been identified for the former Teledyne-Ryan complex. The former Teledyne-Ryan complex is designated under the Proposed Airport Land Use Plan to be used for both ground transportation and airport support, so there would be no direct impacts to these resources for the Proposed Airport Implementation Plan, but future actions may affect the historic properties. If future actions are proposed within the historic district, appropriate mitigation measures must be developed and implemented.

No specific land use or project element has been identified for the Allied Aerospace Building, so no impacts are anticipated and no mitigation measures are required at this time.

#### **5.7.7.2 Proposed Airport Implementation Plan (Preferred Alternative)**

No archaeological resources have been identified within the SDIA Master Plan area, so no mitigation measures are required for archaeology.

No specific project element is proposed for the ASIG Building (the original United Airlines Hangar and Terminal) under the Proposed Airport Implementation Plan. Therefore, the Proposed Airport Implementation Plan would have no direct impacts to this significant resource and no mitigation measures are required at this time.



No land uses are designated for the Allied Aerospace Building under the Proposed Airport Implementation Plan. Based on this, the Proposed Implementation Plan would have no impacts to this significant resource and no mitigation measures are required.

No specific projects are proposed for the Teledyne-Ryan complex and the Ryan Aeronautical Company Historic District under the Proposed Airport Implementation Plan. Therefore, no mitigation measures are required at this time.

### **5.7.8 Level of Significance after Mitigation Measures**

No impacts to the historic structures due to the Proposed Airport Implementation Plan are proposed at this time and no mitigation measures are required. When future actions are proposed, they would be addressed on a project-specific basis, and mitigation measures would be developed and implemented at that time.



## 5.8 Biotic Communities/Endangered and Threatened Species

This section describes the general approach and methodology, significance criteria, and environmental setting, as well as considers potential biotic communities and endangered and threatened species impacts associated with the Proposed Project and alternatives to the Proposed Project. Additionally, this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts. There were no comments in response to the NOP specific to potential biotic communities/endangered and threatened species impacts.

Comments in response to the previously circulated Draft EIR specific to biotic communities and endangered and threatened species impacts were received from the following agencies:

- The USFWS and CDFG submitted a joint letter expressing concerns regarding potential impacts to avian nests, potential impacts to California least tern (*Sterna antillarum browni*), and the potential effects of developing the former Teledyne Ryan property.

Comments on the previously circulated Draft EIR are summarized in [Appendix A](#) to this ~~recirculated Draft~~ Final EIR.

The changes to the Proposed Project and alternatives that are included in this ~~recirculated Draft~~ Final EIR do not affect the results of the biotic communities/endangered and threatened species analysis presented in the previously circulated Draft EIR. The proposed changes to the Proposed Project and alternatives would not increase the area of disturbance associated with future Airport development, would not alter Airport operations such that they would affect on- or off-Airport vegetation or wildlife in a manner not previously evaluated, and would not cause otherwise cause new or previously unevaluated impacts to sensitive biological resources. The vast majority of potential effects to biotic communities/endangered and threatened species would be realized during the development and initial operation of new facilities at SDIA, meaning that virtually all of those impacts would occur prior to 2015. Accordingly, extending the horizon year for biotic communities/endangered and threatened species impact evaluations to 2030 would not change the findings of the previously circulated analysis of these potential impacts.

### 5.8.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

Impacts to biotic communities and threatened and endangered species were assessed through a review of previous documents (e.g., least tern nesting records, Biological Opinion [BO]) and assessment of the potential for SDIA to support vegetation communities/habitat). Because the vast majority of SDIA is developed or highly disturbed, this effort focused on two areas: (1) the least tern nesting areas (“ovals”) at the southeast portion of SDIA and (2) the undeveloped portion (approximately 34 acres) of the 52-acre parcel transferred from the former Naval Training Center (NTC). Within the former NTC Parcel, vegetation communities were mapped using aerial interpretation combined with direct observation.

## 5.8.2 Significance Criteria

For the purposes of this analysis, potential significant biotic communities/endangered and threatened species impacts were evaluated based on the CEQA Environmental Checklist Appendix G of *CEQA State Guidelines*. The Proposed Project would have a significant biotic communities/endangered and threatened species impact if it would:

- Have a substantial adverse effect on a species identified as sensitive or special status species in local or regional plans or by the CDFG or USFWS;
- Have a substantial adverse effect on riparian habitat or other sensitive natural communities;
- Interfere substantially with the movement of native resident, migratory fish or wildlife species or impede the use of native wildlife nursery sites; or
- Substantively conflict with the provisions of an adopted habitat conservation plan or natural communities conservation plan.

## 5.8.3 Environmental Setting

### 5.8.3.1 Biotic Communities

The habitat surrounding and including SDIA supports a limited number of biological resources because much of the area is already extensively developed. Except as noted below, the entire area within the perimeter of the SDIA boundaries is developed or disturbed in some manner with no native vegetation existing on the site. In areas where sparse vegetation has been able to grow, patches of ruderal species such as Bermuda grass (*Cynodon dactylon*), feathergrass (*Nassella tenuissima*), common tanglehead (*Heteropogon contortus*), and curly dock (*Rumex crispus*) exist. These areas are limited to the ovals between runways, taxiways, roads, and a strip between the runway and the northern fence at the western portion of the airport. Vegetation also is present in a portion of the former NTC parcel.

### Ovals

Patches of ruderal fields in the ovals between taxiways, the runway and roads serve as wildlife habitat. The composition of these grasslands varies, consisting of a mosaic of weeds, grass, bare soil, and gravel. These areas offer potential nest sites for avian species.

### Former NTC Parcel

Five vegetation communities and developed lands were mapped in the former NTC parcel, as described in the text that follows, see [Table 5-8.1](#). Note that if the currently proposed Former NTC Landfill Remediation Project is implemented, then the vegetation communities described below would largely be replaced with disturbed habitat consisting of barren and compacted soil. (The Former NTC Landfill Remediation Project is planned for 2008; however CEQA compliance is not complete for the proposed landfill remediation, and it has not yet been approved by the Airport Authority.)

Table 5-8.1  
Former NTC Parcel Vegetation Communities

Vegetation Community*	Acre(s)
Disturbed wetland	<del>0.4</del> <u>0.03</u>
<i>Baccharis scrub</i> (including disturbed)	<del>0.5</del> <u>0.45</u>
<i>Non-native grassland</i>	1.1 <u>1</u>
Non-native vegetation	0.8 <u>4</u>
<i>Disturbed habitat</i>	31.7 <u>1</u>
TOTAL	34.2 <u>11</u>

\*Vegetation communities pursuant to Holland 1986<sup>131</sup> and Oberbauer 1996.<sup>132</sup>

### **Disturbed Wetland**

Disturbed wetland within the former NTC parcel is dominated by non-native wetland species such as rabbitfoot grass (*Polypogon monspeliensis*) and grass poly (*Lythrum hyssopifolium*). Other species present include white sweet clover (*Melilotus alba*), prickly lettuce (*Lactuca serriola*), English plantain (*Plantago lanceolata*), and oats (*Avena* sp.). Disturbed wetland occurs as a linear area of habitat in the southeastern portion of the former NTC parcel where water ponds due to man-induced changes in the landscape. It covers approximately ~~0.4~~ 0.03 acre. Field work subsequent to the original biological survey conducted for the Draft EIR provided a more scientifically rigorous wetlands determination completed per Army Corps of Engineers standards resulting in the reduction of wetland size from 0.1 to 0.03. As discussed in Section 5.9, *Wetlands*, this habitat does not meet the criteria for jurisdictional wetlands pursuant to the federal Clean Water Act, California Fish and Game Code or California Coastal Act.

### **Baccharis Scrub**

Baccharis scrub is an upland community recognized by resource agencies as a subtype of coastal sage scrub. Due to the altered nature of the site and its location on fill soils, this habitat type most likely established as a pioneer community rather than following Diegan coastal sage scrub disturbance. It is dominated by broom baccharis (*Baccharis sarothroides*); with San Diego goldenbush (*Isocoma menziesii* var. *menziesii*), telegraph weed (*Heterotheca grandiflora*), horseweed (*Conyza canadensis*), red brome (*Bromus madritensis* ssp. *rubens*) and Russian thistle (*Salsola tragus*) as non-dominant species. San Diego goldenbush is dominant in disturbed areas. This habitat occurs in the northern portion of the former NTC parcel and covers approximately 0.5 acre.

### **Non-native Grassland**

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Characteristic species on site consist of oats, red brome, ripgut grass (*Bromus diandrus*), Bermuda grass, rye grass (*Lolium multiflorum*), and smilo grass (*Piptatherum miliaceum*). This habitat occurs primarily in the westernmost portions of the former NTC parcel and covers approximately 1.1 acres.

### **Non-native Vegetation**

This habitat type consists of cultivated plants that have naturalized into otherwise native habitat areas or were put in place by humans, usually for the purpose of beautification, windbreaks, or other related purposes. Non-native vegetation on site consists of a row of trees along the western property boundary

<sup>131</sup> Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, State of California, Department of Fish and Game, Sacramento. 156 pp.

<sup>132</sup> Oberbauer, T. 1996. Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions. February.

and adjacent patches of non-native groundcover. Species observed include pine (*Pinus* sp.), Brazilian pepper (*Schinus terebinthifolius*), Canary Island date palm (*Phoenix canariensis*), and sea fig (*Carpobrotus edulis*). This habitat covers approximately 0.8 acre.

### **Disturbed Habitat**

Disturbed habitat includes unvegetated or sparsely vegetated areas, particularly where the soil has been heavily compacted by prior development or where agricultural lands have been abandoned. Disturbed habitat on site is represented by a combination of bare, graded land, and areas comprised of weedy species. Characteristic species include crown daisy (*Chrysanthemum coronarium*), mustard (*Brassica* sp.), white sweet clover, pigweed (*Chenopodium album*), English plantain, and Russian thistle. This habitat covers the majority (approximately 31.7 acres) of the former NTC parcel.

#### **5.8.3.2 Endangered and Threatened Species (Flora)**

No listed endangered or threatened plant species have been observed on-site at SDIA, nor are any expected to occur due to the developed/disturbed nature of the Airport and the former Teledyne Ryan leasehold.

#### **5.8.3.3 Endangered and Threatened Species (Fauna)**

SDIA is used by the California least tern (federal and state listed as endangered); the western snowy plover (*Charadrius alexandrinus nivosus*; Pacific coastal population federally listed as threatened); and the California horned lark (*Eremophila alpestris actia*; a state species of concern and former federal Category 2 Candidate). The peregrine falcon (*Falco peregrinus anatum*, state listed as endangered [federal delisted as endangered]) also occasionally uses the SDIA area incidentally to its presence in the San Diego Bay region. The California brown pelican (*Pelecanus occidentalis californicus*) uses areas of the San Diego Bay region as foraging habitat. Of these avian species, the western snowy plover, the California horned lark, and the California least tern use or may use habitable areas of SDIA during the nesting season. These species are addressed below.

### **California Least Tern**

California least terns breed from San Francisco Bay south to Baja California. In San Diego County, this species is a fairly common summer resident from early April to the end of September.<sup>133</sup> Wintering areas are along the Pacific coast of South America. This small migratory tern nests colonially on undisturbed, sparsely vegetated, flat areas with loose, sandy substrate adjacent to open water foraging areas. The California least tern is federally listed as endangered with loss of nesting habitat being the primary cause for the initial decline of the population of the California subspecies. Few undisturbed beach nesting areas remain and California least terns are now found in varied habitats ranging from mudflats to airports. Breeding California least terns begin nesting in mid-May and June. California least terns abandon the nesting colonies by mid-August and migrate south by mid-September. California least terns exhibit a tenacity to the colony site where they first breed successfully. Prey includes northern anchovy, top smelt, killifish, mosquito fish, shiner, surf perch, and mudflat gobys.

California least terns have nested at multiple locations at SDIA (**Figure 5.8-1**) with the first observations of terns thought to be nesting occurring in 1969.<sup>134</sup> It is likely, given the historic configuration of the San Diego shoreline and the tern's documented use of fill and airports, that nesting occurred at this site prior to 1969.<sup>135</sup> The site was first monitored for tern nesting in 1970; and, in that year, SDIA supported the third largest colony in the state. Nesting at the airport has been documented in 28 of the last 36 years. Areas used for nesting by the California least tern have been monitored annually by the CDFG since

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<sup>133</sup> Unitt, P. San Diego Society of Natural History. *The Birds of San Diego County*. 1984.

<sup>134</sup> Craig, A. *Survey of California Least Tern Nesting Sites*. California Department of Fish and Game Wildlife Management Branch. 1970.

<sup>135</sup> Craig, A. *Survey of California Least Tern Nesting Sites*. California Department of Fish and Game Wildlife Management Branch. 1970.

1976. There is an annual fluctuation in the number of least tern nests at SDIA; the cause of this fluctuation is not known. [Table 5-8.2](#) lists the number of least tern nests observed at SDIA for the last five years. It should be noted that some pairs of least terns may have more than one nest.

Table 5-8.2  
Least Tern Nesting at SDIA

Year	Estimated Number of Breeding Pairs at SDIA	Number of Nests at SDIA
2006	114	131
2005	121 – 150	157
2004	65 – 70	76
2003	46 – 51	53
2002	48	50
2001	35-66	36
5-year average	67	74

\* Based on mean of each annual range in estimated pairs

Sources:

Patton, R. 2002. California least tern breeding survey, 2000 season. Calif. Dep. Fish and Game, Habitat Conservation and Planning Branch, Species Conservation and Recovery Program Report, 2002-03

Patton, R. 2003 draft. California least tern breeding survey, 2003 season. Calif. Dep. Fish and Game, Habitat Conservation and Planning Branch, Species Conservation and Recovery Program Report. Unpubl. draft.

Marschalek, D. 2004 draft. California least tern breeding survey, 2004 season. Calif. Dep. Fish and Game, Habitat Conservation and Planning Branch, Species Conservation and Recovery Program Report. Unpubl. draft.

Gilb, R. 2005. Preliminary draft summary of California least tern breeding at San Diego Regional Airport Authority and San Diego Unified Port District sites, 2005.

The Airport has supported a significant percentage of the nesting population of the state in multiple years. Terns have nested at several locations around the Airport, with Oval 3 South being the area used most consistently (locations are indicated in [Figure 5.8-1](#)). Various projects have obligated tern management efforts at SDIA and a Biological Opinion (BO) prepared by the USFWS requires reasonable and prudent measures for protecting terns at SDIA. The BO stated a number of conditions/protective measures, which included, among others, the following:

- The FAA and the SDCRAA<sup>136</sup> will maintain in perpetuity Ovals 0-1S, 0-2S, 0-3S, and 0-4S as nesting habitat for California least tern.
- The FAA and SDCRAA placed tern fledgling nest barriers/fencing around the perimeter of the above ovals to prevent the movement of fledglings outside these areas onto runways and taxiways. The fence is inspected and maintained by a qualified tern biologist with the appropriate endangered species permit issued by the USFWS.
- The FAA and SDCRAA provide annual funding for a predator control program; however, no shooting of tern predators at SDIA is allowed and non-lethal means are preferred.
- The FAA and SDCRAA will prepare and maintain in perpetuity a minimum of 6.2 acres of contiguous supratidal habitat at the Chula Vista Wildlife Reserve in south San Diego Bay for tern nesting.
- The FAA and District are responsible for assuring ongoing monitoring of tern populations at SDIA and at Chula Vista Wildlife Reserve by qualified tern biologist(s).

In addition, the BO specified certain practices for construction crews working on facility improvements, including educating workers on prohibitions to applying materials, storing equipment, or performing maintenance near the ovals, constraining ingress and egress routes to specific locations during the

<sup>136</sup> The Biological Opinion measures were directed at the Port of San Diego, not the SDCRAA, because at the time, SDIA was operated by the Port. Because the responsibilities regarding the least tern have transferred to the SDCRAA, references to the Port of San Diego have been revised accordingly.

nesting season (greater than 1,200 feet from the ovals), lowering crane booms when not in use, ensuring that trash would be properly disposed and that workers would not feed potential tern predators in the area.

### **Western Snowy Plover**

The western snowy plover, the coastal population of which is federally listed as threatened, nested at SDIA in 1979 when a single pair nested at SDIA.<sup>137</sup>

### **California Horned Lark**

This subspecies of horned lark is known to use areas within SDIA. The California horned lark is a sensitive species that has decreased in abundance across its entire range, presumably because of loss of habitat.<sup>138</sup> California horned larks have been eliminated as a nesting species from much of the SDIA area. Horned larks are thought to nest at MCRD and are known to nest at North Island.<sup>139</sup>

The California horned lark is a designated California Species of Special Concern by CDFG, which means it must be considered in state environmental documentation and is a former federal Category 2 candidate. Protective measures afforded to Category 2 candidates have been removed by the federal government, and California horned larks have not been proposed for listing.

### **5.8.3.4 Habitat Conservation and Natural Communities Conservation Plans**

SDIA is not within an adopted habitat management plan or natural communities conservation plan. Although the Airport is within the municipal limits of the City of San Diego, and the City is a participating jurisdiction in the San Diego Multiple Species Conservation Program (MSCP), State Tidelands along San Diego Bay are specifically excluded from the MSCP. These State Tidelands are addressed in the *San Diego Bay Integrated Natural Resources Management Plan*, which was prepared by the U.S. Navy and the Port of San Diego; however, that plan does not focus on “developed fill areas” such as SDIA, nor does it provide applicable guidance for the development of SDIA or the former Teledyne Ryan leasehold.<sup>140</sup>

## **5.8.4 Impact Analysis**

### **5.8.4.1 Proposed Project - With and Without Parking Structure**

#### **Proposed Airport Land Use Plan**

##### **Direct Impacts**

##### **Biotic Communities**

As indicated above, SDIA has few sensitive biological resources due to its highly developed nature. The former NTC parcel that would be developed under this alternative supports nonnative and/or disturbed habitat that is isolated from other areas of native habitat by urban development. Also as noted above, the former NTC parcel may be completely disturbed in 2008 as a result of the planned, but not yet approved, Former NTC Landfill Remediation Project. Virtually all of the remaining Airport areas that would be developed or otherwise affected consist of bare earth (such as runway ovals), paved surfaces, structures or ornamental (low habitat value) landscaping.

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<sup>137</sup> Unitt, P. San Diego Society of Natural History. *The Birds of San Diego County*. 1984.

<sup>138</sup> Gallagher, S.R. Atlas of Breeding Birds, Orange County, California. 1997.

<sup>139</sup> San Diego Unified Port District. Environmental Constraints Analysis for San Diego International Airport Master Plan 2020. Prepared by CH2M HILL. March 1999.

<sup>140</sup> U.S. Department of the Navy, Southwest Division and San Diego Unified Port District. *San Diego Bay Integrated Natural Resources Management Plan*. September 2000. Prepared by Tierra Data Systems. Citation is from Page 1-5 of the plan.



### Endangered and Threatened Species

As described previously, the runway ovals in the southeast portion of the Airport provide least tern nesting habitat. Accordingly, impacts to least terns must be addressed and (given the dearth of other sensitive biological resources) are the focus on this analysis. Neither the adoption of the Proposed Airport Land Use Plan nor the development of the Airport in accordance with that plan would directly affect the nesting ovals. That is, none of the ovals would be reduced in size or otherwise subject to direct physical disturbance.

Development of SDIA in accordance with the Proposed Airport Land Use Plan would not significantly affect the potential suitability of SDIA as foraging habitat for other sensitive species, such as the California horned lark, due to the small amount and generally low quality of the foraging habitat involved.

### Indirect Impacts

In a meeting between the USFWS and CDFG (resource agencies) and SDCRAA,<sup>141</sup> the resource agencies identified several concerns regarding indirect effects on least tern nesting ovals that could result from future development at SDIA, including additional jet traffic past the ovals, additional perch locations for predators, lighting impacts, and trash containers (such as dumpsters<sup>®</sup>) that could attract predators. The resource agencies also expressed concerns regarding the potential migration of contaminated sediments (such as those currently located at the former Teledyne Ryan leasehold) into San Diego Bay, which is foraging habitat for the terns and also supports numerous other sensitive species.

The Proposed Airport Land Use Plan identifies proposed uses for the former Teledyne Ryan leasehold, which is located immediately southwest (across the perimeter road) from the nesting ovals. The area near the nesting ovals is generally designated for Airport Support.<sup>142</sup> As described in Chapter 4, *Alternatives*, Airport Support uses may include general aviation, air cargo, air traffic control tower, fuel storage, aircraft rescue and fire fighting, and airport maintenance facilities. The development and use of Airport Support facilities at the former Teledyne Ryan leasehold could contribute to the following indirect effects:

- Increased taxiing past the ovals, particularly by smaller aircraft (e.g., corporate jets) if general aviation or aircraft maintenance facility is developed;
- Creation of perch locations for predators;
- Lighting of the least tern nesting ovals; or
- Use of trash containers for businesses at the site.

Each of these potential indirect impacts is addressed below. The potential for contamination of San Diego Bay is addressed in Sections 5.6, *Hydrology and Water Quality*, and 5.15, *Hazards and Hazardous Materials*.

The most likely taxi route for aircraft to reach the former Teledyne Ryan leasehold would be via Ryan Taxiway, which passes immediately northwest of 03-South, the most used nesting oval (see [Figure 5.8-1](#)). Accordingly, development of the eastern portion of the former Teledyne Ryan leasehold with Airport Support uses could increase taxiing-related indirect effects on nesting terns. Because there is no specific plan for the development of the former Teledyne Ryan leasehold, it is not possible to quantify the extent to which future development would increase the number of aircraft that would taxi past the least tern nesting ovals. Further complicating the ability to assess this impact is that while there is anecdotal evidence regarding the effects of aircraft on the least terns, the actual effects are not definitively known. For example, the terns' penchant for nesting at SDIA suggests that the noise and jet blast associated with aircraft operations on adjacent taxiways do not discourage nesting or substantively affect breeding

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<sup>141</sup> The meeting was held August 10, 2005 at the Authority's offices.

<sup>142</sup> A portion of the former Teledyne Ryan leasehold designated for Ground Transportation is located just south of the western end of Oval 04 South; however, this oval is less suitable (and not typically used) for least tern nesting due to its increased distance from the bay, especially on the oval's western end.

success. On the other hand, increased aircraft taxiing could increase the potential for ground-strikes of fledgling terns, although fencing is used to keep them from leaving the relative protection of the taxiway ovals. Thus, the potential impact from increased taxiing is speculative, both because the potential increase in taxiing is unknown and because its effect on terns is difficult to quantify.<sup>143</sup> When a specific development at the former Teledyne Ryan leasehold is proposed, the impacts of taxiing would need to be addressed at that time. Given that future development at Teledyne Ryan would likely require a change to the FAA-approved Airport Layout Plan for SDIA (for example, to provide airfield access or alter the fence location), resource agency consultation would be expected to occur as part of the Airport Layout Plan revision process.

The issue of predator perch creation is easier to address because any new development near the least tern nesting ovals would be designed to minimize potential perching locations and required to use anti-perch treatments such as stainless steel bird spike barriers that can be applied to potential perch sites (e.g., Nixalite®). Also, the extent to which the former Teledyne Ryan leasehold is covered by structures and, therefore, potential perch locations, would be similar to the current condition. Additionally, the ongoing predator control program mandated by the BO (see above) will continue to be implemented regardless of what new development occurs at the former Teledyne Ryan leasehold.

Lighting of any proposed new uses at the former Teledyne Ryan leasehold would be required to be directed away from the least tern nesting ovals. (For aviation safety reasons, lighting for airport support uses is generally not directed toward the airfield anyway.) Accordingly, lighting is not expected to result in a significant effect on least terns. Project-specific analysis of lighting would be required when a specific development is proposed, however, to confirm this assessment.

Increased predator presence due to trash containers is not anticipated because open trash containers would not be allowed, both for least tern predator-control reasons and because such containers could contribute to potential bird air strike hazards. That is, birds pose a potential aviation hazard and SDCRAA would require any tenant of the former Teledyne Ryan leasehold to cover all trash containers as an enforceable provision of their lease. Accordingly, the potential indirect impacts associated with trash containers are considered to be less than significant.

With regard to contaminated sediment exposure, readers are referred to Sections 5.6 *Hydrology and Water Quality* and 5.15 *Hazards and Hazardous Materials*. With the implementation of the mitigation measures included in those sections, contaminated materials are not expected to migrate off site to the San Diego Bay, which is habitat for the terns and many other sensitive species.

In summary, there is a potential for as-yet-unidentified development in accordance with the Proposed Airport Land Use Plan to cause increased indirect effects on least terns. Given the unknown elements involved, however, it would be speculative to identify specifically what those impacts would be. As stated in Section 15145 of the State CEQA Guidelines, “If, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact.” Accordingly, no determination of significance can be made at this time. Any future specific projects will be subject to further environmental review as such time specific impacts can be identified and mitigation measure, if necessary, can be developed.

### **Habitat Conservation and Natural Communities Conservation Plans**

Because SDIA is not encompassed by an adopted habitat conservation plan or natural resources community conservation plan, the development at SDIA in accordance with the Proposed Airport Land Use Plan would not conflict with the provisions of a habitat conservation plan or natural resources community conservation plan.

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<sup>143</sup> Per Section 15145 of the *State CEQA Guidelines*, “If, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact.”

## **Proposed Airport Implementation Plan**

### **Direct Impacts**

#### **Biotic Communities**

The Proposed Airport Implementation Plan projects would have a less-than-significant effect on biotic communities. As noted previously, the former NTC parcel that would be developed for the T2 West expansion supports nonnative and/or disturbed habitat that is isolated from other areas of native habitat by urban development. Virtually all of the remaining areas that would be developed under the Proposed Airport Implementation Plan consist of bare earth, paved surfaces, structures or ornamental (low habitat value) landscaping.

#### **Endangered and Threatened Species**

The Proposed Airport Implementation Plan projects would have no direct effects on endangered or threatened or other sensitive species. These proposed airport improvements are not located at or adjacent to least tern nesting sites or other areas of sensitive habitat for threatened, endangered or other species.

### **Indirect Impacts**

The indirect impacts of the Proposed Airport Implementation Plan projects would be less than significant because these projects would not be built adjacent to sensitive habitat, would not substantively affect air traffic levels at SDIA, and would not cause a significant change in the volume or location of sediment or other pollutants that are carried off site in storm flows. Specifically with regard to the least tern nests, the Implementation Plan projects would be north of the runway or separated from the nests by the former Teledyne Ryan leasehold, which would not be developed under the Proposed Airport Implementation Plan.

One indirect effect of the North Area Projects, specifically the improvements to Taxiway C, would incrementally reduce the number of large jets taxiing past the nesting ovals. The Taxiway C improvements would enable Group V/VI aircraft to use this taxiway north of the runway up to the queue for Runway 27. The Group V/VI aircraft would, therefore, be able to taxi on the north side of the field (after crossing the runway from the gate area at Taxiway B4) and so avoid the nesting areas. Without this change to Taxiway C, Group V/VI aircraft would re-cross the runway at Taxiway D and traverse the nesting areas. Although positive, the net effect of this change would be minor due to the small number of aircraft involved (only one aircraft departure per day is projected to be affected in the 2010 to 2015 timeframe). Additionally, because the Proposed Airport Implementation Plan projects would not increase operations when compared to the No Project Alternative, there would be no increased risk of collisions due to the Proposed Airport Implementation Plan projects.

### **Habitat Conservation and Natural Communities Conservation Plans**

Because SDIA is not encompassed by an adopted habitat conservation plan or natural resources community conservation plan, the Proposed Airport Implementation Plan projects would not conflict with the provisions of such a plan.

#### **5.8.4.2 East Terminal Alternative**

##### **Airport Land Use Plan**

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the proposed Airport Land Use Plan see Chapter Four, section 4.2.1 *Airport Land Use Plan*, for a detailed explanation. Therefore, the East Terminal Alternative includes the Proposed Airport Land Use Plan.

As discussed in Section 5.8.4.1 *Impact Analysis Proposed Project (Preferred Alternative)*, the only potentially significant effects of the Proposed Airport Land Use Plan on biotic communities or endangered or threatened species would stem from a potential for as-yet-unidentified development in accordance with the Proposed Airport Land Use Plan of the former Teledyne Ryan leasehold with Airport Support uses. Given the unknown elements involved, however, it would be speculative to identify specifically what those

impacts would be and, accordingly, no determination of significance can be made at this time. Any future specific projects will be subject to further environmental review as such time specific impacts can be identified and mitigation measure, if necessary, can be developed.

### **Airport Implementation Plan Alternative**

As with the Proposed Airport Implementation Plan, this alternative would avoid construction in sensitive habitat or near the least tern ovals. Accordingly, it would have similar, less-than-significant impacts on biotic communities and threatened and endangered species.

#### **5.8.4.3 No Project Alternative**

Under the No Project Alternative, there would be no change to the least tern ovals and, except for expected growth in (non-project-related) aircraft operations at SDIA, no increase in indirect effects compared to baseline conditions. The Airport would continue to operate in compliance with the terms of the BO issued by the USFWS, no potential predator perches would be constructed near the ovals, there would not be additional lighting near the ovals, and there would be no change to the former Teledyne Ryan leasehold that would increase use of the existing Ryan Taxiway. In comparison to the Proposed Project and Alternative Project, there would be incrementally more large jet traffic past the ovals on Taxiway B under the No Project (because there would be no improvement to Taxiway C allowing large jets to enter the runway queue from the north side of the runway). Because an average of only one departure per day is projected to be affected by the Proposed Project (Preferred Alternative) or East Terminal Alternative Taxiway C improvements, the incrementally increased jet traffic past the nesting ovals associated with the No Project Alternative would have a negligible effect on nesting least terns in comparison to the Proposed Project (Preferred Alternative) or the East Terminal Alternative.

### **5.8.5 Construction Impacts**

Construction at SDIA would comply with the above-described BO measures (e.g., implementing a construction-worker education program, constraining ingress and egress routes to at least 1,200 feet from the ovals, lowering crane booms when not in use, ensuring that trash would be properly disposed, and not feeding potential tern predators in the area). The SWMP requirements combined with mitigation measures discussed in Section 5.15, *Hazards and Hazardous Materials*, would avoid significant construction-related effects associated with contaminated sediments.

#### **5.8.5.1 Proposed Airport Land Use Plan**

Construction of Airport Support uses in the eastern portion of the former Teledyne Ryan leasehold could disrupt nesting, depending on the extent and timing of the proposed construction. As discussed in 5.8.4.2, *Impact Analysis Easter Terminal Alternative*, the only potentially significant effects of the Proposed Airport Land Use Plan on biotic communities or endangered or threatened species would stem from a potential for as-yet-undefined development in accordance with the Proposed Airport Land Use Plan. Given the unknown elements involved, however, it would be speculative to identify specifically what those impacts would be and, accordingly, no determination of significance can be made at this time. Any future specific projects will be subject to further environmental review as such time specific impacts can be identified and mitigation measure, if necessary, can be developed.

#### **5.8.5.2 Proposed Airport Implementation Plan and Airport Implementation Plan Alternative - With and Without Parking Structure**

Through compliance with the BO and the measures addressed in Sections 5.6 *Hydrology and Water Quality* and 5.15 *Hazards and Hazardous Materials*, impacts associated with construction of the Proposed Airport Implementation Plan and the Airport Implementation Plan Alternative projects would be less-than-significant. This assessment reflects, in part, the distances between the Proposed Airport Implementation Plan and Airport Implementation Plan Alternative project sites and the least tern nesting ovals and the absence of other sensitive biological resources on Airport.

## **5.8.6 Cumulative Impacts**

As discussed above, with the exception of least tern nesting habitat, SDIA has little biological resource value due to the dearth of native habitat and the Airport's highly developed environment. Further development of SDIA in accordance with the proposed Land Use Plan would not cause the loss of sensitive vegetation communities/native habitat and would not reduce the habitat of sensitive species (such as threatened or endangered species). Because the Implementation Plan projects would be constructed away from the least tern nesting ovals and would be consistent with the existing BO for SDIA, these projects would not incrementally contribute to a significant impact to this species. If future development of the former Teledyne Ryan leasehold were to adversely affect nesting terns (through indirect impacts), that would incrementally contribute to effects on this species. Given the nesting requirements for least terns, however, none of the other reasonable foreseeable projects described in Section 5.19, Cumulative Impacts, would be expected to adversely affect least tern nesting. Additionally, SDCRAA has acquired property in south San Diego Bay that was incorporated into the South San Diego Bay National Wildlife Refuge and managed to accommodate least tern nesting (and also to benefit other sensitive wildlife species), which help offset potential effects of SDIA's operation on least terns.

Based on these factors, cumulative effects to the least tern are considered less than significant, and the Proposed Project would not otherwise incrementally contribute to significant cumulative effects to biotic communities or other sensitive species.

## **5.8.7 Mitigation Measures/Other Improvements**

### **5.8.7.1 Proposed Project (Preferred Alternative)**

#### **Proposed Airport Land Use Plan**

SDCRAA is committed to implementing the measures identified in the above-described BO. Compliance with those measures, including the construction-related measures, represents the existing condition for SDIA and is not mitigation.

Of the potential effects described above, only the potential indirect effect to least terns associated with the development of Teledyne Ryan leasehold would potentially have a significant effect on least terns. No other resources discussed in this section would be significantly affected and require mitigation.

The potentially significant impacts associated with the development and the use of the Teledyne Ryan leasehold with Airport Support facilities include both construction-related and long-term indirect effects. Absent a specific proposal for the development of this property, however, it is not feasible to identify the specific mitigation that would reduce impacts to less-than-significant levels. Nonetheless, given SDCRAA's ability to operate a major international airport in manner that has allowed a colony of nesting least terns to thrive within the runway ovals at the southeast end of the Airport, it is reasonable to expect that adequate mitigation can be incorporated into the construction and operation of new facilities at the former Teledyne Ryan leasehold. Program level mitigation measures specific to the Proposed Airport Land Use Plan would likely include the following:

- PLMM5.8-1 Avoidance of construction adjacent to the least tern nesting ovals during the least tern breeding season
- PLMM5.8-2 Design and construction of new facilities such that potential predator perches are minimized and, where potential perches are unavoidable, the use of anti-perch material on those surfaces
- PLMM5.8-3 Use of lighting that is directed away from the least tern nesting ovals
- PLMM5.8-4 Use of enforceable lease requirements and associated site inspections to ensure that there are no open trash containers or other sources of food available to least tern predators at tenant facilities on the former Teledyne Ryan leasehold

Other, project-specific measures would depend on the type of use proposed and will be determined once projects are proposed for the Teledyne Ryan leasehold.

Based on the availability of measures that would reduce potential impacts to nesting terns, SDCRAA anticipates that impacts to least terns would be mitigable to less than significant levels.

### **Proposed Airport Implementation Plan**

The Implementation Plan would not cause significant impacts to biotic communities or threatened or endangered species and would not require mitigation.

#### **5.8.7.2 East Terminal Alternative**

The mitigation for the East Terminal Alternative would be identical to the Proposed Project (Preferred Alternative) for the Proposed Airport Land Use Plan. No mitigation would be required for the Airport Implementation Plan Alternative.

#### **5.8.7.3 No Project Alternative**

No mitigation would be required under the No Project Alternative.

### **5.8.8 Level of Significance after Mitigation Measures**

Potential impacts to biotic communities/endangered and threatened species due to the Proposed Airport Implementation Plan and Airport Implementation Plan Alternative are less than significant; therefore, mitigation measures would not be required for this impact category. Future development of the Teledyne Ryan leasehold should consider mitigation to minimize potential impact to the least tern nesting ovals, however, the specific mitigation can not be determined until such time that actual projects are proposed for this area.

## 5.9 Wetlands

This section describes the general approach and methodology, significance criteria, and environmental setting, as well as considers potential wetland impacts associated with the Proposed Project (Preferred Alternative) and its alternatives. Additionally this section describes potential construction and cumulative impacts. There were no comments in response to the NOP specific to potential wetland impacts.

Comments in response to the previously circulated Draft EIR specific to wetlands impacts were received from the following agencies:

- The USFWS and CDFG submitted a joint letter<sup>144</sup> suggesting that the U.S. Army Corps of Engineers be contacted to determine whether the 0.1 acre of disturbed wetland habitat is federally jurisdictional under Section 404 of the Clean Water Act and also indicating that the CDFG may consider the 0.1 acre of disturbed wetland to be under state jurisdiction pursuant to Section 1600 et seq. of the California Fish and Game Code.

A summary of comments received on the previously circulated Draft EIR are included as [Appendix A](#) to this ~~recirculated Draft~~ Final EIR.

The changes to the Proposed Project and alternatives that are included in this ~~recirculated Draft~~ Final EIR do not affect the results of the wetlands analysis presented in the previously circulated Draft EIR. The proposed changes to the Proposed Project and alternatives would not increase the area of disturbance associated with future Airport development, would not alter Airport operations such that they would affect wetlands in a manner not previously evaluated, and would not cause otherwise cause new or previously unevaluated impacts to wetlands. Because wetland impacts would be associated with the initial development and operation of new Airport facilities, extending the horizon year for impact evaluation from 2015 to 2030 does not alter the previous assessment of wetland impacts, as contained in the previously circulated Draft EIR and provided below.

### 5.9.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

Prior to beginning fieldwork, recent aerial photographs (1"=150' scale), USGS topographic maps, and the County of San Diego soil survey were reviewed to determine the location of potential jurisdictional wetland areas that may be affected by the project. Data were collected in areas that were suspected to be jurisdictional habitats. In areas that potentially could be jurisdictional wetlands, a jurisdictional delineation was conducted to identify and map areas that may fall under U.S. Army Corps of Engineers (Corps) jurisdiction pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344), wetland and streambed habitats under California Department of Fish and Game (CDFG) jurisdiction pursuant to Section 1600 of the Fish and Game Code, and wetland habitat under California Coastal Commission (CCC) jurisdiction pursuant to Section 30121 of the California Coastal Act.

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<sup>144</sup> This is the same letter referenced in "Biotic Communities and Endangered and Threatened Species."

As a result of this screening analysis, two sample plots were studied and a soil pit was dug at each plot.

### **5.9.2 Significance Criteria**

The Proposed Project would have a significant impact if it would result in the loss or degradation of wetland habitat considered jurisdictional under Clean Water Act, California Fish and Game Code, or California Coastal Act regulations.

### **5.9.3 Environmental Setting**

SDIA is highly developed (e.g., buildings, paved surfaces, ornamental landscaping) and contains few areas with the potential to support wetlands.

One area that does contain vegetation is the approximately 52-acre parcel transferred from the former Naval Training Center (NTC) to SDIA in 1991. Specifically, within the 52-acre parcel transferred from the former NTC to SDIA, human-induced changes to the landscape have resulted in areas where water ponds instead of draining off-site. At this location, vegetation mapping (described in Section 5.8 *Biotic Communities/Endangered and Threatened Species*) identified 0.1 acre of habitat as “disturbed wetland.” Disturbed wetland within the study area is dominated by non-native wetland species such as rabbitfoot grass (*Polypogon monspeliensis*) and grass poly (*Lythrum hyssopifolium*). Other species present include white sweet clover (*Melilotus alba*), prickly lettuce (*Lactuca serriola*), English plantain (*Plantago lanceolata*), and oats (*Avena* sp.). At both sample plot locations, the “disturbed wetland” did not qualify as federal or state jurisdictional wetland because it lacked appropriate wetland indicator species and/or appropriate soil conditions. As noted above for Biotic Communities, it also is probable that the former NTC parcel will be graded as a result of the planned (but not yet approved) Former NTC Landfill Remediation Project, anticipated to occur in 2008. Should the Former NTC Landfill Remediation Project be implemented, it would eliminate the above-described 0.1 acre of non-jurisdictional disturbed wetland on the former NTC parcel.

No other areas within the SDIA property has been identified as having the potential to support federal or state jurisdictional wetlands.

### **5.9.4 Impact Analysis**

This section considers potential wetlands impacts associated with the Proposed Project (Preferred Alternative) and its alternatives.

#### **5.9.4.1 Proposed Project - With and Without a Parking Structure**

##### **Proposed Airport Land Use Plan**

Because SDIA does not encompass jurisdictional wetlands, the development of SDIA in accordance with the Proposed Airport Land Use Plan would not significantly affect such wetlands.

##### **Proposed Airport Implementation Plan**

The expansion of Terminal 2 West would eliminate the 0.1 acre of non-jurisdictional, disturbed wetland habitat. Based on the small, isolated area affected and because the habitat is disturbed and does not qualify as jurisdictional wetlands under federal or state criteria, the loss of this habitat as a result of the Terminal 2 West expansion would be a less-than-significant impact. The North Area associated with the Proposed Airport Implementation Plan is heavily developed and disturbed and does not support wetlands. Accordingly, the Proposed Airport Implementation Plan would not significantly affect wetlands.

#### **5.9.4.2 East Terminal Alternative**

##### **Airport Land Use Plan**

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the proposed Airport Land Use Plan see Chapter Four, section 4.2.1 *Airport Land use Plan* for a detailed explanation. Therefore, the East Terminal Alternative includes the Proposed Airport Land Use Plan.



For the reasons described in Section 5.9.4.1 *Impact Analysis Proposed Project (Preferred Alternative)*, developing SDIA in accordance with the Airport Land Use Plan would not result in significant wetland impacts.

### **Airport Implementation Plan Alternative**

The proposed sites for Airport Implementation Plan Alternative projects are heavily developed and disturbed and do not support wetlands. Accordingly, this component of the East Terminal Alternative would not affect wetlands.

#### **5.9.4.3 No Project Alternative**

Under the No Project Alternative, there would be less ground disturbance than under the Proposed Project and no impacts to wetlands due to the lack of on-site wetland resources.

#### **5.9.5 Construction Impacts**

For the reasons described above (e.g., absence of jurisdictional wetlands), construction of the Proposed Project or alternatives to the Proposed Project would not significantly affect wetlands.

#### **5.9.6 Cumulative Impacts**

Because the 0.1 acre of habitat mapped as “disturbed wetland” does not qualify as state or federal jurisdictional wetland, and because it is the result of man-made ground disturbance within a highly disturbed site, its loss would not incrementally contribute to a significant cumulative effect on wetlands.

#### **5.9.7 Mitigation Measures/Other Improvements**

Because wetland impacts would be less than significant, no wetland mitigation is required.

#### **5.9.8 Level of Significance after Mitigation Measures**

Potential impacts to wetlands due to the Proposed Project are less than significant; therefore, mitigation measures would not be applied for this impact category. The level of significance specific to wetland impacts remains less than significant.



## 5.10 Coastal Resources

This section describes the general approach and methodology, regulatory framework, significance criteria, environmental setting, as well as considers potential coastal resource impacts associated with the Proposed Project (Preferred Alternative) and its alternatives. Additionally, this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts. Comments in response to the NOP specific to potential coastal resource impacts were received from the following agency:

- Unified Port of San Diego specific to impacts on tidelands and cumulative impacts on tidelands.

All written and oral comments during the NOP process are provided in [Appendix A](#).

Comments in response to the previously circulated Draft EIR specific to potential coastal resource impacts were received from the following agency:

- California Coastal Commission concurred that the SDCRAA would be required to obtain coastal development permits for the proposed development of SDIA contemplated in the EIR and noted that if FAA action is required, the FAA may need to demonstrate consistency with the Coastal Act prior the SDCRAA's application for a coastal development permit.

Comments received specific to coastal resource impacts are addressed within this section of the EIR.

The changes to the Proposed Project and alternatives that are included in this ~~recirculated Draft~~ Final EIR do not affect the results of the Coastal Resources analysis presented in the previously circulated Draft EIR. The proposed changes to the Proposed Project and alternatives would not cause new or substantially more severe impacts to Coastal Resources in comparison to the Proposed Project evaluated in the previously circulated Draft EIR. Additionally, based on the nature of the Proposed Project and alternatives, and considering their potential effects to coastal resources, extending the horizon year to 2030 would not change the findings of the previously circulated analysis of coastal resource impacts (see below).

### 5.10.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

Coastal resources are addressed with regard to consistency with the California Coastal Act of 1976 ("Coastal Act"; California Public Resources Code Sections 30,000 et seq.). This act, which is consistent with the Federal Coastal Zone Management Act, contains the State's adopted policies with regard to the protection of coastal resources.

### 5.10.2 Regulatory Framework

SDIA and the entire study area addressed in this ~~Draft~~ Final EIR are within California's Coastal Zone, as designated by the Coastal Act; accordingly, development at SDIA is regulated by the applicable Coastal Act provisions. SDIA represents a unique situation with regard to Coastal Act jurisdiction because it is a non-coastal dependent use located on State Tidelands and (pursuant to an act of the state legislature) is

operated by a non-port public agency. However, airport land uses are an allowable use on state tidelands as they promote the movement of people, goods, and services through the region. Chapter 3 of the Airport Authority Act (as codified in California Public Utilities Code Section 170060(c)) states that:

The [San Diego County Regional Airport] authority shall be responsible for making any necessary application to the California Coastal Commission pursuant to the California Coastal Act of 1976 (Division 20 (commencing with Section 30000) of the Public Resources Code) and to other agencies in accordance with other applicable laws in effect on the effective date of the act that added this section for improvements upon coastal lands under the control of the authority through a lease. The port [of San Diego] shall assist in the application for those projects as the trustee of the lands and shall not impede any improvements sought in the fulfillment of the authority's duties. The authority shall be responsible for all applications, requests, or submittals to other governmental agencies for approvals, permits, authorizations or agreements of any kind affecting or relating to the property governed by the lease, and the port shall cooperate in completion of all documents in the form submitted or approved by the authority without modification, providing the documents are requested by the authority, or required by any other governmental agencies, or both.

In accordance with the Coastal Act and Airport Authority Act, SDCRAA will seek Coastal Development Permits (if necessary) for the proposed developments at SDIA that would follow adoption of the plan (e.g., Implementation Plan projects).

It is expected that the Coastal Commission will assess the Proposed Airport Land Use Plan and the Proposed Airport Implementation Plan with regard to the coastal resources planning and management policies contained in Chapter 3 of the Coastal Act (California Public Resources Code Sections 30200 – 30265.5). These policies address public access, recreation, the marine environment, land resources, development and industrial development. Not all policies are applicable to every proposed plan or development with the Coastal Zone.

As noted previously, SDIA is located on State Tidelands. Chapter 8 of the Coastal Act (California Public Resources Code Sections 30700 – 30721) contains the provisions that "...govern those portions of the Ports of Hueneme, Long Beach, Los Angeles, and San Diego Unified Port District located within the coastal zone...." Pursuant to the Coastal Act, each port is required to have a master plan that is consistent with the applicable Coastal Act policies and that has been certified by the California Coastal Commission. The Port of San Diego's Coastal Commission-certified plan is the *Port of San Diego Port Master Plan*. Once a Port master plan is certified by the Coastal Commission, only developments consistent with the master plan may be approved by the respective Port decision-making body.

As described in Section 2.2.1, *San Diego County Regional Airport Authority*, the SDCRAA Board is responsible for all policy and planning decisions for SDIA; accordingly, Board of Port Commissioners approval is not required for the adoption of Airport plans or the implementation of proposed developments at SDIA (except for developments involving State Tidelands not transferred to SDCRAA as part of the Airport Authority Act or acquired by lease from the Port). Where Coastal Development Permits are necessary, SDCRAA will apply for these directly to the Coastal Commission.

### **5.10.3 Significance Criteria**

The Proposed Project would have a significant impact to coastal resources if it would be inconsistent with applicable coastal zone management and planning policies in Chapter 3 of the Coastal Act, including the following:

1. Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.
2. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.
3. Marine resources shall be maintained, enhanced, and, where feasible, restored.
4. The biological productivity and the quality of coastal waters appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water

discharges and entrainment, controlling runoff, preventing substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

5. Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
6. Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.
7. New commercial or industrial development, except as otherwise provided in the Coastal Act, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it.
8. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.
9. The location and amount of new development should maintain and enhance public access to the coast by providing adequate parking facilities or providing substitute means of serving the development with public transportation.
10. New development shall minimize risks to life and property in areas of high geologic, flood, and fire hazard.
11. New development shall be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.

Note that these are not the only coastal zone management and planning policies contained in Chapter 3 of the Coastal Act; rather, these are the policies that SDCRAA considers potentially applicable to the proposed Airport Land Use Plan and Implementation Plan. These policies also are considered in light of Coastal Act guidance that existing developed uses are essential to the economic and social well-being of the people of California. That is, although the Airport is not a coastal dependent use, it is an existing facility that cannot feasibly be relocated to a non-coastal location within the timeframes addressed by the Proposed Airport Land Use Plan and Proposed Airport Implementation Plan). Also note that, because the topic of “coastal resources” encompasses a broad spectrum of resources and issue areas, much of the discussion of impacts provided below refers to analyses elsewhere in this EIR. For the purposes of assessing coastal resource impact significance, this section assumes that mitigation measures identified in other Sections (e.g., 5.6 *Hydrology and Water Quality*, 5.14 *Geology and Soils*, 5.15 *Hazards and Hazardous Materials*) would be implemented.

#### **5.10.4 Environmental Setting**

As noted above, all of SDIA and the study area addressed in this EIR are within the California Coastal Zone. There is no Coastal Commission-certified Airport Land Use Plan for SDIA, although the Airport and its study area were encompassed previously by the Coastal Commission-certified *Port Master Plan*. The *Port Master Plan* designates SDIA as International Airport, Aviation Related Commercial and Aviation Related Industrial. In general, the International Airport designation encompasses areas where the Port operated SDIA facilities, the Aviation Related Commercial was applied to commercial operators’ leaseholds (such as the existing FBO in the North Area), and Aviation Related Industrial encompasses the former General Dynamics leasehold (in the current North Area) and the former Teledyne Ryan leasehold. The *Port Master Plan* does envision, among other actions, (1) addition of an air terminal concourse, and associated aircraft apron areas; and (2) modification of existing parking and airport roadway improvements. However, it should be noted that SDCRAA does not use the *Port Master Plan* as a guide to future development of SDIA. The Airport Land Use Plan will describe the boundaries of the Airport and describe the Airport-related uses.

## 5.10.5 Impact Analysis

This section considers potential coastal resource impacts associated with the Proposed Project (Preferred Alternative) and its alternatives.

### 5.10.5.1 Proposed Project - With and Without Parking Structure

Adoption of the Proposed Project (Preferred Alternative) would not conflict with the applicable coastal zone management and planning policies contained in Chapter 3 of the Coastal Act for the following reasons (number correspond to the significance criteria listed above):

1. The developments that would occur under the Proposed Airport Land Use Plan and Proposed Airport Implementation Plan would not preclude or restrict public access to the coast. For aviation security reasons, much of the study area is currently closed to the public or limited to persons with legitimate Airport business. In the broader sense, improvements to SDIA would make arriving at San Diego more pleasant for visitors, which could be considered an improvement to coastal access.
2. SDIA and its study area are not necessary to support coastal recreation and have not historically been used for such a purpose. Recreation would not be consistent with current and proposed use of the subject property as a busy international airport.
3. Neither the general land uses envisioned in the Proposed Airport Land Use Plan nor the specific developments included in the Proposed Airport Implementation Plan would adversely affect the marine environment. There would be no construction in marine areas and, as described in Sections 5.6, *Water Quality and Hydrology*, and 5.15, *Hazards and Hazardous Materials*, the Proposed Project would not, as mitigated, increase pollutant discharges to the marine environment.
4. The Proposed Project (Preferred Alternative) would not degrade the biological productivity or the quality of coastal waters because it would incorporate measures to address potential runoff during construction and operation of the proposed new facilities (see Section 5.6, *Hydrology and Water Quality*), wastewater flows generated at the Airport (including those from Proposed Airport Implementation Plan facilities) would be treated by the City of San Diego prior to discharge in the Ocean, reclaimed water would be used where appropriate (such as for certain landscaping irrigation applications), and Airport facilities would not be constructed in the 100-year floodplain or in streambeds or other natural water bodies.
5. The vast majority of SDIA and the associated Port Tideland leaseholds are paved or highly disturbed. As described in Sections 5.8 *Biotic Communities/Endangered and Threatened Species* and 5.9 *Wetlands*, the proposed T2 West expansion area contains disturbed, low quality habitat that is isolated from other vegetation. No Clean Water Act or California Fish and Game Code wetlands exist on site. The taxiway ovals in the southwest sector of SDIA represent important nesting habitat for the California least tern; however, impacts to least terns are not significant for the reasons described in Section 5.8, *Biotic Communities/Endangered and Threatened Species*. Accordingly, the Proposed Project (Preferred Alternative) would not cause a significant disruption to, or loss of habitat value in, environmentally sensitive habitat areas.
6. With the exception of marine habitat (see item no. 3), SDIA is not adjacent to environmentally sensitive habitat areas. As described in Section 5.1, *Noise*, the Proposed Project (Preferred Alternative) would not result in a noticeable increase in noise levels off-Airport, and as described in Section 5.6, *Hydrology and Water Quality*, the Proposed Project (Preferred Alternative) would not increase pollutant emissions in stormwater runoff. Accordingly, the Proposed Project (Preferred Alternative) would not have indirect effects on off-Airport habitat. Similarly, the Proposed Project (Preferred Alternative) would not substantively affect nearby Spanish Landing Park or recreational boaters in San Diego Bay.
7. The proposed expansion of SDIA facilities would occur within the existing Airport property or within areas previously used for aviation commercial and industrial purposes. Accordingly, the Proposed Project (Preferred Alternative) would be consistent with Coastal Act guidance calling for new development to be within, contiguous with, or in close proximity to existing developed areas.

8. As described in Section 5.14, *Aesthetics* the Proposed Project (Preferred Alternative) would not significantly affect views to and along scenic coastal areas (e.g., views to the Bay from inland of the Airport), and it would result in development that is visually compatible with the character of surrounding areas.
9. Development at SDIA would occur outside the 100-year floodplain and would not be in a wildland fire or other high-fire hazard area. Potential geological stability issues would be addressed during project design and construction, as addressed in Section 5.14, *Geology and Soils*.
10. SDIA is a public transportation facility that provides coastal access (e.g., access to San Diego County and its coastal resources) for visitors from throughout California and the nation. Locally, the Airport is served by several forms of public transit including busses, taxis and shuttles, and commuter and inter-city rail (via the Metropolitan Transit System Flyer Bus Route No. 992 from Santa Fe Station). These services would continue under the Proposed Project (Preferred Alternative). Specifically with regard to parking, the Proposed Airport Implementation Plan includes the provision of additional parking at Terminal T2, and the Proposed Airport Land Use Plan envisions additional parking at the former TDY property. Based on these factors, the Proposed Project (Preferred Alternative) is consistent with applicable Coastal Act guidance on transportation and parking in the coastal zone.
11. As described in Section 5.5, *Air Quality*, the Proposed Project (Preferred Alternative) would be consistent with requirements imposed by the San Diego County Air Pollution Control District and the State Air Resources Control Board.

Because the Proposed Project (Preferred Alternative) would be consistent with the planning and land use policies adopted by the State to protect coastal resources, its effect on coastal resources would be less than significant.

#### **5.10.5.2 East Terminal Alternative - With and Without Parking Structure**

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the proposed Airport Land Use Plan see Chapter Four, section 4.2.1 *Airport Land use Plan* for a detailed explanation. Therefore, the East Terminal Alternative includes the Proposed Airport Land Use Plan. From the perspective of coastal resources and Coastal Act consistency, this alternative would have virtually identical effects as those described in Section 5.10.5.1 *Impact Analysis Proposed Project (Preferred Alternative)* for the Proposed Project (Preferred Alternative) (i.e., less than significant coastal resources impact).

#### **5.10.5.3 No Project Alternative**

Under the No Project Alternative, there would be no change in the existing use of coastal resources at SDIA and the former Teledyne Ryan leasehold. Similarly, there would be no Airport Land Use Plan adoption or proposed Airport developments requiring certification and/or approval from the California Coastal Commission.

#### **5.10.6 Construction Impacts**

With the implementation of water quality best management practices (BMPs) and other stormwater pollution measures identified in the SWPPP (see Section 5.6, *Hydrology and Water Quality*), construction activities would not have a significant effect on coastal act policies.

#### **5.10.7 Cumulative Impacts**

Past and present activities at SDIA and in the cumulative impacts study area (see Section 5.19 *Cumulative Impacts*) have resulted in a highly developed environment along this section of the Coastal Zone (primarily northern San Diego Bay). This portion of the Coastal Zone has a high number of visitor-serving uses, provides many recreational opportunities and generates substantial economic activity. Although highly developed, the area near SDIA is also an important scenic resource. Much of the native habitat value near SDIA has been lost, however, especially with regard to upland habitats (the marine environment in the nearby Bay continues to be important). With regard to reasonably foreseeable developments, the majority of developments discussed in Section 5.19 *Cumulative Impacts* would occur within the Coastal Zone and/or could indirectly affect coastal resources (such as through runoff).

Developments that could affect coastal resources would, however, be subject to the Coastal Act, as implemented by the respective local jurisdictions (e.g., City of San Diego, Port of San Diego) and/or the California Coastal Commission. As a result, developments in the SDIA area are not expected to result in significant adverse effects on coastal resources, and the Proposed Project is not expected to incrementally contribute to a significant coastal resources impact.

### **5.10.8 Mitigation Measures/Other Improvements**

This assessment of coastal resource impacts assumes that the mitigation measures identified elsewhere in this ~~Draft~~ Final EIR would be implemented. Specifically, this includes implementation of water quality best management practices (BMPs) and other stormwater pollution measures identified in the SWPPP (see Section 5.6, *Hydrology and Water Quality*) and ~~mitigation measures defined in Section 5.15 *Hazards and Hazardous Materials*~~. With conformance to the SWPPP and the implementation of these mitigation measures, no additional measures would be required to reduce coastal resource impacts to less-than-significant levels.

### **5.10.9 Level of Significance after Mitigation Measures**

With conformance with the SWPPP and ~~the implementation of the mitigation measures defined in Section 5.15, *Hazards and Hazardous Materials*~~, coastal resource impacts would be less than significant.



## 5.11 Utilities and Service Systems

This section describes the general approach and methodology, regulatory framework, significance criteria, and environmental setting, as well as considers potential utilities and service systems impacts associated with the Proposed Project (Preferred Alternative) and its alternatives. Additionally, this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts. Comments in response to the NOP specific to potential utilities and service systems impacts were received from the public during oral comments taken during scoping meetings:

- Oral comments during scoping meetings expressed concern about sewer capacity at SDIA.

All written and oral comments during the NOP process are provided in [Appendix A](#). The comment received specific to utilities and service systems impacts is addressed within this section of the EIR.

Comments in response to the previously circulated Draft EIR specific to potential utilities and service systems impacts were received from the following agency:

- City of San Deigo (Resources Management Division-Enviroinmental Services Department) indicated that the facility would cause significant strain to an already undercapacity system. Systems should be designed to reduce solid waste generation impacts. The Airport should develop and implement SWMP that addresses C&D debris and ongoing waste generation.

Also during the public review period, the City of San Diego completed and provided to the SDCRAA a Water Supply Assessment Report<sup>145</sup> demonstrating the adequacy of water supplies for the Proposed Project.

Comments received specific to utilities and service system impacts are addressed within this section of the EIR.

Public utilities addressed in this section are energy supply (electricity, natural gas and aviation fuel), telecommunications, water demand/supply and systems, sewer service, and solid waste.

### 5.11.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

This analysis focuses on the capacities and capabilities of existing public utilities and service systems and examines how the Proposed Project (Preferred Alternative) and its alternatives would affect them. This study incorporates information obtained during preparation of the Airport Master Plan, which is incorporated into this EIR by reference.

Water service demand was assessed using the water demand factors established by the City of San Diego Water Department, which provides water service to SDIA<sup>146</sup>. Water supply availability was

<sup>145</sup> City of San Diego Water Department. Water Supply Assessment Report. Airport Master Plan – Airport Improvements. July 2006

<sup>146</sup> City of San Diego Water Department Capital Improvements Program. Guidelines and Standards. Book 2. July 1999.

assessed in compliance with California Water Code requirements<sup>147</sup> in a City of San Diego-prepared Water Supply Assessment, which is incorporated into this EIR by reference. The Water Supply Assessment addressed the demand estimates for the Proposed Project in comparison to anticipated water supply requirements, incorporating applicable elements of the 2005 City of San Diego Urban Water Management Plan (UWMP),<sup>148</sup> The Metropolitan Water District of Southern California 2005 Regional Urban Water Management Plan<sup>149</sup> (RUWMP) and the City's Long-Range Water Resources Plan (2002-2030).<sup>150</sup>

Other utility providers' facilities were identified through review of maps, available studies, and other documents; field reconnaissance; and communications with personnel at San Diego Gas and Electric Company (SDG&E), City of San Diego and SDIA. Potential impacts to public utilities and service systems were evaluated by (a) assessing the potential for the Proposed Project to increase demand and (b) comparing the ability of the service provider/public facility to serve the Proposed Project developments and accommodate the associated increase in demand, and (c) addressing whether existing utility lines would need to be relocated or otherwise directly affected by construction/operation of project elements (see also "Thresholds of Significance").

The changes to the Proposed Project and alternatives that are included in this ~~recirculated Draft~~ Final EIR do not affect the results of the utilities and service systems impacts analysis presented in the previously circulated Draft EIR. Specifically, the changes to the Proposed Project and alternatives do not include any new facilities that would affect any of the resources considered in this impact category. Extending the horizon year to 2030 would not change the findings of the previously circulated analysis of impacts as improvements associated with the alternatives for implementation do not include improvements beyond 2015.

## **5.11.2 Regulatory Framework**

The following section presents the federal, state, regional and local utility and service system regulations, plans, and standards that are directly applicable to the Proposed Project.

### **5.11.2.1 Energy Supply**

#### **Electricity**

FERC regulates rates for wholesale electric power sales of electricity and transmission in interstate commerce for investor-owned electric utilities, power marketers, power pools, power exchanges, and Regional Transmission Operators. FERC does not regulate the physical construction of generation, transmission, or distribution facilities. Prior to September 2001, direct access to electrical generation was permitted and local municipalities, businesses, and institutions established contracts for power directly with the generators. Since September 2001, the CPUC has regulated electrical rates, distribution, and services.

#### **Natural Gas**

The Federal Energy Regulatory Commission (FERC) regulates prices, services, and the construction of the interstate natural gas pipelines that serve California. The California Public Utilities Commission (CPUC) regulates intrastate and local natural gas distribution facilities and services, natural gas procurement, pipelines, as well as production and gathering. In addition, regulations related to natural gas services at the local level include the California Building Code, the California Health and Safety Code, the California Fire Code and their associated implementing ordinances at the County and City levels.

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<sup>147</sup> Specifically including those sections of the California Water Code beginning at Section 10910 and codifying Senate Bill 610

<sup>148</sup> City of San Diego. The 2005 City of San Diego Urban Water Management Plan. 2005.

<sup>149</sup> The Metropolitan Water District of Southern California. The Metropolitan Water District of Southern California 2005 Regional Urban Water Management Plan. November 2005.

<sup>150</sup> City of San Diego. *Long-Range Water Resources Plan (2002-2030)*. Adopted by the City Council on December 9, 2002.

## **5.11.2.2 Water Service**

### **Federal**

At the federal level, the primary regulations relating to water services are associated with water quality. These laws and regulations include the Clean Water Act (CWA), the goal of which is pollution prevention (see Section 5.7, *Hydrology and Water Quality*), and the Safe Drinking Water Act (SDWA). The latter, enacted by Congress in 1974 and amended in 1986 and 1996, requires protection of drinking water and its source lakes, reservoirs, springs, and groundwater wells. The SDWA divides the responsibility of ensuring safe drinking water among the U.S. EPA, states, and local service providers.

### **State and Local Level**

At the state level there are two agencies that oversee water services. The first is the State Water Resources Control Board (including its Regional Water Quality Control Boards), which is responsible for the enforcement of the Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code). The Porter-Cologne Act deals with the potential discharges into water bodies that could result in a negative impact to water quality (see also Section 5.7, *Hydrology and Water Quality*).

The second agency is the Department of Water Resources (DWR), whose mission is the overall management of California's water resources. The regulations overseen by DWR regarding water service availability include the Urban Water Management Planning Act, and those sections of the California Water Code added/amended by Senate Bills (SBs) 610 and 221. The California Act, adopted in 1983, requires all urban water suppliers within the state to prepare an Urban Water Management Plan (UWMP) and update them every five years. The City of San Diego updated its UWMP in 2005.

SBs 610 and 221 amended state law to improve the link between information on water supply availability and certain land use decisions made by cities and counties. Both statutes require detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects. Both statutes also require this detailed information be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Both measures recognize local control and decision-making regarding the availability of water for projects and the approval of projects. Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code Section 10912 [a]) subject to CEQA. The types of projects subject to SBs 610 and 221 include: shopping centers or businesses employing more than 1,000 people or having more than 500,000 square feet of floor space; commercial office buildings employing more than 1,000 people or having more than 250,000 square feet of floor space; industrial, manufacturing, or processing plants or industrial parks planned to house more than 1,000 people or having more than 650,000 square feet of floor space; mixed use projects that include one or more of the above types of projects; and projects that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

San Diego's arid climate and the fact that the majority of the region's water is imported, results in a limited water supply and availability. The drought cycles have resulted in a water conservation program throughout the City and region. Pursuant to San Diego Municipal Code Section 147.04, all buildings, prior to a change in ownership, are required to be certified as having water-conserving plumbing fixtures in place. All residential, commercial, and industrial water customers who receive water from the City of San Diego Water Department are affected by this ordinance.

### **Recycled Water Reuse**

Recycled water use in the City of San Diego is regulated by Ordinance 0-17327 ("Mandatory Reuse Ordinance") adopted by the San Diego City Council on July 24, 1989. This ordinance specifies that "recycled water shall be used within the City where feasible and consistent with the legal requirements, preservation of public health, safety, and welfare, and the environment." Compliance with this ordinance for new development is made a condition of tentative maps, land use permits, etc. based on the project's location within an existing or proposed recycled water service area. In addition, the City Water Department is proposing additional retrofit criteria in conjunction with the Public Utilities Advisory Commission. Compliance with the Mandatory Reuse Ordinance is assured via permit conditions and, therefore, no impact significance analysis under CEQA is required.

### **5.11.2.3 Solid Waste Generation/Disposal**

In September 1989, the California Integrated Solid Waste Management Act (also known as Assembly Bill [AB] 939) was enacted into law. The IWMA establishes an integrated system of waste management in California and requires each local jurisdiction to implement a Source Reduction and Recycling Element (SRRE), Household Hazardous Waste Element (HHWE), and Non-Disposal Facility Element (NDFE). The IWMA requires that the Siting Element be prepared by the county and approved by the County Board of Supervisors and a majority of the cities within the county. The IWMA requires each city in the state to divert at least 50 percent of its solid waste from landfill disposal through source reduction, recycling, and composting.

### **5.11.3 Significance Criteria**

For the purposes of this analysis, potential significant utilities and service systems impacts were evaluated based on the *CEQA State Guidelines* and in cooperation with SDCRAA. The Proposed Project would have a significant utilities and service systems impact if it would:

- Interruption in Service — Interruption or disruption of utility services could occur as a result of physical displacement and subsequent relocation of public utility infrastructure. Such impacts would be considered significant if the result would be a direct long-term service interruption or permanent disruption of essential public utilities;
- Need for Additional Capacity — A significant impact would occur if an alternative would result in the need for additional capacity of utility infrastructure or additional services, which could not be supplied by existing utility service providers; or
- Decrease in Level of Service — A significant impact would occur if an alternative would cause a substantive decrease in existing levels of utility service.

### **5.11.4 Environmental Setting**

#### **5.11.4.1 Energy**

##### **Electrical Power and Natural Gas**

Electrical power and natural gas service at SDIA are provided by SDG&E, which supplies power to a population of 1.3 million business and residential accounts in a 4,100 square-mile service area spanning two counties and 25 communities. SDG&E addresses power and gas requirements for upcoming development projects on a case-by-case basis, and SDG&E consults with developers to incorporate energy saving devices into project design, where feasible. Forecasting future electric power and natural gas consumption demand is performed on a continual basis by SDG&E. In situations where projects with large power loads are planned, these new large power loads are considered together with other existing or anticipated future loads in the project vicinity, and electrical substations are upgraded or new substations are built if the capacities of existing substations are exceeded. Direct impacts to electrical and natural gas facilities are addressed by SDG&E at the time incoming development projects occur.

Near SDIA, the Pacific Highway right-of-way contains three 12-kilovolt (kV) circuits fed from the Kettner substation. Two of the circuits currently feed power to the former General Dynamics site in the northern portion of the SDIA near the intersection of Sassafras Street and Pacific Highway.

Harbor Drive presently serves as a corridor for five 12kV circuits, four from the Kettner substation and one from the Old Town substation. An additional circuit runs to SDIA from the Point Loma substation, providing backup for the Airport. There are several emergency generators located throughout the SDIA, which currently provide backup lighting throughout the existing terminals. There are also several emergency generator hookups at various locations throughout the SDIA that were installed during the rolling blackouts experienced in southern California. There are hookups on the airfield at the central plant, Terminals 1 and 2, as well as the Commuter Terminal. These hookups currently do not have emergency generators, but are routed to provide full electrical service when properly energized.

Natural gas utilities at SDIA include a 6-inch main, located in Harbor Drive, with 60 pounds per square inch (PSI) of pressure. The former General Dynamics property is connected by a 4-inch main with 60 PSI

from Sassafras Street as well as a 4-inch line with 150 PSI from Pacific Highway terminating at the west end of the site.

### **Aviation Fuel**

Aviation fuel is supplied to the San Diego region by a 16-inch common carrier pipeline extending south from Los Angeles. This fuel pipeline is operated by Kinder Morgan Energy Partners, L.P. (formerly Santa Fe Pacific Pipeline Partners, Ltd.), and it connects to the Kinder Morgan fuel terminal in Mission Valley. An 8-inch-diameter branch line provides aviation fuel from the fuel terminal to SDIA.

The SDIA fuel system consists of the 8-inch-diameter supply pipeline into the airport, two 1-million-gallon aboveground fuel storage tanks, and a 10-inch-diameter transfer line and a fuel dispensing facility (truck load rack). This 10-inch transfer line is routed from the fuel storage tank farm under the primary runway where it is routed inside of a 36-inch-diameter pipe conduit with other underground utilities and ends at the fuel dispensing facility located near the Commuter Terminal. A 14-inch-diameter containment-monitoring sleeve, routed in the 36-inch-diameter conduit, surrounds this 10-inch fuel line. The 8-inch supply pipeline enters the airport from Pacific Highway and runs west to Taxiway C4 and north to the fuel farm.

#### **5.11.4.2 Telecommunication Systems**

Utility providers such as AT&T, IBM, and independent cable companies service communications system(s) for telephone, large-scale computer systems, and cable television in the City of San Diego. Communication system needs for incoming projects are serviced by these utility providers on an as-needed basis.

AT&T is mandated by the State Public Utilities Code to provide telephone service wherever it is requested throughout the State of California. AT&T, therefore, must provide ongoing telephone service. Forecasting future service demand is performed by computerized statistical modeling based on land use patterns, zoning, and other growth indicators. When possible, AT&T engineers contact developers regarding future development plans early on in a project's conceptual planning stages, to establish upcoming service demand.

Near SDIA, both Pacific Highway and Harbor Drive house fiber optics and copper line for telecommunications. Two central office diverse feed locations are located at the south side of the SDIA.

#### **5.11.4.3 Water Demand/Supply and Systems**

Approximately 90 percent of the San Diego region's water is imported, while 10 percent is supplied from water produced locally through a system of reservoirs and pipelines. The San Diego County Water Authority (SDCWA) is the main wholesale supplier of water in San Diego County. Imported water is supplied to SDCWA by The Metropolitan Water District of Southern California (Metropolitan), which serves the greater southern California area. Metropolitan's primary sources of water are the State Water Project (SWP) and the Colorado River. A 242-mile-long aqueduct brings Colorado River water from Lake Havasu to southern California. The City also receives water originating in northern California from the SWP. SWP water is initially captured in reservoirs north of Sacramento and released through natural rivers and streams into the Sacramento-San Joaquin Delta. The water is then delivered to southern California through a 444-mile-long aqueduct. Metropolitan blends Colorado River and SWP water at a facility in Riverside County, and then transfers it to San Diego water treatment plants.<sup>151</sup> The City of San Diego Water Department purchases water from SDCWA and delivers it throughout the City.

The City's Water Department maintains a complex water treatment and distribution system to support approximately 1.2 million people over a 330 square mile area. The City maintains three water treatment plants with a combined total treated capacity of 294 million gallons per day (MGD). The Miramar Water Treatment Plant, originally constructed in 1962, has a rated capacity of 140 MGD. The Alvarado Water Treatment Plant, operational since 1951, recently increased the rated capacity to 150 MGD. The Otay Water Treatment Plant was originally constructed in 1940 and has a current capacity of 34 MGD. The

<sup>151</sup> City of San Diego. The 2005 City of San Diego Urban Water Management Plan. 2005.

City Water Department also maintains and operates 32 treated water storage facilities, including steel tanks, standpipes, concrete tanks and rectangular concrete reservoirs, with capacities varying from less than 1 million gallons to 35 million gallons. The City's water system consists of approximately 3,460 miles of pipeline, including transmission lines up to 84 inches in diameter and distribution lines as small as 4 inches in diameter. There are approximately 250,000 metered service connections within the City Water Department's service area. The City Water Department also sells water to a number of other water agencies, and maintains emergency connections to these adjacent jurisdictions/districts in the event of water shortages.

Along with the potable water supply, the City of San Diego built the North City Wastewater Reclamation Plant (NCWRP) and the South Bay Water Reclamation Plant (SBWRP) to treat wastewater to a level that is approved for irrigation, manufacturing and other non-drinking/non-potable purposes. The NCWRP has the capability to treat 30 MGD of sewage and the SBWRP can treat 15 MGD. The City of San Diego Water Department maintains and operates the recycled water distribution system. It consists of 66 miles of recycled water pipeline, a 9-million gallon reservoir and two pump stations. The pipeline sizes vary from 4- to 36-inches in diameter.<sup>152</sup>

The majority of the water system at SDIA consists of pipes ranging in size from 12- to 16-inches in diameter. The secondary system of water laterals branching off of the primary system consists of 8- to 16-inch water lines providing service to the terminals, aprons, and the adjacent former TDY facilities along Harbor Drive. Water service to the fuel farm and ATCT extends from the water system in Pacific Highway along Washington Street. There are two 16-inch water mains running parallel along North Harbor Drive. The first one is aligned along Harbor Drive from Laurel Street to Nimitz Boulevard. The second one is on the south side portion of Harbor Drive along the entrance of Terminal One to Nimitz Boulevard. Both 16-inch mains merge into a single main before crossing the bridge at the Navy Lagoon.

There are a series of water mains ranging from 12 inches to 16 inches along Nimitz Boulevard: a 16-inch main from Harbor Drive to Rosecrans Street, a 12-inch main from Nimitz Boulevard to the Barnett Avenue intersection, and a 16-inch main from Rosecrans to the Sports Arena Boulevard. The 12-inch main in Barnett Avenue runs southeast from its intersection with Rosecrans Street to connect with an 18-inch water main in Kurtz Street (parallel to Pacific Highway). The 18-inch main in Kurtz Street runs southeast to intersect a 24-inch main southeast of Vine Street. The 24-inch main connects to a 12-inch main in Pacific Highway. This 12-inch main runs southeast along a portion of the General Dynamics site frontage to Laurel Street, where it joins a 16-inch water main in Laurel Street. Both a 12-inch main and a 20-inch main continue southeasterly in Pacific Highway toward Downtown San Diego. The 16-inch main in Laurel Street runs southwest to join the 16-inch main in Harbor Drive. This completes the closed loop water main system on the Airport property.

Surrounding the fuel storage tank farm is a 10-inch fire service water line connected along the north side of the main runway to a 16-inch ductile iron fire service. This 16-inch fire service extends along the access road between the MCRD and the General Dynamics site, where it joins a 12-inch main near the intersection of Washington and Pacific Highway.

#### **5.11.4.4 Sewer**

Wastewater (sewer) service in the SDIA area is provided by the City of San Diego Metropolitan Sewerage System, which is owned by the City of San Diego, and operated by the San Diego Metropolitan Wastewater Department (SDMWWD). The SDMWWD serves 2.2 million people from the City of San Diego and 15 other cities and special wastewater/water districts. The 330 square mile service area generates approximately 180 million gallons of wastewater per day. Within the City, there are approximately 2,894 sewer lines with over 250,000 connections and more than 55,000 manholes. There are 84 municipal pump stations that transport the sewage to the system's main treatment facility in Point Loma. The system's various elements range in age from brand new to over 100 years old.<sup>153</sup>

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<sup>152</sup> City of San Diego. The 2005 City of San Diego Urban Water Management Plan. 2005.

<sup>153</sup> [www.sandiego.gov/mwwd](http://www.sandiego.gov/mwwd)

Sewer service at SDIA is provided by a network of pipes ranging from 6 to 21 inches in diameter. Wastewater from SDIA is conveyed to the Point Loma Treatment Plant via a 15-inch line located just south of Harbor Drive. There also is a 36-inch regional trunk sewer line under Kettner Boulevard, which also transports wastewater north, and then southwesterly to the Point Loma Treatment Plant.

The primary public sewer system lines serving the area in the vicinity of the SDIA are routed along Harbor Drive, Laurel Street, and Pacific Highway. A set of secondary sewer mains then feed these main lines by collecting waste from SDIA and the former General Dynamics site. Additional primary sewer mains run along Harbor Drive, Pacific Highway, Barnett Avenue, and south across the west side of the Airport. These lines converge on the north side of Harbor Drive west of the Airport at Pump Station No. 2. Two primary lines then exit Pump Station No. 2. One of these lines is an 87-inch force main aligned west along Harbor Drive, and the other is an 87-inch force main crossing Harbor Drive and following San Diego Bay to the Point Loma Treatment Plant.

Pacific Highway houses a 51-inch sewer primary line and a secondary 8-inch sewer line. The primary line runs from Sassafras to Laurel Street, continuing southeast along Pacific Highway. This line eventually bends west and connects to the 108-inch primary line located in Harbor Drive. The 8-inch line in Pacific Highway serves the former General Dynamics site between Vine and the extension of Olive Street along the south side of Pacific Highway. At the extension of Olive Street with Pacific Highway, the 8-inch sewer line outlets to the primary line.

The former General Dynamics site (North Area) was formerly serviced by a complete secondary sewer system. It was comprised of an 8-inch sewer line adjoining a 12-inch sewer line; however the current disposition of the 8-inch line is unknown at this time. The 12-inch sewer line runs south under the runway and connects to a 24-inch sewer line parallel to Laurel Street. This 24-inch sewer line crosses the site to the southwest where it connects to the 108-inch primary line at Harbor Drive near the U.S. Coast Guard Station.

Harbor Drive contains a 108-inch primary line that transverses the entire length of the TDY facilities and the airport frontage, connecting to Pump Station No. 2 just west of SDIA. This line is fed by numerous secondary sewer lines ranging from 8 to 21 inches that service the Airport and the TDY property. One of these lines, the 12-inch secondary line just north of the Commuter Terminal, has been abandoned. It has been replaced by a sewer service routed in Winship Lane that connects to the 108-inch primary line in Harbor Drive.

Two additional primary wastewater collection pipelines—the 96- and 114-inch-diameter North Metro Interceptor Sewers 1 and 2, respectively—cross under MCRD, traverse under the west end of the runway, continue under the east side of the former NTC site, and feed into Pump Station No. 2. The 114-inch primary line is protected in a utility tunnel as it traverses the SDIA and the MCRD.

#### **5.11.4.5 Solid Waste**

As described in the County Integrated Waste Management Plan,<sup>154</sup> the system of collection, removal and disposal of solid waste in the jurisdictions of San Diego County has evolved from the direct haul of waste to county or city owned landfills, to a system that integrates waste management alternatives. The current methods include separate collection of refuse and recyclables, and in certain cases removal of recyclables from waste at transfer stations. Collections are made by permitted and franchised haulers, which provide these services, by agreement, for ratepayers. In 2000, San Diego County was diverting 48 percent of its solid waste from landfill disposal through source reduction, recycling, and composting, and was 2% short of the 50% diversion mandated by the IWMA.

There are seven existing landfills in San Diego County, five accept municipal solid waste and two accept only military waste. Of the five landfills that accept municipal solid waste, four are privately owned and

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<sup>154</sup> County of San Diego Department of Public Works, Solid Waste Planning and Recycling. San Diego County Integrated Waste Management Plan, Consisting of: Countywide Summary Plan & Countywide Siting Element, 2005 5-Year Revision, Final. Approved and Adopted by the Board Of Supervisors January 5, 2005. Approved by the California Integrated Waste Management Board September 20-21, 2005.

operated by Allied Waste Industries, Inc. The fifth, Miramar Landfill, is operated by the City of San Diego on land owned by the United States Navy.

Solid waste generated in the project area is generally collected by private contractors and transported to the Miramar Landfill. The Miramar Landfill is located at 5180 Convoy Street and is operated by the City's Environmental Services Department (ESD), Refuse Disposal Division. It has a current remaining capacity of approximately 23 million cubic yards and approximately more than 1.4 million tons of waste is disposed at the landfill every year.<sup>155</sup> Recently, with citywide recycling efforts, the amount of refuse directed to the landfill has been steadily decreasing. The landfill is currently filling its last excavated and lined cell and is expected to operate and accept refuse through the year 2011. However, the landfill is currently in the permitting process for a proposed height increase that would allow the landfill to continue to operate until around the year 2016.<sup>156</sup>

The City of San Diego has an agreement with Allied, Inc., the owner/operators of Sycamore Canyon Landfill in East Elliott, to provide San Diego preferred customer status if the capacity exists to accept waste after Miramar closes. Sycamore Landfill is located on a 520-acre site and is permitted to receive 3,9650 tons of waste for disposal daily. Sycamore Canyon Landfill is fully permitted as a Class III landfill and accepts only routine household and commercial waste. Based on a revised permit for the landfill issued on September 15, 2006, Sycamore Canyon Landfill is anticipated to be at capacity in the year 2031.<sup>157</sup>

### **Landfill Projects Under Consideration**

According to the Integrated Waste Management Plan Countywide Siting Element, if no additional in-county landfill capacity were added, the County would potentially run out of landfill capacity in approximately 2016. In order to meet the waste disposal needs of the County through 2020 and beyond, two landfill projects are currently under consideration: establishment of a new Gregory Canyon Landfill and the expansion of the Sycamore Canyon Landfill. If neither landfill project is approved without using other strategies, the region may need to export up to 55 percent of its waste in 2017. If these two projects are approved, the region may need to export only 7.2 percent of its waste out-of-county to meet a disposal need of 6.1 million tons annually.<sup>158</sup> The two landfill projects currently under consideration are summarized below.

*New Gregory Canyon Landfill.* The new Gregory Canyon Landfill was incorporated into the County of San Diego's General Plan by a voter initiative on November 8, 1994 as a possible landfill site. The landfill would occupy a 1,770-acre site located off of SR-76 near Fallbrook and has a permitted remaining capacity of 33.4 million tons (County of San Diego, 2005). Approximately 0.6 million tons per year would be accepted at the Gregory Canyon Landfill through 2020. The Director of the DEH certified the Final EIR for the landfill project on February 6, 2003. However, a legal challenge to the EIR was filed. The court ruled that the EIR was defective in three respects and on January 20, 2006, issued Peremptory Writ of Mandate to the Director of DEH to rescind his prior action certifying the EIR. The writ requires the DEH to address the deficiencies noted by the court: traffic, water supply, and Proposition C biological mitigation. A Revised Partial EIR (RPEIR) is currently under development for the project.<sup>159</sup>

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<sup>155</sup> County of San Diego Department of Public Works, Solid Waste Planning and Recycling. San Diego County Integrated Waste Management Plan, Consisting of: Countywide Summary Plan & Countywide Siting Element, 2005 5-Year Revision, Final. Approved and Adopted by the Board Of Supervisors January 5, 2005. Approved by the California Integrated Waste Management Board September 20-21, 2005.

<sup>156</sup> Personal communication with Rebecca Lafreniere, City of San Diego, Landfill Inspection and Permitting, September 29, 2006.

<sup>157</sup> Personal communication with Bill Prinz, City of San Diego, Landfill Inspection and Permitting, September 29, 2006.

<sup>158</sup> County of San Diego Department of Public Works, Solid Waste Planning and Recycling. San Diego County Integrated Waste Management Plan, Consisting of: Countywide Summary Plan & Countywide Siting Element, 2005 5-Year Revision, Final. Approved and Adopted by the Board Of Supervisors January 5, 2005. Approved by the California Integrated Waste Management Board September 20-21, 2005.

<sup>159</sup> <http://www.sdcounty.ca.gov/deh/chd/gchome.html>



*Expansion of Sycamore Canyon Landfill.* The second landfill project is the phased expansion of the existing Sycamore Landfill in 2005 and 2011. This project would involve expanding the Sycamore Canyon Landfill to accept 5,000 tons per day in 2005 and boost the daily acceptance rate to 12,000 tons per day in 2011.<sup>160</sup> The expansion of the Sycamore Canyon Landfill is currently undergoing CEQA review.

## **Recycling Strategies**

Approximately 35 percent of the total waste disposed in the Miramar Landfill has historically consisted of construction and demolition debris. On October 10, 2005 the San Diego City Council adopted a Deposit Construction and Demolition Debris Diversion Ordinance (C&D Ordinance). The ordinance mandates a recycling rate of 50 percent of debris for most construction, demolition and remodeling projects. Recycling 50 percent of construction and demolition debris is expected to increase waste diversion in the Miramar Landfill by over six percent and prolong the life of the Miramar Landfill.<sup>161</sup> ~~A proposed demolition recycling facility at Miramar Landfill is currently undergoing CEQA review and is in the permitting process.~~<sup>162</sup>

### **5.11.5 Impact Analysis**

This section considers potential utilities and service system impacts associated with the Proposed Project (Preferred Alternative) and its alternatives.

#### **5.11.5.1 Proposed Project - With or Without Parking Alternative**

For each utility or service system, and as applicable, impacts are assessed with regard to the demand that would be generated by the Proposed Project (Preferred Alternative) and then with regard to the potential for direct impacts to the respective utility (e.g., pipeline relocation requirements).

## **Energy Supply**

### **Electrical Power and Natural Gas**

The Proposed Project (Preferred Alternative) would generate increased demand because it would result in new structures being built that would require electrical service. As discussed above, there are several 12kV lines near SDIA, which provide connections to two different substations. Also as noted above, SDG&E continually assesses projected demand and plans and operates accordingly. Although extension of on-Airport electrical power lines would be required, this would not exceed the capacity of SDG&E to provide service.

The proposed expansion of Terminal 2 West would affect buried utility lines. There are two 12kV feeder cables (in four-inch-diameter PVC concrete, which is encased in conduit ductbank) that pass through the area of the proposed Terminal 2 West buildout. The ductbank would, therefore, need to be moved prior to constructing of the proposed Terminal 2 West expansion. This relocation would be coordinated with SDG&E.

A 10-inch-diameter 400 PSI natural gas line runs north/south near the west edge of Terminal 2. The proposed Terminal 2 West Expansion would require this line to be relocated. The engineering for moving the line would be done by SDG&E upon receipt of the finalized footprint for the Terminal 2 plan. The adjoining streets could have sufficient gas facilities to accommodate most SDIA proposed activities. Utility extensions would be required to serve new facilities.

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<sup>160</sup> County of San Diego Department of Public Works, Solid Waste Planning and Recycling. San Diego County Integrated Waste Management Plan, Consisting of: Countywide Summary Plan & Countywide Siting Element, 2005 5-Year Revision, Final. Approved and Adopted by the Board Of Supervisors January 5, 2005. Approved by the California Integrated Waste Management Board September 20-21, 2005.

<sup>161</sup> <http://www.sandiego.gov/environmental-services/recycling/cdrecycling.shtml>

<sup>162</sup> Personal communication with Bill Prinz, City of San Diego, Landfill Inspection and Permitting, September 29, 2006.

## **Aviation Fuel**

The Proposed Project (Preferred Alternative) would not cause a substantive change in the number of aircraft arriving or departing SDIA or affect those aircrafts' approach, departure or flight routes as described in Section 5.1, *Noise*. Accordingly, the Proposed Project (Preferred Alternative) would not cause aircraft en route to or from SDIA to burn more fuel than under the No Project Alternative. Aircraft taxiing would be affected by the Proposed Project (Preferred Alternative) because more airfield would be available for RON and hold positions and there would be more gates. In general, the provision of new gates would require less movement of aircraft at SDIA than under a No Project Alternative, because airlines would have less (or no) need to "shuffle" their planes in order to deal with a shortage of available gates. Thus, the new gates might nominally reduce the amount of aviation fuel burned while taxiing. If the development of SDIA in accordance with the Proposed Airport Land Use Plan results in new users at currently vacant facilities, this could result in an increase in aviation fuel consumption. For example, the Airport Support designation for the eastern portion of the former TDY property could include aircraft maintenance facilities, and maintenance activities could consume aviation fuel. Although unquantified, this potential increase in fuel use is expected to be negligible in terms of the capacity of the existing fuel supply system and the availability of this fossil fuel. In summary, the Proposed Project (Preferred Alternative) would have elements that might increase or decrease aviation fuel consumption at SDIA, but it would not significantly affect the ability of the existing aviation fuel system to service aircraft at the Airport.

None of the Proposed Airport Implementation Plan projects would directly impact and/or require the relocation of existing aviation fuel lines or related facilities at SDIA.

## **Telecommunications**

Both Pacific Highway and Harbor Drive house fiber optics and copper line for telecommunications. It is anticipated that these ducts would provide ample service for possible expansion of the SDIA as well as existing facilities. Two central office diverse feed locations are located at the south side of the Airport. This diverse feed could accommodate airport expansion and development at the former General Dynamics site.

There is an existing buried telephone line along the west edge of the existing terminal 2. To construct the proposed Terminal 2 West expansion, the telephone line would require to be moved and the services it provides to the existing Terminal 2 maintained. Extension of telecommunication lines would be required from Harbor Drive and Pacific Highway. These relocations/extensions would be coordinated with SBC and would not constitute a significant utility impact.

## **Water Demand/Supply And Systems**

As required by law, the 2005 UWMP identifies projected water supplies required to meet future water demands. The 2005 UWMP assesses demand and supply and concludes that the City has an adequate supply (relying mostly on imported water) to meet municipal, commercial and industrial demands throughout the City's service area through 2020. The 2005 UWMP does not contemplate specific projects, but rather is based on the overall anticipated growth rate within the City's water service area. In its Water Supply Assessment for the Proposed Project, the City of San Diego determined that:

...there is a sufficient water supply to serve existing demand and projected demands of the [San Diego International Airport Master Plan] Project within the Water Department's service area in normal and dry year forecasts. An adequate supply is further confirmed by the *Report on Metropolitan's Water Supplies, A Blueprint for Water Reliability (March 2003 Report)* which states that Metropolitan will have adequate supplies to meet dry-year demand within its service area over the next 20 years.<sup>163</sup>

It is acknowledged that the above-cited Water Supply Assessment and the planning documents upon which it was based were prepared prior to an August 31, 2007 District Court ruling curtailing the pumping

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<sup>163</sup> City of San Diego Water Department. Water Supply Assessment Report. Airport Master Plan – Airport Improvements. Pg. 3. July 2006.

of San Francisco Bay Delta water into the State Water Project. That ruling, intended to protect the Delta smelt pursuant to the requirements of the federal Endangered Species Act, curtails pumping for one year until a new Biological Opinion is in place; however, it is probable that future pumping restrictions may be identified as part of the long-term recovery plan for the Delta smelt.

With regard to the effect of this ruling within San Diego, the SDCWA has indicated that

The [San Diego County] Water Authority purchases its Bay-Delta water supplies from the Metropolitan Water District of Southern California (MWD), which stands to lose a significant portion of its supplies from Northern California next year and possibly longer as a result of the ruling. Officials from MWD are weighing the potential impact of the court action on its projected water supplies for 2008.... The final impact of the court action will not be known until the end of the upcoming 2007-2008 winter season, which will determine how much Sierra snow pack – and water supply – may be available next year, and how much of that supply will be curtailed because of the pumping restrictions.<sup>164</sup>

Metropolitan also acknowledges uncertainty with regard to how this ruling will affect water supplies, noting that actual water supply curtailments for Metropolitan will depend on fish, weather and flow conditions in the Delta and how curtailments are divided between the state and federal projects. In addition, actual impacts also will be contingent upon the formal, signed ruling<sup>165</sup>.

Over the long term, it is anticipated that reductions in Bay-Delta water supplies would be addressed through a combination of conservation and programs to import non-Bay-Delta water to the region. The SDCWA and Metropolitan have both recently invested in diversifying their water portfolios. The SDCWA has invested in maximizing storage, local supply development, the Coachella and All-American canal lining projects, a water transfer from Imperial Irrigation District, conservation, and recycling. By 2011, SDCWA projects that water transfer and canal lining projects will provide nearly 158,000 acre-feet of water and that by 2021, they will provide 277,700 acre-feet annually. The City of Carlsbad, a SDCWA member agency, is working on a seawater desalination plant, which the SDCWA is supporting. The SDCWA also projects that as a result of investments by its member agencies, groundwater production will triple from 14,956 acre-feet in 2006 to 52,300 acre-feet in 2020. Similarly, recycled water usage is expected to triple from 14,828 acre-feet in 2006 to 52,300 acre-feet in 2020. The SDCWA is also exploring other potential short-term water transfers<sup>166</sup>.

Based on the preparation of a Water Supply Assessment by the City of San Diego Water Department that specifically finds that adequate water supply would be available for the Proposed Project, water supply impacts are assessed as less than significant. While it is acknowledged that reductions in water imports from the Bay-Delta could affect water supplies in the San Diego region, the long-term nature of any such reduction is unknown, and regional water suppliers (such as Metropolitan and SDCWA) have been and actively continue to pursue other water sources. Accordingly, the potential long-term effects of a reduction in Bay-Delta water imports to San Diego are considered speculative at this point, and the recent ruling regarding the Delta smelt is not considered sufficient basis negate the findings of the City-prepared Water Supply Assessment.

In terms of the water delivery or conveyance system, the land uses for each project component would result in an increased demand for water, which would require an extension of water conveyance facilities on the SDIA. There is an existing water line along the west edge of the existing Terminal 2. To construct the proposed Terminal 2 Expansion, the water line would be moved and the services it provides to the existing Terminal 2 maintained. New service would be established from the relocated line. In the North Area, the Proposed Project (Preferred Alternative) would require extension of water utilities from Pacific Highway

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<sup>164</sup> San Diego County Water Authority, "News Release: Federal judge orders massive cut in water supply deliveries from the Bay Delta." August 31.

<sup>165</sup> The Metropolitan Water District of Southern California. "News Release: Metropolitan Board to Assess Water Management Options in 2008, After Judge Orders Historic Reductions in Supplies from Delta."

<sup>166</sup> San Diego County Water Authority News Release: Federal judge orders massive cut in water supply deliveries from the Bay Delta. August 31.

Water conservation would be achieved through the incorporation of water conservation devices into project designs, such as the use of low-flush toilets, low-flow faucets, and timers on lawn sprinklers.

None of the Proposed Airport Implementation Plan projects would require the relocation of major water supply lines, nor would future development per the Proposed Airport Land Use Plan (such as at the former TDY property) be expected to require such relocations. This assessment is based on the locations of the existing water lines in relationship to the Proposed Airport Implementation Plan project sites and other areas likely to be developed under the Proposed Airport Land Use Plan.

## **Sewer**

Development of SDIA in accordance with the Proposed Airport Land Use Plan, including the Proposed Airport Implementation Plan projects, would result in additional wastewater-generating facilities (e.g., sinks, toilets). Because the number of passengers traveling through SDIA would not be substantively affected by the Proposed Project (Preferred Alternative), the addition of new facilities would not cause a substantive increase in wastewater generation at SDIA. The development of the North Area and/or the reuse of the former TDY property could, however, generate new uses at SDIA with an associated (but unquantified) increase in wastewater generation. This increase in wastewater generation would not be significant, however, because of the wastewater treatment capacity available to SDIA and because of the Airport's location near large SDMWWD wastewater collection pipelines and Pump Station No. 2. As a result, little-to-no off-Airport infrastructure would be required to convey increased wastewater flows from SDIA to the SDMWWD sewer system and the Point Loma Treatment Plant. Capacity impacts to SDMWWD wastewater treatment facilities would be offset through payment of applicable sewer capacity fees, to the extent required by law.

Development in accordance with the Proposed Airport Land Use Plan could require the relocation of minor on-airport sewer lines, and it also would require measures to address the 96- and 114-inch-diameter interceptor sewers located on the former NTC parcel. These two sewer lines pass under the area proposed for additional aircraft parking apron to the west of the proposed T2 West expansion. As constructed, the sewer pipelines may not be able to accommodate the weight of large jet aircraft taxing or parking on the surface, directly above the pipelines. Accordingly, as part of project implementation, roughly 1,500 linear feet of these pipelines would be protected through concrete armoring or the use of other underground protective structures. (Relocation of these extremely large, gravity sewer lines would not be practical.) A section of the proposed T2 West expansion would also span these two pipelines. Terminal design and construction would accommodate the pipelines by providing structural support and/or by avoiding increased loads on the pipelines where they would pass under the terminal. The specific measures that would be used to protect the pipelines would be developed in coordination with the SDMWWD.

Based on the available treatment capacity, the proximity of SDIA to major wastewater collection pipelines and the measures that would be used to avoid damage to the large sewer pipelines under the former NTC parcel, the Proposed Project (Preferred Alternative) would have a less-than-significant impact on sewers.

## **Solid Waste Disposal**

Operation of the Proposed Project (Preferred Alternative) is anticipated to result in an increase of solid waste generated at SDIA. This increase would be negligible in comparison to the available disposal capacity described above. Construction and demolition activities would result in a substantial temporary increase of solid waste generation at SDIA. However, recycling, salvage, reuse, and disposal options would be identified in a Solid Waste Management Plan in advance of all activities in order to minimize the amount of debris directed to local landfills. This plan would include the identification of locations for sorting of materials for reuse and recycling. At least 50 percent of all waste generated during construction and demolition activities would be recycled in accordance with the C&D Ordinance.

It is expected that project-generated solid waste would be transported for disposal at the ~~City-owned and operated~~ (under a lease agreement with the Marine Corp Air Station Miramar) Miramar Landfill because it is the closest landfill to the project site. The Proposed Project (Preferred Alternative) is not anticipated to result in changes to the operation of the Miramar Landfill entrance facility because the increase in solid waste transported to the landfill from the project would be small in comparison to the capacity of the three landfill entrance lanes. Because measures would be incorporated to recycle at least 50 percent of all

waste generated during construction and demolition activities, in accordance with the C&D Ordinance, the Proposed Project would have a less-than-significant impact on the solid waste disposal system.

Any hazardous waste resulting from construction, demolition, and operations at SDIA, including roughly 25,000 cubic yards of potentially contaminated soil at the former NTC landfill site and any other contaminated soil identified at the project location, would not be disposed at Miramar Landfill and would instead be disposed at a landfill approved to receive hazardous waste, as required by local and state regulations. A *Clean Closure Plan* for the complete removal of wastes from this site as well as environmental review documentation are currently under development by SDCRAA (see Section 5.15, *Hazards and Hazardous Materials*).

### **5.11.5.2 East Terminal Alternative - With and Without Parking Structure**

#### **Airport Land Use Plan**

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the proposed Airport Land Use Plan see Chapter Four, section 4.2.1 *Airport Land use Plan* for a detailed explanation. Therefore, the East Terminal Alternative includes the Proposed Airport Land Use Plan.

From a capacity standpoint, the East Terminal Alternative would result in impacts similar to those of the Proposed Project (Preferred Alternative) that is, less than significant. This assessment reflects that the overall Airport Land Use Plan would be the same and the fact that this alternative would generate demand for additional utility services that could be accommodated by the respective service providers.

#### **Airport Implementation Plan Alternative**

The potential for direct impacts to utility lines would be different due to the different locations of this alternative's Implementation Plan projects. Under this alternative, there would be less aircraft parking apron on the former NTC parcel west of T2 West, requiring that only roughly 1,000 feet of the large sewer pipelines be given protection/structural support to accommodate the aircraft parked/taxiing above them.

The new unit terminal would require the relocation of an on-airport eight-inch-diameter water pipeline and potentially the existing aviation fuel dispensing facility. The relocation of these on-airport utilities that serve only SDIA would be accommodated with only minor disruptions in service and would not represent a significant utility impact.

Other utility impacts would be similar to those described for the Proposed Project (Preferred Alternative) and are less than significant for the same reasons as discussed in Section 5.11.5.1, *Impact Analysis Proposed Project (Preferred Alternative)*.

### **5.11.5.3 No Project Alternative**

With the No Project Alternative, existing utilities would not be extended and/or relocated; therefore, there would be no disruption to any of the services on or off site.

### **5.11.6 Construction Impacts**

Construction of the alternative would require water for dust suppression, and would generate small amounts of construction waste and construction debris. In addition, minimal wastewater is expected to be generated during construction. These utility and service needs would be within the capacity of the respective utility and service systems and would not cause a significant impact.

As discussed above, construction of Proposed Project (Preferred Alternative) and the East Terminal Alternative facilities could also require that existing utility infrastructure be relocated. Prior to severing existing utility lines, replacement lines would be brought into service. Accordingly, disruptions in service would be avoided or limited to the short amount of time necessary to make new connections. All utility relocation would be conducted in close coordination with (or by) the respective service providers. Accordingly, construction impacts on utilities and service systems would not be significant.

### **5.11.7 Cumulative Impacts**

The Proposed Project would result in an incremental increase in demand for public utilities and services. This incremental increase in demand would not contribute to a significant cumulative utilities and service

systems impact because the increase would occur in an area with sufficient infrastructure to support it and because the respective utility providers have planned for and are able to accommodate growth in this area.

### **5.11.8 Mitigation Measures/Other Improvements**

Implementation of the Proposed Project would include coordination with the affected utility providers/service system operators with regard to extending services and/or relocating utility lines. Similarly, SDCRAA would pay necessary engineering or facility expansion fees to affected service providers (e.g., SDG&E reengineering fees). These measures are considered to be elements of the Proposed Project and not mitigation. Because the Proposed Project would not generate significant impacts, no utility or service system mitigation is required.

### **5.11.9 Level of Significance after Mitigation Measures**

Utility and service systems impacts due to the Proposed Project are less than significant; therefore, mitigation is not required and the levels of significance are not reduced by mitigation measures.

## 5.12 Light Emissions

This section describes the general approach and methodology, regulatory framework, significance criteria, environmental setting, as well as considers potential light emissions impacts associated with the Proposed Project (Preferred Alternative) and its alternatives. Additionally, this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts. Comments in response to the NOP specific to potential light emission impacts were received from the following agencies and individuals:

- Oral comments during scoping meetings expressed concern about increased light impacts during construction and with expanded facilities.

All written and oral comments during the NOP process are provided in [Appendix A](#). Comments received specific to light emission impacts are addressed within this section of the EIR. No comments specific to light emissions were received in response to the previously circulated Draft EIR.

### 5.12.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

The purpose of this section is to describe the existing light environment and analyze potential project impacts from the Proposed Project. Analysis in this section is based upon site reconnaissance, aerial photographs, and preliminary schematic designs.

The potential light emissions and impacts of the proposed build alternatives were determined by evaluating the current facility site plan and observing current airport light sources (i.e., parking lots, roadways, terminals, cargo areas), surveying and documenting lighting conditions and effects on sensitive receptors, and assessing future lighting effects based on the proposed site plans. Given the absence of precise development plans at this point in the planning process, conclusions regarding impacts take into account offsetting effects associated with existing airport commitments to the community and adherence to current airport lighting guidelines.

The changes to the Proposed Project and alternatives that are included in this ~~recirculated Draft~~ Final EIR do not affect the results of the light emissions impact analysis presented in the previously circulated Draft EIR. Specifically, the changes to the Proposed Project and alternatives do not include any new facilities that would affect any sensitive receptors considered in this impact category. Extending the horizon year to 2030 would not change the findings of the previously circulated analysis of impacts as improvements associated with the alternatives for implementation do not include improvements beyond 2015.

### 5.12.2 Regulatory Framework

There are no specific federal standards that define significance for light emission impacts. Section 47(e)(17) of FAA Order 5050.4A, *Airport Environmental Handbook*, requires evaluation of the extent to which lighting associated with an airport action would create an annoyance among people in the vicinity of the installation.

The *San Diego Municipal Code*, Chapter 14, Article 2, General Development Regulations, Division 7: Off-Site Development Impact Regulations, provides standards with the intent of minimizing negative impacts from development to surrounding property. All development that produces glare or lighting is subject to this regulation. Glare regulation include a maximum of 50 percent of the exterior of a building may be comprised of reflective material that has a light reflectivity factor of greater than 30 percent. Reflective building materials shall not be permitted where the City Manager determines that their use would contribute to potential traffic hazards, diminish quality of a riparian habitat, or reduce enjoyment of public open space. Outdoor lighting regulation requires that lighting fixtures shall be directed or shaded so that light does not fall onto surrounding properties or create glare hazards within public rights of way. All outdoor lighting shall be turned off between 11:00 p.m. and 6:00 a.m. except for, in the case of SDIA, outdoor lighting used for security purposes. On properties with are adjacent to or contain sensitive biological resources, such as nesting Least terns, any exterior lighting would be limited to low-level lights and shields to minimize the amount of light entering any identified sensitive biological resources area.

### **5.12.3 Significance Criteria**

Introduction of light can be a nuisance to adjacent areas, diminish views of the night sky, and if uncontrolled, can disturb wildlife in natural habitat areas. Perceived glare is a potentially objectionable sensation observed by a person as they look directly in the light source. Light spill is the presence of unwanted light on adjacent properties. Impacts from light emissions would be considered significant if:

- Components of the project would be inconsistent with applicable plans and policies such as set forth by the San Diego Municipal Code or other regulation.
- The project would adversely impact adjacent community, transportation, biological resource, or scientific facilities.
- Installation of lighting within an airport hazard area that would adversely affect pilots and would impair their ability to operate aircraft.

### **5.12.4 Environmental Setting**

Primary sources of light at SDIA include light emanating from buildings (i.e., terminals and cargo, flight kitchen and other airport facilities) and light from exterior sources (i.e., airfield lighting, parking, security lighting, street lighting, wayfinding and landscaping lighting). Current SDIA facilities within the Proposed Project site produce light common in highly urbanized areas, and specifically provides for the safety and security of people, property and the air transportation network located at SDIA. Certain airport facilities are visible from the airport periphery and emit light intensities that are noticeably above average ambient light conditions, but existing lighting does not interfere with the nighttime visibility of control tower operators and incoming pilots, or the existing biological resources or sensitive receptors.

### **5.12.5 Impact Analysis**

This section considers potential light emissions impacts associated with the Proposed Project (Preferred Alternative) and its alternatives.

#### **5.12.5.1 Proposed Project - With and Without Parking Structure**

##### **Proposed Airport Land Use Plan**

The lighting scheme associated with the Proposed Airport Land Use Plan would not change illumination levels or glare unless a specific project was developed. At that time, any airfield, terminal, ground transportation, or airport support project would be required to adhere to federal, state and local regulations. Subsequent project analysis would provide for mitigation of significant impacts.

##### **Proposed Airport Implementation Plan**

Light and glare associated with the SDIA project site is presently generated by buildings and exterior sources to protect and secure people, property and the air transportation system. Implementation of the Proposed Airport Implementation Plan would increase the size of terminal facilities, aircraft parking, apron, aircraft taxilane, surface and structured parking and vehicle circulation, as well as reconfigure airfield, roadways, and parking facilities. Increased building and exterior sources would result in greater



amounts of light emanating from interior and exterior sources. Inclusion of the following improvements as project components would reduce impacts to a less than significant level.

- The light fixtures specified for the Project design must comply with the standard of the Illuminating Engineering Society for full cutoff capability.
- Exterior lighting shall be designed and located as to avoid intrusive effect on runway operations, so as not to result in an air safety hazard. Lighting fixtures shall use shielding, if necessary, to prevent spill lighting on adjacent off-site uses.

#### **5.12.5.2 East Terminal Alternative - With and Without Parking Structure**

##### **Airport Land Use Plan**

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the proposed Airport Land Use Plan see Chapter Four, section 4.2.1 *Airport Land use Plan* for a detailed explanation. Therefore, the East Terminal Alternative includes the Proposed Airport Land Use Plan.

The lighting scheme associated with the Proposed Airport Land Use Plan would not change illumination levels or glare unless a specific project was developed. At that time, any airfield, terminal, ground transportation, or airport support project would be required to adhere to federal, state and local regulations. As under the Proposed Project (Preferred Alternative), the East Terminal Alternative would include subsequent project analysis which would provide for mitigation of significant impacts as part the project.

##### **Airport Implementation Plan Alternative**

Light and glare associated with the SDIA project site is presently generated by buildings and exterior sources to protect and secure people, property and the air transportation system. Implementation of the East Terminal Alternative would increase the size of terminal facilities, aircraft parking, apron, aircraft taxiway, surface and structured parking and vehicle circulation, as well as reconfigure airfield, roadways and parking facilities. Increased building and exterior sources would result in greater amounts of light emanating from interior and exterior sources. Inclusion of the following improvements as project components would reduce impacts to a less than significant level.

- The light fixtures specified for the Project design must comply with the standard of the Illuminating Engineering Society for full cutoff capability.
- Exterior lighting shall be designed and located as to avoid intrusive effect on runway operations, so as not to result in an air safety hazard. Lighting fixtures shall use shielding, if necessary, to prevent spill lighting on adjacent off-site uses.

#### **5.12.5.3 No Project Alternative**

The No Project Alternative would not result in any modifications to SDIA facilities; therefore, there would be no light emissions impacts associated with this alternative.

#### **5.12.6 Construction Impacts**

Construction activities could create light or glare impacts during both daylight and non-daylight hours if safety and security lights were not positioned correctly. With the following improvement as a project component during construction those impacts would be reduced to a less than significant level.

- During construction activities, the construction contractor shall ensure that temporary construction-related lighting shall be arranged so that direct rays would not shine on or produce glare for adjacent street traffic, or community, biological or scientific resources.

#### **5.12.7 Cumulative Impacts**

The Proposed Project would result in construction activities and expansion of airport facilities. All potentially significant effects from light emissions would be reduced to a level considered less than significant with implementation of the mitigation measures identified. For a cumulative light emissions impact to occur, the proposed elements of adjacent uses need to be seen together or in proximity to each other. The project site is already developed in an urbanized area and is highly illuminated. The

Proposed Project in combination with other related projects in the immediate vicinity would not significant alter the perception of the area as an urban environment. The Proposed Project in combination with other known projects would not substantially change the developed environment nor would they degrade existing lighting or substantially increase glare. Therefore, there would be no significant cumulative impact.

### **5.12.8 Mitigation Measures/Other Improvements**

Because the project improvements are provided to ameliorate the effects of light and glare from additional illumination at SDIA resulting from the Proposed Project and from construction, there would be a less than significant impact due to light emissions. No mitigation measures are required.

### **5.12.9 Level of Significance after Mitigation**

Potential impacts due to the Proposed Project are less than significant for light emissions; therefore, mitigation measures would not be applied for this impact category. The level of significance specific to light emission impacts remains less than significant.

## 5.13 Aesthetics

This section describes the general approach and methodology, regulatory framework, significance criteria, environmental setting, and potential aesthetic impacts associated with the Proposed Project (Preferred Alternative) and its alternatives. Additionally, this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts. Lastly, there is a section addressing the level of significance after mitigation measures.

Comments received on the previous Draft EIR included:

- Marine Corps Recruitment Depot (MCRD) - Henderson Avenue should be considered visually for adverse impact to the MCRD Historic District. – The Historic District is not significant for its view but for its significance as an historic military base and for its architectural style. Additionally, the 10-gate extension will not affect the view of the Henderson Avenue corridor.
- San Diego Unified Port District - No mitigation measures were stated for impact of construction phase aesthetics.

Comments received on this previous Draft EIR are also addressed in this section.

### 5.13.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

The purpose of this section is to describe the existing aesthetic conditions of the project area and analyze the potential project impacts on its aesthetic character and the aesthetic character of the surrounding areas as a result of the implementation of the Proposed Project (Preferred Alternative) and its alternatives. The approach to analyzing potential impacts to aesthetic resources for each alternative includes: first, a review of the regulatory documents that govern the project area in regards to aesthetic resources; second, a review of the significance criteria that was used to evaluate potential impacts; third, a description of the environmental setting, both on-site, as well as the surrounding area; fourth a description of all three alternatives in terms of potential aesthetic impacts and the relevant plans and policies that regulate land use, both on-site and in the surrounding areas; fifth, potential construction impacts that could occur during construction of the alternatives; and lastly a discussion of cumulative potential impacts, mitigation measures, and the level of significance of the potential impacts after mitigation measures for each alternative.

This analysis is based on a review of the regulatory documents governing the project area and the areas adjacent to it. Additionally, the analysis included: 1) site reconnaissance of the project area and the surrounding communities, 2) review of aerial photographs, 3) identification and documentation of key views, and 4) review of the preliminary designs and project descriptions of the alternatives provided by SDCRAA. More specifically, in regards to views, consideration and assessment was given to defining public scenic resources, identifying major viewer groups, and selecting key views.

## **5.13.2 Regulatory Framework**

The following are existing design policies from community plans that affect the project area. These policies form the basis for determining how aesthetics would impact the project.

### **5.13.2.1 Related Community Plans and Planning Areas**

There are several planning areas located near or adjacent to SDIA that set policies within their own areas specific to aesthetic views of the Bay and the downtown area. Policies in the community plans that relate to aesthetics are discussed below in two categories: urban design guidelines and view corridor preservation. The discussion of urban design guidelines focuses on the policies that communities have in place that relate to the design of development near SDIA. The discussion of view corridor preservation concentrates on policies that identify view corridors and measures to preserve them.

### **5.13.2.2 Port Master Plan (PMP)**

The Port Master Plan (PMP) is the land use document governing the land and water development within the Port District's jurisdiction. However, in January 2003, the San Diego Regional Airport Authority Act (SDCRAA Act) became effective. The SDCRAA Act grants to SDCRAA all land use and design related authority and jurisdiction over lands within the original SDIA leasehold, along with any other lands that might be acquired adjacent to the existing airport property and necessary to operate the airport. Although the Airport property, including the more recently acquired General Dynamics and Teledyne Ryan parcels, are still depicted in the certified Port Master Plan (PMP), the PMP and its associated design guidelines are no longer applicable to property now under the planning and design auspices of SDCRAA.

The Unified Port of San Diego's Port Master Plan (February 2004) still guides the land use designation and policies for lands adjacent to or adjoining SDIA. The Port Master Plan establishes precise plans for each of the planning districts located within the project area. The planning district most affected by the Proposed Project is Planning District 2 (Harbor Island/Lindbergh Field). This planning district identifies two scenic vistas that include:

- Views from Spanish Landing out toward the Bay, and
- Views from West and East Harbor Island to the Bay.

Both of these designated view areas are generally located to the south of SDIA and would not be affected by the Proposed Project improvements.

Section II Planning Goals of the Port Master Plan identifies general goals that are to be attained by implementing the policies set forth in the Precise Plans. These goals apply to the entire district and address the design and treatment of new development in the area under the Districts jurisdiction. The most relevant goals that address aesthetic issues include the following:

- "Goal VIII: The Port District will enhance and maintain the bay and tidelands as an attractive physical and biological entity."
- "Views should be enhanced through view corridors, the preservation of panoramas, accentuation of vistas, and shielding of the incongruous and inconsistent."
- "Establish guidelines and standards facilitating the retention and development of an aesthetically pleasing tideland environment free of noxious odors, excessive noise, and hazards to the health and welfare of the people of California."
- "Goal IX: The Port District will insure physical access to the bay except as necessary to provide for the safety and security, or to avoid interference with waterfront activities."
- "Provide 'windows to the water' at frequent and convenient locations around the entire periphery of the bay with public right-of-way, automobile parking and other appropriate facilities." It should be noted that these planning goals of the Port Master Plan apply only to the lands under the District's jurisdiction and do not apply to SDCRAA or SDIA.

### **5.13.2.3 California Coastal Act**

Under the provisions of the Coastal Act, development projects located in the coastal zone must receive an additional level of review for potential impacts to coastal resources. Prior to the formation of SDCRAA, SDIA was governed by and considered part of the Port of San Diego and was included in the Port's certified PMP. Since January 1, 2003, however, the Port's PMP no longer serves as the coastal planning document for SDIA. Section 170060(c) of the SDCRAA Act states:

The Authority shall be responsible for making any necessary application to the California Coastal Commission pursuant to the California Coastal Act of 1976 [Division 20 (commencing with Section 3000) of the Public Resources Code] and to other agencies in accordance with other applicable laws in effect on the effective date of the Act that added this section for improvements upon coastal lands under the control of the Authority through a lease.

Since the SDCRAA inception, all coastal permitting has been initiated by SDCRAA staff directly with the Coastal Commission. Since SDIA is no longer part of the Port, the standard of review for all development projects is Chapter 3 of the Act. The policies of the PMP and Chapter 8 of the Act are no longer applicable.

The California Coastal Act-Section 30251 Scenic and Visual Quality is the section that is applicable for reviewing the visual aesthetics of the Proposed Project. Section 30251 states:

- The scenic and visual qualities of the coastal areas should be protected as a public resource.
- Proposed projects in the Coastal Zone shall be sited and designed to protect views to and along the ocean, scenic coastal areas, to minimize the alteration of natural landforms, to be visually in character of the surrounding area and, wherever possible to restore and enhance the visual quality in visually degraded areas.

### **5.13.2.4 City of San Diego Community Plans and Policies**

This section describes the following City of San Diego Plans related to the aesthetic and visual resources of the SDIA project site and the surrounding areas.

#### **San Diego Downtown Community Plan**

This section describes plans and policies related to aesthetic and visual resources for the southeastern area surrounding SDIA. More specifically, the review of policies about aesthetics includes such elements as neighborhood character, landform, and light and glare.

The San Diego Downtown Community Plan (SDDCP) and its two redevelopment plans (Horton Plaza Redevelopment Plan and the Centre City Redevelopment Plan) govern a project area that is immediately southeast of SDIA. The San Diego Downtown Community Planning Area is bounded by Laurel Street and Interstate 5 at its north side, Interstate 5 at its east side, and San Diego Bay at its south and west side. The SDDCP project area is 1,445 acres in size and is divided into eight urban, high-density, mixed-use districts. The district that is most relevant to this project is the Little Italy District, which is immediately adjacent to southeast corner of SDIA. It is a medium density residential and commercial neighborhood with mostly low- to mid-rise buildings.

The aesthetic resources objectives for the SDDCP Area are best expressed by the following statement from the SDDCP: *"Downtown has a magnificent setting, occupying a strategic location between the sparkling San Diego Bay and the green expanse of Balboa Park. The Community Plan capitalizes on these unique assets, creating an outdoor-focused, Mediterranean ambiance that emphasizes vitality and street life, and gathering places that reflect San Diego's natural setting."* More specifically, policies regarding aesthetic resources for the San Diego Downtown area bordering SDIA include:

- *"Restrict building heights as follows: throughout downtown, consistent with policies and regulations for airport operations established by the Federal Aviation Administration (FAA), the Airport Land Use Compatibility Plan (ALUCP), and the Airport Approach Overlay Zone."*
- *"Work with the Port and the County to ensure a diversity of land uses along Harbor Drive."*
- *"Foster physical and visual linkages between downtown and surrounding neighborhoods,*

*working together with adjacent communities.”*

- *“Use airport-related development constraints as opportunities for unique land use and development patterns.”*

Regarding visual resources, the SDDCP defines a general policy goal of *“protect[ing] public views of the San Diego Bay by establishing view corridors with appropriate development standards, and captur[ing] new public views where possible as waterfront sites are redeveloped.”* The Community Plan also has more specific policies directed towards view preservation that include the following:

- *“Protect public views of the water, and re-establish water views, in the corridors shown in Figure 5-1.” This includes the views from Laurel Street towards the San Diego Bay.”*
- *“Work with the Port to maintain open corridor to the water – that is, free of structures and landscaping that would restrict the views. Encourage the Port to create view corridors extending southward along Pacific Highway and Kettner Boulevard at such time that redevelopment of the Seaport Village site is undertaken.”*
- *Preserve and create views by: Requiring all buildings to comply with view corridor setbacks along existing streets and future view corridors to maintain visual and physical access to the Bay.”*

## **Midway/Pacific Highway Corridor Community Plan**

### **Urban Design Guidelines**

The Midway/Pacific Highway Corridor Community Planning Area contains areas that are within the State Coastal Zone as defined by the California Coastal Act of 1976. As such, as part of the Midway/Pacific Highway Corridor Community Plan development process, it was required that a Local Coastal Program be developed and approved by the California Coastal Commission. Under the Local Coastal Program for the Midway/Pacific Highway Corridor Community Planning Area, the area within the Coastal Zone is subject to special coastal guidelines. Those that apply to this project include:

- *“Assure continuity and compatibility between the City and the Port District through the coordination of planning efforts.”*
- *“Improve the quality of architectural styles and site design in and around the Coastal Zone Area.”*
- *“Preserve and emphasize public views west and south to the waterfront.”*
- *“Prevent the expansion or development of unsightly land use activities in the coastal strip.”*

### **View Corridor Preservation**

In regards to visual resources, the Midway/Pacific Highway Corridor Community Plan states the following policies:

- *“Commercial redevelopment projects located along Pacific Highway should not obstruct scenic vistas and/or should provide and maintain view corridors from all public right-of-ways.”*
- *“Provide coastal and bayward view corridors through the community.”*
- *“Application of the CPIOZ [Community Plan Implementation Overlay Zone] in conjunction with the [Commercial] C-1 zone will ensure maintenance of view corridors to the waterfront, incorporation of pedestrian-oriented features and landscaping of visible parking structures, while promoting airport-related uses.”*

## **Peninsula Community Plan**

### **Urban Design Guidelines**

In regards to urban design and aesthetics, the Peninsula Community Plan contains policies that comply with the existing land uses and built conditions at the SDIA Project site.

### **View Corridor Preservation**

In regards to visual resources, the Peninsula Community Plan describes major views in the area as those overlooking “the San Diego Bay, Downtown, Coronado, Mission Bay and Pacific Beach,” and identifies “Preserv[ation] and enhance[ment] of significant views of the [San Diego] bay and ocean” as an objective. The Plan goes on to state, “Structures should be designed to protect views of Peninsula’s natural scenic amenities, especially the ocean shoreline, and San Diego Bay.”

### **Uptown Community Plan (February 2, 1988)**

#### **Urban Design Guidelines**

In regards to urban design and aesthetics, the Uptown Community Plan contains policies that comply with the existing land uses and built conditions at the SDIA Project site.

#### **View Corridor Preservation**

In regard to visual resources, the Uptown Community Plan provides for the protection of public views of open space and water areas, particularly along the “western slopes” of the community.

### **North Bay Redevelopment Plan**

A majority of the Midway/Pacific Highway community lies within the North Bay Redevelopment Project Area. A key development objective proposed in the 1999 amendment to the redevelopment plan is to create a Bay-to-Bay canal that would link the San Diego Bay to Mission Bay via the San Diego River. The north end of the San Diego Bay “Navy Boat Channel” is the point from San Diego Bay where the canal project enters from San Diego Bay. This channel is the western boundary of the SDIA project area.

The goal for the Bay-to-Bay amendment is for the development of the canal is to catalyze new development along its length and in the surrounding area. In April of 2004, San Diego City Council issued a directive to the Planning Department to remove the Bay-to-Bay concept from the Midway/Pacific Highway Corridor Community Plan and other related documents (i.e., North Bay Redevelopment Plan). The City of San Diego and the North Bay Redevelopment Project Area Committee commenced preparation of a Community Plan Amendment reflecting this directive. Currently, however, the City of San Diego is not moving forward on the amendment to remove the Bay-to-Bay canal and the 1999 amendment that includes the plan for the Bay-to-Bay canal remains existing policy.

Although unlikely, the City of San Diego could move forward with proposed development of the canal area and its associated open space and building development projects. If this were the case new projects proposed within the airport site affect aesthetic and visual resources for the proposed Bay-to-Bay canal plan.

The planned Bay-to-Bay link is located north of the SDIA Project Area, if implemented, would not be affected by the Proposed Project, with the exception of Navy Boat Channel portion of the canal at the canal’s south entrance from San Diego Bay, which is currently controlled by the U.S. MCRD and the Federal Government.

### **NTC Precise Plan and Redevelopment Plan Area**

#### **Urban Design Guidelines**

In regards to aesthetics and urban design guidelines, The NTC Precise Plan complies with the existing land uses and built conditions at the SDIA project site. The primary consideration outlined in the plan is the preservation of views to the waterfront and skyline by regulating building design in order to establish or maintain public view corridors. This would be achieved by, ...”appropriate zoning, setbacks and design standards, including clustering of tall buildings, slender buildings, proper building orientation and floor area restriction and heights limits where necessary.”

#### **View Corridor Preservation**

The NTC Precise Plan identifies several view corridors to scenic resources. Specifically these views are to the east towards the San Diego Bay “Navy Boat Channel.” However, the views are intended to

terminate on the east side of the channel with proposed screening. The screening is intended to block views to the development east of the channel.

In addition, off-site view corridors are identified in the Peninsula Community overlooking NTC. These view corridors are noted in the Peninsula Community Plan section previously described.

### **5.13.3 Significance Criteria**

For the purposes of this analysis, potential significant aesthetics impacts were evaluated based on the CEQA State Guidelines and the City of San Diego Environmental Analysis Section Significant Determination Guidelines for public policies regarding aesthetic/ urban design guidelines and visual resources, and the SANDAG “Impacts of Unconstrained Air Transportation Capacity on the San Diego Regional Economy” Report were considered. Drawn from these documents is the the evaluation criteria for the Proposed Project in regards to potential aesthetic and visual impacts and are as follows:

- 1) *“Substantially alter aesthetics in the area by:*
  - *Altering the natural or naturalized landform*
  - *Conflicting with adopted urban design and view preservation policies within the District<sup>167</sup>*
  - *Conflicting with related community plans*
  - *Altering lighting so as to create substantial glare at sensitive receptors”*
- 2) *“Severely contrast with the character of the surrounding neighborhood”*
- 3) *“Substantially block public views from designated open space, roads, or parks to visual landmarks or scenic vistas (Pacific Ocean, San Diego Bay, mountains or waterways) for a majority of viewers”*

In evaluating the potential impact of the Proposed Project on the quality of aesthetic and visual resources, the analysis process begins with an evaluation of the potential for the SDIA Project to impact each of the key views presented in Section 5.13.4. The degree of potential impact at each key view is assessed by assigning low-, medium-, or high-value weighting factors to the three aesthetic impact categories: views, neighborhood character, and aesthetics. This approach is similar to the system used for many years by the Federal Highway Administration.<sup>168</sup> The characteristics of each weighting factor are described below.

- *“Low (1): Minor adverse change in views to scenic or visual resources, neighborhood character, or aesthetics resulting in a minor effect on the visual resource that would not generally be noted by the viewer because of the minor aspect of the change or distance from the site. Visual impacts would be considered less than significant and mitigation measures are not required.”*
- *“Medium (2): Moderate adverse change in the views to scenic or visual resources, neighborhood character, or aesthetics resulting in an effect that some viewers would consider to be significant while others might not. Mitigation measures might be necessary to improve the visual quality of the area and create a setting where the visual impact would be considered less than significant.”*
- *“High (3): Major adverse change to the views to scenic or visual resources, neighborhood character, or aesthetics resulting in an effect that the majority of the viewers would consider to be significant. Mitigation measures are needed to alleviate the problem. Without mitigation, visual impact is considered significant.”*

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<sup>167</sup> San Diego Association of Governments (SANDAG). Impacts of Unconstrained Air Transportation Capacity on the San Diego Regional Economy. 2001.

<sup>168</sup> Federal Highway Administration (FHWA). *Aesthetics and Visual Quality Guidance Information*. August 18, 1986.



## **5.13.4 Environmental Setting**

SDIA is located in a fully urbanized area that is surrounded by existing commercial uses, industrial uses, military uses, a park, and San Diego Bay. This section describes both the environmental setting on-site at SDIA and in the surrounding area.

Onsite, the SDIA project area is relatively flat and sits within the landforms of the Point Loma peninsula on the west and the hillsides of Uptown and Middle Town on the east. The average elevation of SDIA is between 10 to 15 feet above mean sea level (msl). The topography at the site slopes gradually to the south and west towards San Diego Bay. Most of the structures associated with SDIA are low-scale development (approximately 50 feet at the highest point). SDIA has its primary aviation terminals on the south side of the facility facing North Harbor Drive. The principal uses between these terminals and North Harbor Drive are the landside parking facilities, transit plazas, and associated access routes. The runway, taxiways, and other airside support facilities are north of the terminals and are not easily viewed from North Harbor Drive. All of these facilities can be seen from the elevated Pacific Highway on-ramp to I-5 and from I-5 itself.

Existing visual resources within the SDIA project area consist of natural and human-made features. Natural visual features include San Diego Bay, the Pacific Ocean and distant views of the Point Loma peninsula. The human-made features include the downtown skyline and various historic structures located on the east side of U.S. MCRD San Diego.

Immediately surrounding the SDIA project area there are residential neighborhoods to the west, military uses to the north, tourist-recreational uses to the south, and industrial and airport-related uses to the east. What follows is a more detailed description of the environmental setting on each side of the SDIA project area.

### **5.13.4.1 Environmental Setting: West of the SDIA Project Area**

Immediately adjacent to the west side of the SDIA project area is Liberty Station (formerly the Naval Training Center). It is currently being redeveloped with multiple uses including residential, commercial, office, open space, and tourist-oriented commercial development. A majority of this development has been completed.

Nearby to the SDIA project area there are east-facing residences in the Peninsula Community Plan Area that have distant views to San Diego Bay, the downtown skyline, the Pacific Ocean, and SDIA.

### **5.13.4.2 Environmental Setting: North of the SDIA Project Area**

U.S. Marine Corps Recruit Depot (MCRD) San Diego is located to the north of the project area and includes historic buildings that are used to house and train Marine recruits. Outdoor-use areas on MCRD San Diego adjacent to the SDIA project area include the outdoor combat skills training areas. There are views to the downtown skyline from Belleau Avenue looking south and to the water from the north end of the San Diego Bay Navy Boat Channel.

### **5.13.4.3 Environmental Setting: East of the SDIA Project Area**

Immediately east of the SDIA project area is a panhandle shaped area within the Midway Community Plan Area that is bounded by I-5 on its west side. This area includes a variety of commercial uses such as light industrial businesses, office uses, gas stations, and long- and short-term parking. Additionally, the area includes the Port of San Diego Headquarters and the Palm Avenue Trolley Station.

Nearby to the SDIA Project area and East of the Midway Community Plan area is I-5, a major transportation corridor that leads south to the border of Mexico and north to Los Angeles. Currently, the motorist has views from the southbound lane of I-5, which is elevated above the SDIA project area, and include San Diego Bay, the Pacific Ocean, Point Loma peninsula, and the downtown skyline. These views are partially obstructed by freeway railings, and by buildings and private fences near the freeway. East of the I-5 are the residential communities within the City of San Diego's Uptown Planning area. These communities are located on hillsides rising up from the I-5 and they have distant views of the San

Diego Bay, the Pacific Ocean, SDIA, and the Point Loma peninsula. These communities also have nighttime views of the same area including views of the SDIA runway lights.

#### **5.13.4.4 Environmental Setting: South of the SDIA Project Area**

Immediately to the south of the project area, there is North Harbor Drive. Along the south side of North Harbor Drive is the City of San Diego Metropolitan Sewer Pump Station #2, the US Coast Guard Station, a rental car center, the Harbor Police Station, and the Spanish Landing Park.

Nearby the SDIA Project Area are hotels, restaurants, and marinas that are located on Harbor Island, an island that is south of North Harbor Drive.

All of these facilities have uninterrupted views of San Diego Bay and of downtown San Diego. West of the SDIA Project Site and NTC/Liberty Station are the residential communities located in the Peninsula CPA.

#### **5.13.5 Impact Analysis**

The aesthetics impact analysis described below evaluates the potential aesthetic and visual changes, as well as potentially significant environmental impacts associated with the implementation of the Proposed Project (Preferred Alternative) and its alternatives.

This aesthetic impact analysis reviews Aesthetics and includes a review of: Neighborhood Character, Landform, and Light and Glare. Also considered are Related Community Plans and Redevelopment Plans areas.

In regards to visual resources, several significant long and short-range views were considered for the sake of this analysis. These key view locations represent typical viewpoints of the proposed terminals and taxiway improvements. A total of 17 key view locations were identified. These viewpoints are located at residential neighborhoods, recreational facilities, and public roadways, including I-5 and Pacific Highway. **Figure 5.13-1** identifies the location of these key views. Each of these views is depicted, along with a brief description in **Figures 5.13-2, 5.13-3, 5.13-4, 5.13-5, 5.13-6, 5.13-7, 5.13-8, 5.13-9, 5.13-10, 5.13-11, 5.13-12, 5.13-13, 5.13-14, 5.13-15, 5.13-16, 5.13-17, 5.13-18, 5.13-19, 5.13-20, 5.13-21, 5.13-22, 5.13-23, and 5.13-24.**

The following steps were conducted for this visual resources assessment.

- 1) Define the existing conditions of the visual environment of the Proposed Project area.
- 2) Identify major viewer groups that would view the project area.
- 3) Select key views for the visual assessment based on representative viewer groups, public viewing locations, and public policies.
- 4) Document the type and degree of visual changes to the key views based on the significance criteria.
- 5) Select significant key views requiring further analysis and representation.
- 6) Assess visual impacts and determine level of significance.
- 7) Assess visual impacts during the course of construction.
- 8) Generate design recommendations to mitigate significant visual impacts

The weighting factor system used to rate the significance of the potential impacts to key views, previously explained in Section 5.1.3 Significance Criteria, is explained again here:

- *“Low (1): Minor adverse change in views to scenic or visual resources, neighborhood character, or aesthetics resulting in a minor effect on the visual resource that would not generally be noted by the viewer because of the minor aspect of the change or distance from the site. Visual impacts would be considered less than significant and mitigation measures are not required.”*
- *“Medium (2): Moderate adverse change in the views to scenic or visual resources, neighborhood*

character, or aesthetics resulting in an effect that some viewers would consider to be significant while others might not. Mitigation measures might be necessary to improve the visual quality of the area and create a setting where the visual impact would be considered less than significant.”

- “High (3): Major adverse change to the views to scenic or visual resources, neighborhood character, or aesthetics resulting in an effect that the majority of the viewers would consider to be significant. Mitigation measures are needed to alleviate the problem. Without mitigation, visual impact is considered significant.”

**Table 5.13-1** below lists the key views presented in Section 5.13.4 and the weighting valuation for each using the system above.

Table 5.13-1  
**Visual Impact Assessment Summary**

Key Views	Potential Visual Change				Weighting Valuation	Significant Impact
	Views	Neighborhood Character	Aesthetics	Total		
1	2	1	1	4	Medium	No
2	1	1	1	4	Medium	No
3	1	1	1	3	Low	No
4	1	1	1	3	Low	No
5	1	1	1	3	Low	No
6	1	1	1	3	Low	No
7	2	1	1	4	Medium	No
8	2	1	1	4	Medium	No
9	1	1	1	3	Low	No
10	1	1	1	3	Low	No
11	1	1	1	3	Low	No
12	2	1	1	4	Medium	No
13	2	1	1	4	Medium	No
14	1	1	1	3	Low	No
15	1	1	1	3	Low	No
16	1	1	1	3	Low	No
17	1	1	1	3	Low	No
18	1	1	1	3	Low	No
19	1	1	1	3	Low	No
20	1	2	1	4	Medium	No
21	1	1	1	3	Low	No
22	1	1	1	3	Low	No
23	1	1	1	2	Low	No

Low: 1 to 3 = "Low Impact" and not considered significant  
Medium: 4 to 6 = "Medium Impact" and not considered significant  
High: 7 to 9 = "High Impact" and considered significant

### 5.13.5.1 Proposed Project

The Proposed Project includes two components, The Proposed Airport Land Use Plan and the Proposed Airport Implementation Plan. The potential impacts for surrounding areas associated with these two components are discussed in the following section and include: 1) an analysis of aesthetic resources

such as neighborhood character, land form and light and glare, 2) a visual resources analysis and 3) a review of compliance with adjacent land use plans.

## **Proposed Airport Land Use Plan**

This section includes an analysis of the possible impacts to aesthetic and visual resources for the areas surrounding the proposed airport land use plan, as well as how this proposed project conforms to adjacent land use plans and policies.

### **Surrounding Area: Aesthetic Resources – Aesthetic Impact Analysis**

In regards to aesthetic resources, the impact of the Proposed Airport Land Use Plan on aesthetics is based on the degree to which it maintains: the character of the neighborhood, existing landforms, and minimizes lighting and glare. Each of these issues is discussed below.

#### **Neighborhood Character**

The current character of the SDIA Project Area is represented by runways, taxiways, aircraft parking aprons, an airport traffic control tower, passenger terminals, and public parking. The Proposed Airport Land Use Plan would not conflict with the current character of this area, because proposed improvements are consistent with the existing character of the SDIA Project Area. Therefore, it would not have a significant impact on the character of the neighborhood.

More specifically, improvements include:

- Expansion of Terminal 2 West with 10 new jet gates;
- Construction of new aircraft parking and replacement of Remain-Over-Night (RON) aircraft parking apron;
- Construction of new apron and aircraft taxilane;
- Construction of new surface parking and vehicle circulation;
- Relocation and reconfiguration of SAN Park Pacific Highway;
- Construction of a new access road to North Area facilities from Sassafras Street/Pacific Highway intersection;
- Construction of new general Aviation facilities including access, terminal/hangars, and apron;
- Demolition of the existing general aviation facility; and
- Reconstruction of Taxiway C and construction of new apron hold pads and new Taxiway east of Taxiway D.

Proposed buildings are planned to be similar to existing buildings in terms of height, mass, scale, materials, and architectural style.

#### **Landform**

Impacts related to the landform would be less than significant due to the fact that the existing site is relatively level. A grade change is proposed for the access from North Harbor Drive at McCain Drive. It is anticipated that grading at the site would be minimal and would have no significant impacts on the aesthetics of this area. However, as more site-specific projects are proposed, further analysis may be needed to address potential aesthetic impacts.

#### **Light and Glare**

Additional lighting is anticipated to be a part of the Proposed Airport Land Use Plan and could increase the overall amount of nighttime lighting for adjacent project areas depending on how close they are to the SDIA Project Area. Currently, residences in the surrounding project area that have nighttime views of the downtown skyline and San Diego Bay, are impacted by light and glare from the current uses at the SDIA

Project Area, and existing uses in the surrounding urbanized area, and vehicle lights associated with the I-5.

The addition to Terminal 2 West of 10 new gates would increase overall nighttime lighting. Proposed lighting for the Terminal 2 West expansion would be similar to the existing terminal and tarmac lighting near Terminal 2. It is anticipated that these light fixtures would be shielded to direct the light downward to the apron area. This would minimize light impacts from addition of new lighting, and would not have a significant impact in terms of glare on the neighboring residential communities. Therefore, the Proposed Project (Preferred Alternative) would not result in significant negative impacts related to lighting and glare. Further discussion on lighting is provided in Section 5.12 *Light Emissions*.

### **Surrounding Areas: Visual Resources – Aesthetic Impact Analysis**

In regards to visual resources, 17 key views were identified in Section 5.13.4 and then evaluated using the process described in Section 5.13.3, and in terms of the visual impact that the Proposed Airport Land Use Plan would have on these key views. The results of the evaluation are presented in [Table 5-13.1](#). As this table illustrates, fifteen (15) views were found to have a low rating, while seven (7) views were determined to have a rating of Medium. The following is a description and analysis of the key views most affected by the Proposed Airport Land Use Plan. These include key views 1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 14-17, 20 and 23. See the Airport Implementation Plan Visual Analysis section for a review of the key views and potential impacts to the surrounding area.

#### **Key Views 1, 2, and 23 – Liberty Station Open Space Park:**

These view sites are located at the Liberty Open Space Park that flanks the San Diego Bay “Navy Boat Channel” looking east. These three (3) views would be of one of the areas closest to the improvements associated with the Airport Implementation Plan and, therefore, would potentially be the most affected. Key Views 1, 2, and 23 are taken from the proposed public park located at Liberty Station (a mixed-use community of residential, office and light industrial uses). The view looks directly towards improvements to Terminal 2 West. Views to scenic resources of the San Diego Bay and the downtown skyline from this location are to the east / southeast and are currently not visible, except for the view of the downtown skyline to the north of Terminal 2W. As illustrated in the photograph, the existing views of these scenic resources would not be impacted by the proposed because future improvements of the Proposed Airport Implementation Plan (With a Parking Structure) are proposed to be similar in height and scale to the existing facilities and the view resource to the downtown skyline would be minimally effected by the proposed project

It was initially determined that these views may have an impact value of “Medium.” However, after further review and study, it was determined that no significant impacts to the key views occur at this location.

#### **Key View 3 and 4: Former NTC Site/(currently used for Paid Surface Parking)**

These view sites are located immediately adjacent to the west side of the SDIA project area and are currently used as paid surface parking lots and are looking east.

The expansion of Terminal 2 West and the addition of a five (5) story parking structure would have minimal impact on the visual resources from this site because views from this site looking southeast toward the San Diego Bay and the downtown skyline are already obscured by the SDIA access ramps, the terminal structures, the U.S. Coast Guard Station buildings, hotels, and other commercial areas on Harbor Island. The Terminal 2W expansion would extend towards the viewer at this site, and would have approximately the same height as the existing structures of the SDIA Project Area. The existing views from this site to the east are also of distant residential communities in the Uptown Community Plan Area. Views from this location to San Diego Bay, Point Loma Peninsula, Pacific Ocean, or downtown skyline would be minimally impaired due to the similar height of the proposed structures.

It was initially determined that these views may have an impact value of “Low.” After further review and study, it was confirmed that the visual impact is low and no significant impacts to the key views occur at this location.

### Key View 5 and 6: North Harbor Drive and Spanish Landing Park

These view sites are located along the west end of North Harbor Drive and the Spanish Landing Park and are looking north towards the SDIA Project Area. There are no existing views of scenic resources from this point along North Harbor Drive towards the SDIA project area. Therefore, the expansion of Terminal 2W and a five (5) story parking structure would not have significant impacts. Views of the Bay and the downtown skyline from this location are to the east and south of these view sites. It was initially determined that these views may have an impact value of “Low.” After further review and study it was confirmed that the visual impact is low and no significant impacts to the key views occur at this location.

### Key View 7 and 8: Terminal 2 Interior Public Spaces

These view sites are located within the public spaces of Terminal 2 W and 2 E looking south towards San Diego Bay. Several large windows located in Terminal 2 face south and could allow views to these local scenic resources. However, the views from these locations are completely obstructed by parked cars, landscaping, airport signage, building supports and parking lot lighting. Although small “slivers” of blue water from the San Diego Bay can be seen at certain locations of Terminal 2, it could not be considered of sufficient size to be considered a significant view. The development of a proposed 5-storey parking structure is not considered a significant impact since visual resources are already obstructed by existing buildings, circulation ramps, and trees.

It was initially determined that this view location may have an impact value of “Medium.” However, after further review and study it was determined that no significant impacts to the key views occur at this location.

### Key View 12: Pacific Highway Southbound I-5 On-ramp

Key View 12 is located on the Pacific Highway raised southbound on-ramp to Interstate 5 just north of Washington Street. From this elevated vantage point, the viewer is looking south/southwest towards the North Area of the SDIA Proposed Project Area and also towards the downtown skyline, with a small portion of the San Diego Bay visible. Per the Proposed Airport Land Use Plan this north eastern part of the SDIA Project Area is planned to include: a new access road, new parking areas, a new aviation facility with terminals, hangers and apron, and improvements to Taxiway C and D. New terminal heights are not anticipated at this time to be significantly higher than existing on-site structures such as Jimsair. Based on the proposed land uses and the proposed heights of the planned structures, the project would not have a significant visual impact because his view is elevated above the SDIA Project Area and would not be blocked. However, as more site-specific projects are proposed, further analysis may be needed to address potential visual impacts from this location.

### Key View 13: Washington Street and Pacific Highway

The location of Key View 13 is at the intersection of Washington Street and Pacific Highway. The primary visual resources at this location include partial views of the downtown skyline. The airport is in the peripheral view of the motorist, and the perimeter fencing blocks the area from view. Based on the current Proposed Airport Land Use Plan there are no significant visual impacts associated with the project at this key view location because the proposed structures would not block this view. However, as more site-specific projects are proposed, (including transportation/parking structures if surface parking is not sufficient to handle future demand) further analysis may be needed to address potential visual impacts.

### Key Views 14 through 17: Uptown Community

These key views are taken from the Uptown CPA to the north and east of the SDIA Proposed Project area. Scenic resources are significant from these communities and include views of the ocean, San Diego Bay, Point Loma Peninsula, and the downtown skyline. Residents directly east of I-5 already have obstructed views of these scenic resources due to existing buildings and the freeway. The majority of residents further east and at a higher elevation would be able to view over any proposed structures and see their respective scenic resources. Distant views to these resources should be maintained. Based on the current Proposed Airport Land Use Plan, there are no significant visual impacts associated with the project at these key view locations. However, as more site specific projects are propose, (including transportation/parking structures if surface parking is not sufficient to handle future demand) further analysis may be needed to address potential visual impacts.

### Key View 20: Sheraton Hotel & Marina West

Key View 20 is located on north side of Harbor Island at the north side of the Sheraton Hotel and Marina West. From this vantage point, the viewer is looking north/north west towards the south side of the Airport Implementation Plan. Here, the site is intended for ground transportation use and a 5-story parking structure in front of the Terminal 2 East building. The view of the five (5) story parking structure identified in the Proposed Airport Implementation Plan would be compatible with typical airport support facility and would not be considered out of visual character with the surrounding area.

It was initially determined that this view location may have an impact value of "Medium." However, after further review and study it was determined that no significant impacts to the key views occur at this location since views towards the SDIA project area are mostly blocked by mature trees located at the Spanish Landing Park.

### Views from U.S. MCRD

The south boundary of U.S. MCRD San Diego is adjacent to the north side (formerly the General Dynamic site) of the SDIA Proposed Project Area. Elevated portions of any future specific project resulting from the Proposed Airport Land Use Plan may be visible from U.S. MCRD San Diego and might obstruct view resources looking to the southeast to San Diego Bay and the downtown skyline. Since these views is not public view they are not identified here as being a significant impact resulting from the Airport Land Use Plan.

## **Surrounding Area's Land Use Plans and Policies – Aesthetic Impact Analysis**

### Port Master Plan

The Port Master Plan outlines general goals addressing the design of new development.<sup>169</sup> The goals relevant to this project deal with view preservation. The above section about visual resources and key views demonstrates that the Proposed Airport Land Use Plan would not have a significant impact on existing views of the Bay or the downtown area. Therefore, the Proposed Airport Land Use Plan would not have a significant impact on the adjacent land governed by the Port Master Plan.

### MCRD Base Exterior Architecture Plan

In regard to aesthetic and visual resources, the MCRD BEAP only addresses visual resources. More specifically, Visual and noise buffers between MCRD San Diego and SDIA are proposed at MCRD's BEAP if new projects at MCRD are constructed. MCRD San Diego has identified the view down Belleau Avenue, looking towards the downtown skyline, as an asset. This view has the possibility of being blocked by future site-specific projects. However, due to the fact that this is a view from a single location that generally is not accessible to the public, it was not rated for visual impact. Under the significance criteria adopted in this report, only public views are analyzed for visual impact.

### City of San Diego Community Plans and Redevelopment Plans

The Proposed Project (Preferred Alternative) was analyzed in relation to the criteria established earlier in this chapter as described in Section 5.13.3 for aesthetic and visual resources. In this section the Significance Criteria for each of the potentially impacted Community Plan Areas and Redevelopment Areas is reviewed for possible impacts to aesthetic and visual resources.

In regards to aesthetic impacts such as neighborhood character, land form, light and glare, the Airport Land Use Plan would comply with the City of San Diego Community Plans, Redevelopment Plans, and General Plans and policies because the proposed land uses are the same as those that currently exist at the SDIA Proposed Project site. The Proposed Airport Land Use Plan would not result in significant impacts related to these planning areas.

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<sup>169</sup> San Diego Unified Port District (District). *San Diego Unified Port District, Port Master Plan*. Revised July 2005. <<http://www.portofsandiego.org/>>

In regards to visual resources, the key views from the community plan areas and redevelopment plan areas, could potentially be impacted by the Proposed Airport Project Plan due to proposed development of land uses on the east and west sides of the SDIA Project Area. After analysis of the views from these planning areas, it was determined that the Airport Land Use Plan would not result in significant impairment to the visual resources identified in these plans.

At the east side of the SDIA project area, the surrounding project area is governed by the Midway Community Plan and its related Redevelopment Plan, the North Bay Redevelopment Plan. The Proposed Project (Preferred Alternative) adjacent to this plan area would transform largely vacant land on the north side of Runway 9-27, the former General Dynamic site, and the former Teledyne Ryan into a modern airport facility while minimizing negative view impacts. More specifically, the improvements in the northeastern part of the SDIA Project Area would include a new access road, new parking areas, a new aviation facility with terminals, hangers and apron, and improvements to Taxiway C and D. The new airport facilities are planned to include structures that aesthetically and visually would be similar in height, mass, scale, and architectural style to the existing facilities.

In regards to the west side of the SDIA Project Area, there would be no significant impacts to key views resulting from the Proposed Airport Land Use Plan.

In summary, the key views are compatible with the view corridor descriptions within the San Diego Downtown Community Plan, the Uptown Community Plan, Midway Pacific Highway Corridor Community Plan, the Peninsula Community Plan and their related Redevelopment Plan Areas.

### **Proposed Airport Implementation Plan (With Parking Structure)**

This section includes an analysis of the possible impacts to aesthetic and visual resources for the areas surrounding the Proposed Airport Implementation Plan (Preferred Plan With a Parking Structure), as well as how this proposed project conforms to adjacent land use plans and policies.

### **Surrounding Area: Aesthetic Resources – Aesthetic Impact Analysis**

In regards to aesthetic resources, the impact of the Proposed Airport Land Use Plan on aesthetics is based on the degree to which it maintains: the character of the neighborhood, existing landforms, and minimizes light and glare. Each of these issues is discussed below.

#### **Neighborhood Character**

The current character of the SDIA Project Area Lindbergh Field Planning Sub-area is represented by runways, taxiways, aircraft parking aprons, an airport traffic control tower, passenger terminals, and public parking.

The Proposed Airport Implementation Plan (Preferred Plan With Parking Structure), would not conflict with the current character of the SDIA Project area, because proposed improvements such as the addition and expansion of existing airport landside or airside improvements are planned to be consistent with the existing design of current development on site.

Additionally, the Proposed Airport Implementation Plan (Preferred Plan With Parking Structure), would not have a significant impact on the character of the surrounding neighborhoods. The features of the Proposed Airport Implementation Plan (Preferred Plan With Parking Structure), do not encroach onto adjacent communities and would not significantly impact the character of the neighborhoods that surround the project area the airport buildings and operations would have the same height, scale, and similar architectural style of the existing facilities.

Therefore, the Proposed Airport Implementation Plan (Preferred Plan With Parking Structure), would not have a significant impact on neighborhood character.

#### **Landform**

Impacts related to the landform changes resulting from the Proposed Airport Implementation Plan (Preferred Plan With Parking Structure), would be less than significant due to the fact that the existing site is relatively level. A grade change is proposed for the access from North Harbor Drive at McCain



Drive. It is anticipated that grading at the site would be minimal and would have no significant impacts on the aesthetics of this area. However, as more site specific projects are proposed, further analysis may be needed to address potential aesthetic impacts.

### Light and Glare

Additional lighting is anticipated to be a part of the Proposed Airport Land Use Plan and could increase the overall amount of nighttime lighting for all adjacent project areas depending on how close they are to the SDIA Project Area. Currently, some residences in the surrounding project area that have nighttime views of the downtown skyline and San Diego Bay, are impacted by bright light and glare from the current uses at the SDIA Project Area, existing uses in the surrounding urbanized area, and vehicle lights associated with the Interstate-5.

The addition to Terminal 2 West of 10 new gates would increase overall nighttime lighting. Proposed lighting for the Terminal 2 West expansion would be similar to the existing terminal and tarmac lighting near Terminal 2. It is anticipated that these light fixtures would be shielded to direct the light downward to the apron area. This would minimize light impacts from addition of new lighting, and would not have a significant impact in terms of glare on the neighboring residential communities. Therefore, the Proposed Project (Preferred Alternative) would not result in significant negative impacts related to lighting and glare. Further discussion on lighting is provided in Section 5.12 *Light Emissions*.

### Surrounding Area - Visual Resources

Using the evaluation process described in Section 5.1.5, twenty-three (23) key views were identified in Section 5.13.4 *Environmental Setting* for evaluation in terms of the visual impact based on the features described in the Proposed Project (Preferred Alternative). The results of the evaluation are presented in [Table 5-85-5.13-1](#). As this table illustrates, most views were found to have a Low rating, while seven (7) views were determined to have a rating of Medium and none of the views received a High rating. The following is a detailed description and analysis of the key views most affected by the Proposed Airport Implementation Plan which are Key Views 1, 2, and 23: Liberty Station Open Space Park, Key Views 3 and 4: Former NTC Site (currently used for paid surface parking), Key Views 5 and 6: North Harbor Drive and Spanish Landing, Key Views 7 and 8: Terminal 2 Interior Public Spaces, Key View 12: Pacific Highway Southbound I-5 On Ramp, and Key View 20: Sheraton Hotel & Marina West.

#### Key Views, 1, 2 and 23 – Liberty Station Open Space Park:

These view sites are located at the Liberty Open Space Park that flanks the San Diego Bay “Navy Boat Channel” looking east. These three (3) views would be of one of the areas closest to the improvements associated with the Airport Implementation Plan and, therefore, would potentially be the most affected. Key Views 1, 2, and 23 are taken from the proposed public park located at Liberty Station (a mixed-use community of residential, office and light industrial uses). The view looks directly towards improvements to Terminal 2 West. Views to scenic resources of the San Diego Bay and the downtown skyline from this location are to the east / southeast and are currently not visible, except for the view of the downtown skyline to the north of Terminal 2W. As illustrated in the photograph, the existing views of these scenic resources would not be impacted by the proposed because future improvements of the Proposed Airport Implementation Plan (With a Parking Structure) are proposed to be similar in height and scale to the existing facilities and the view resource to the downtown skyline would be minimally effected by the proposed project.

It was initially determined that these views may have an impact value of “Medium.” However, after further review and study, it was determined that no significant impacts to the key views occur at this location.

#### Key View 3 and 4: Former NTC Site/(currently used for Paid Surface Parking)

These view sites are located immediately adjacent to the west side of the SDIA project area and are currently used as paid surface parking lots and are looking east.

The expansion of Terminal 2 West and the addition of a five (5) story parking structure would have minimal impact on the visual resources from this site because views from this site looking southeast toward the San Diego Bay and the downtown skyline are already obscured by the SDIA access ramps, the terminal structures, the U.S. Coast Guard Station buildings, hotels, and other commercial areas on

Harbor Island. The Terminal 2W expansion would extend towards the viewer at this site, and would have approximately the same height as the existing structures of the SDIA Project Area. The existing views from this site to the east are also of distant residential communities in the Uptown Community Plan Area. Views from this location to San Diego Bay, Point Loma Peninsula, Pacific Ocean, or downtown skyline would be minimally impaired due to the similar height of the proposed structure to those that already exist and would be blocked by existing structures as mentioned previously.

It was initially determined that these views may have an impact value of “Low.” After further review and study, it was confirmed that the visual impact is low and no significant impacts to the key views occur at this location.

#### *Key View 5 and 6: North Harbor Drive and Spanish Landing Park*

These view sites are located along the west end of North Harbor Drive and the Spanish Landing Park and are looking north towards the SDIA Project Area. There are no existing views of scenic resources from this point along North Harbor Drive towards the SDIA project area. Therefore, the expansion of Terminal 2W and a five (5) story parking structure would not have significant impacts.

It was initially determine that these views may have an impact value of “Low.” After further review and study it was confirmed that the visual impact is low and no significant impacts to the key views occur at this location.

#### *Key View 7 and 8: Terminal 2 Interior Public Spaces*

These view sites are located within the public spaces of Terminal 2 W and 2 E looking south towards San Diego Bay. Several large windows located in Terminal 2 face south and could allow views to these local scenic resources. However, the views from these locations are completely obstructed by parked cars, landscaping, airport signage, building supports and parking lot lighting. Although small “slivers” of blue water from the San Diego Bay can be seen at certain locations of Terminal 2, it could not be considered of sufficient size to be considered a significant view. The development of a proposed 5-story parking structure is not considered a significant impact since visual resources are already obstructed by existing buildings, circulation ramps, and trees.

It was initially determined that this view location may have an impact value of “Medium. However, after further review and study it was determined that no significant impacts to the key views occur at this location.

#### *Key View 12: Pacific Highway Southbound I-5 On-ramp*

Key View 12 is located on the Pacific Highway raised southbound on-ramp to Interstate 5 just north of Washington Street. From this elevated vantage point, the viewer is looking south/southwest towards the North Area of the SDIA Project Area and also towards the downtown skyline, with a small portion of the San Diego Bay visible. Per the Proposed Airport Land Use Plan this north eastern part of the SDIA Project Area is planned to include: a new access road, new parking areas, a new aviation facility with terminals, hangars and apron, and improvements to Taxiway C and D. New terminal heights are not anticipated at this time to be significantly higher than existing on-site structures such as Jimsair. Based on the proposed land uses and the proposed heights of the planned structures, the project would not have a significant visual impact because his view is elevated above the SDIA Project Area and would not be blocked. However, as more site-specific projects are proposed, further analysis may be needed to address potential visual impacts from this location.

#### *Key View 20: Sheraton Hotel & Marina West*

Key View 20 is located on north side of Harbor Island at the north side of the Sheraton Hotel and Marina West. From this vantage point, the viewer is looking north/north west towards the south side of the Airport Implementation Plan. Here, the site is intended for ground transportation use and a 5-story parking structure in front of the Terminal 2 East building. The view of the five (5) story parking structure identified in the Proposed Airport Implementation Plan would be compatible with typical airport support facility and would not be considered out of visual character with the surrounding area.

It was initially determined that this view location may have an impact value of “Medium.” However, after further review and study it was determined that no significant impacts to the key views occur at this location since views towards the SDIA Project Area are mostly blocked by mature trees located at the Spanish Landing Park.

In summary, there would be no significant visual impact on the 10 key views identified and studied for the Proposed Airport Implementation Plan.

### **Surrounding Area’s Land Use Plans and Policies – Aesthetic Impact Analysis**

The Proposed Airport Implementation Plan (Preferred Plan With Parking Structure) was analyzed with respect to each of the aesthetic / urban design and view corridor guidelines described in Section 5.13.3, *Significance Criteria* for each of the potentially impacted CPAs. This section reviews the Proposed Airport Implementation Plan (Preferred Plan With Parking Structure), for compliance with plans and policies governing the surrounding area as described earlier in Section 5.13.2 Regulatory Frame and include: 1) the Port Master Plan, 2) The MCRD Base Exterior Architecture Plan and 3) the City of San Diego’s Community and Redevelopment Plans.

#### **Port Master Plan**

The Port Master Plan outlines general goals addressing the design of new development.<sup>170</sup> The goals relevant to this project deal with view preservation. The above section about visual resources and key view demonstrates that the Proposed Airport Land Use Plan would not have a significant impact on existing views of the Bay or the downtown area from Port Tidelands. Therefore, the Proposed Airport Land Use Plan would not have a significant impact on the adjacent land governed by the Port Master Plan.

While the Port Master Plan is not responsible for the urban design guidelines for SDIA, it does outline general goals that address the design of new development for property within its own jurisdiction. The primary goals of the PMP concern the preservation of views, access and use of the bay, and maintaining the bay and tidelands as an attractive physical and biological entity. The Proposed Airport Implementation Plan (Preferred Plan With Parking Structure) would not prohibit any of these goals from being implemented. As such, the Airport Implementation Plan would not have a significant impact on adjacent lands governed by the Port Master Plan.

#### **California Coastal Act**

The primary goals of Section 30251 of the California Coastal Act is to preserve scenic resources along the coastal areas, minimize land form alteration and to be visually compatible with the character with the character of the surrounding area. As discussed earlier in this section, there would be no significant impacts to key views, no significant land form alteration and the Proposed Airport Implementation Plan is in keeping with the existing character of the area which is currently an airport facility. Therefore, the Proposed Airport Implementation Plan would not result in significant impacts related to these guidelines.

#### **MCRD Base Exterior Architecture Plan**

In regard to aesthetic and visual resources, the MCRD BEAP only addresses visual resources. More specifically, Visual and noise buffers between MCRD San Diego and SDIA are proposed at MCRD’s BEAP if new projects at MCRD are constructed. MCRD San Diego has identified the view down Belleau Avenue, looking towards the downtown skyline, as an asset. This view has the possibility of being blocked by future site-specific projects of the Proposed Project. However, due to the fact that this is a view from a single location that generally is not accessible to the public, it was not rated for visual impact. Under the significance criteria adopted in this report, only public views are analyzed for visual impact.

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<sup>170</sup> San Diego Unified Port District (District). *San Diego Unified Port District, Port Master Plan*. Revised July 2005. <<http://www.portofsandiego.org/>>

## City of San Diego Community Plans and Redevelopment Plans

The Proposed Project (Preferred Plan With Parking Structure), was analyzed in relation to the criteria established earlier in this chapter as described in Section 5.13.3 for aesthetic and visual resources. In this section the Significance Criteria for each of the potentially impacted Community Plan Areas and Redevelopment Areas is analyzed for possible impacts to aesthetic and visual resources.

In regards to aesthetic impacts such as neighborhood character, land form, light and glare, the Proposed Project is similar to the existing development at the SDIA Project Area and land uses are consistent with the Proposed Airport Land Use Plan. Therefore, the Proposed Project would be in conformance with these plans and would not result in significant impacts related to these plans and policies about aesthetic resources.

The key views are compatible with the view corridor descriptions within the San Diego Downtown Community Plan, the Uptown Community Plan, Midway Pacific Highway Corridor Community Plan, the Peninsula Community Plan and their related Redevelopment Plan Areas. These visual resources as defined in these plans are not significantly impacted.

### **Proposed Airport Implementation Plan – (Preferred Plan without Parking Structure)**

Since this Plan proposes less development than the Proposed Airport Implementation Plan (With Parking Structure), it would have less impacts and would not be of significant impact in terms of aesthetic and visual resources. The analysis that precedes this section for the Proposed Airport Implementation, Component #2 – (With Parking Structure) substantially conforms to the Proposed Airport Implementation Plan (Without Parking Structure).

#### **5.13.5.2 East Terminal Alternative**

The East Terminal Alternative also includes two components, an Airport Land Use Plan, an Airport Implementation Plan Alternative. For this alternative there are two Airport Implementation Plan Alternatives: the East Terminal Alternative (with Parking Structure) and the East Terminal Alternative, Airport Implementation Plan (without Parking Structure). Within each section impacts to aesthetic and visual resources are reviewed as well as conformance with the plans and policies of surrounding areas.

### **On-Site - Aesthetic Resources**

#### **Airport Land Use Plan**

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the proposed Airport Land Use Plan. See Chapter Four, section 4.2.1, *Airport Land Use Plan*, for a detailed explanation. Therefore, the East Terminal Alternative includes by reference the Proposed Airport Land Use Plan. As under the Proposed Project (Preferred Alternative), the East Terminal Alternative would have a less than a significant impact on aesthetics and visual resources.

#### **Airport Implementation Plan Alternative (With a Parking Structure)**

This section includes an analysis of the possible impacts to aesthetic and visual resources for the areas surrounding the East Terminal Alternative, as well as how this proposed project conforms to adjacent land use plans and policies.

### **Surrounding Area - Aesthetic Resources**

In regards to aesthetic resources, the impact of the East Terminal Alternative on aesthetics is based on the degree to which it maintains: the character of the neighborhood, existing landforms, minimizes lighting and glare. Each of these issues is discussed below.

#### **Neighborhood Character**

The existing character of the SDIA Project Area is defined by the aesthetic qualities of the existing terminals, runways, taxiways, parking areas, and other related airport facilities. Therefore, the addition

and expansion of existing airport landside or airside improvements would not have a significant impact on the character of the area.

In addition, the features of the Airport Implementation Plan Alternative would not significantly impact the character of the neighborhoods that surround the project area. The surrounding communities currently have views of the airport buildings and operations. The expansion would have the same height, scale, and similar architectural style of the existing facilities, and would not create improvements that are out of character with current land uses, or views.

Therefore, the Airport Implementation Plan Alternative would not have a significant impact on neighborhood character.

### **Landform**

Impacts related to the landform changes resulting from the East Terminal Alternative would be less than significant due to the fact that the existing site is relatively level. Changes to the landform in the area between Terminal 1 and the existing Commuter Terminal would not be significant. Therefore, impacts due to the East Terminal Alternative would not be significant relative to existing or future conditions proposed at the SDIA Project Area. It is anticipated that grading at the site would be minimal and would have no significant impacts on the aesthetics of this area. However, as more site specific projects are proposed, further analysis may be needed to address potential aesthetic impacts.

### **Light and Glare**

Additional lighting is anticipated to be a part of the Proposed Airport Land Use Plan and could increase the overall amount of nighttime lighting for all adjacent project areas depending on how close they are to the SDIA Project Area. Currently, some residences in the surrounding project area that have nighttime views of the downtown skyline and San Diego Bay, are impacted by bright light and glare from the current uses at the SDIA Project Area, existing uses in the surrounding urbanized area, and vehicle lights associated with the Interstate-5.

The addition to Terminal 1 of 10 new gates would increase overall nighttime lighting. Proposed lighting for the Terminal 1 expansion would be similar to the existing terminal and tarmac lighting near Terminal 1. It is anticipated that these light fixtures would be shielded to direct the light downward to the apron area. This would minimize light impacts from addition of new lighting and would not have a significant impact in terms of glare on the neighboring residential communities. Therefore, the East Terminal Alternative would not result in significant negative impacts related to lighting and glare. Further discussion on lighting is provided in Section 5.12, *Light Emissions*.

### **Surrounding Area - Visual Resources**

Using the evaluation process described in Section 5.1.5, *Aesthetic and Visual Resources Impact Analysis*, the twenty-two (22) key views were identified in Section 5.13.4 *Environmental Setting* for evaluation in terms of the visual impact based on the features described in the East Terminal Alternative (With a Parking Structure). The results of the evaluation are presented in [Table 5-85-5.13-1](#). As this table illustrates, most views were found to have a Low rating, while seven (7) views were determined to have a rating of Medium, and none of the views received a High rating. The following is a detailed description and analysis of the key views most affected by the Proposed Airport Implementation Plan which are Key Views 1, 2, and 23: Liberty Station Open Space Park, Key Views 3 and 4: Former NTC Site (currently used for paid surface parking), Key Views: North Harbor Drive and Spanish Landing, Key Views 7 and 8: Terminal 2 Interior Public Spaces, Key View 12: Pacific Highway Southbound I-5 On Ramp, and Key View 20: Sheraton Hotel & Marina West.

#### **Key Views 1, 2 and 23 – Liberty Station Open Space Park:**

Key Views 1, 2, and 23 are taken from the proposed public park located at Liberty Station (a mixed-use community of residential, office and light industrial uses). The view direction looks directly toward the existing Terminal 2 West. However, views to the proposed East Terminal (adjacent to the existing Commuter Terminal) and parking structure would not be visible from this location. Views to scenic resources of the San Diego Bay and the downtown skyline from this location are to the east / southeast

and are not visible from this site because of view blockage from the existing terminals, and other elements to the south of the SDIA Project Area. As illustrated in the photograph, the existing views of these scenic resources would not be impacted by the proposed improvements. Future improvements are proposed to be of similar height and scale as the existing facilities. As such, these improvements would not be seen from this location either.

Initial determination of was that Views 1, 2, and 23 may have an impact value of "Medium." However, after further review and study it was determined that no significant impacts to these key views occur at these locations.

### **Key View 3 and 4: Former NTC Site (currently used for paid surface parking)**

These view sites are located immediately adjacent to the west side of the SDIA project area and are currently used as paid surface parking lots and are looking east.

The proposed eastern expansion of Terminal 1 and the new Terminal to be located between Terminal 1 and the Commuter Terminal would have no impact on the scenic views from this site since the existing Terminal 2 TW currently blocks those views. The proposed five (5) story parking structure would not have a significant impact on the visual resources of this site since it is far in the distance and in character with existing structure in terms of height, massing, scale and architectural style. Additionally other elements impede this view currently such as the circulation ramp to the SDIA Project site, and the buildings located along the south side of North Harbor Drive.

It was initially determined that these views may have an impact value of "Low." After further review and study it was confirmed that the visual impact is low and no significant impacts to the key views occur at this location.

### **Key View 5 and 6: North Harbor Drive and Spanish Landing**

These view sites are located along the west end of North Harbor Drive and the Spanish Landing Park and are looking north towards the SDIA Project Area. There are no existing views of scenic resources from this point along North Harbor Drive towards the SDIA project area. Therefore, the expansion to west side of Terminal 2TW and new Terminal proposed to be placed between Terminal 1 and the Commuter Terminal, as well as a five (5) story parking structure would not have significant visual impacts. Additionally the views towards the SDIA Project Area would be similar in terms of their visual quality since the proposed project would be similar in architectural character.

It was initially determined that these views may have an impact value of "Low." After further review and study it was confirmed that the visual impact is low and no significant impacts to the key views occurs at this location.

### **Key View 9: North Harbor Drive and Pedestrian Promenade**

This view is taken from the Harbor Police Station Site looking north towards the SDIA Project Area. There are no existing views of scenic resources from this point along North Harbor Drive towards the proposed improvements because an existing elevated circulation roadway ramp from the SDIA to Harbor Drive blocks this view. Therefore, the implementation of an expansion to Terminal T2W, the proposed terminal building east of Terminal 1 or the proposed five (5) story parking structure would not have any significant impacts. Views of the Bay and the downtown skyline from this location are to the east and south of North Harbor Drive and, therefore, are not a factor.

It was initially determined that this view may have an impact value of "Low." After further review and study it was confirmed that the visual impact is low and no significant impacts to the key view occur at this location.

### **Key View 12: Pacific Highway Southbound I-5 On-ramp**

Key View 12 is located on the elevated Pacific Highway southbound on-ramp to Interstate 5 just north of Washington Street. From this raised vantage point, the viewer is looking south/southwest towards the north side of the expansion for the East Terminal and the Terminal and other improvements at the north

east side of the SDIA Project Area. Also, there views from this site towards the downtown skyline, with a small portion of the San Diego Bay visible. Because this view is taken from an elevated roadway on-ramp that would be above the height of proposed improvements—significant views would not be blocked and would not have a significant visual impact.

### **Surrounding Area’s Land Use Plans and Policies – Aesthetic Impact Analysis**

The Airport Implementation Plan East Terminal Alternative (With Parking Structure) was analyzed with respect to each of the urban design and view corridor guidelines described in Section 5.13.2., *Regulatory Framework*, for each of the potentially impacted plan area.

As discussed earlier in this section, there would be no significant impacts to key views from the East Terminal Alternative (With Parking Structure). The key views are compatible with the view corridor descriptions within the Peninsula, Midway Pacific Highway Corridor, the Uptown CPA guidelines and the Port Master Plan. Therefore, the East Terminal Alternative (With Parking Structure) would not result in significant negative impacts related to these view corridors.

More specifically, this section reviews the East Terminal Alternative (With Parking Structure) for compliance with plans and policies governing the surrounding area including: 1) the Port Master Plan, 2) The MCRD Base Exterior Architecture Plan and 3) the City of San Diego’s Community and Redevelopment Plans.

#### **Port Master Plan**

The Port Master Plan outlines general goals addressing the design of new development.<sup>171</sup> The goals relevant to this project deal with view preservation. The above section about visual resources and key views demonstrates that the East Terminal Alternative Plan would not have a significant impact on existing views of the Bay or the downtown area. Therefore, the East Terminal Alternative Plan would not have a significant impact on the adjacent land governed by the Port Master Plan.

#### **US MCRD Base San Diego Exterior Architecture Plan**

In regard to aesthetic and visual resources, the US MCRD San Diego BEAP only addresses visual resources. More specifically, Visual and noise buffers between US MCRD San Diego and SDIA are proposed at US MCRD San Diego’s BEAP if new projects at US MCRD San Diego are constructed. US MCRD San Diego has identified the view down Belleau Avenue, looking towards the downtown skyline, as an asset. This view has the possibility of being blocked by future site-specific projects. However, due to the fact that this is a view from a single location that generally is not accessible to the public, it was not rated for visual impact. Under the significance criteria adopted in this report, only public views are analyzed for visual impact.

#### **City of San Diego Community Plans and Redevelopment Plans**

The East Terminal Alternative Implementation Plan (With Parking Structure) was analyzed in relation to the criteria established earlier in this chapter as described in Section 5.13.3 for aesthetic and visual resources. In this section the Significance Criteria for each of the potentially impacted Community Plan Areas and Redevelopment Areas is analyzed for possible impacts to aesthetic and visual resources.

In regards to aesthetic impacts such as neighborhood character, land form, light and glare, the East Terminal Alternative Implementation Plan (With Parking Structure) is in compliance with these plans and would not result in significant impacts.

In regards to visual resources, the key views from the community plan areas and redevelopment plan areas, could potentially be aesthetically and visually impacted by projects proposed for the East Terminal Alternative Implementation (With Parking Structure) on the east side of the SDIA Project Area. Since proposed development of the East Terminal Alternative Implementation Plan (With Parking Structure)

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<sup>171</sup> San Diego Unified Port District (District). *San Diego Unified Port District, Port Master Plan*. Revised July 2005. <<http://www.portofsandiego.org/>>

includes projects that are similar in use, height, massing, bulk and architectural style there are no significant visual impacts to surrounding community plan and redevelopment areas.

In summary, the East Terminal Alternative Implementation Plan (With Parking Structure) complies with the aesthetic/urban design guidelines and visual resources plans and policies contained within the San Diego Downtown Community Plan, the Uptown Community Plan, Midway Pacific Highway Corridor Community Plan, the Peninsula Community Plan and their related Redevelopment Plan Areas. As such, the East Terminal Alternative Implementation Plan (With Parking Structure), project impacts would also be considered less than significant.

### **Airport Implementation Plan (Without Parking Structure)**

Since this Alternative proposes less development than the East Terminal Alternative - Airport Implementation Plan Alternative (With Parking Structure), it would have less impacts and would not be of significant impact in terms of aesthetic and visual resources. The analysis that precedes this section for the East Terminal Alternative – Airport Implementation Plan substantially conforms to this Alternative.

#### **5.13.5.3 No Project Alternative**

There would be no changes to the existing terminals, airside facilities, cargo facilities, or landside access facilities and, therefore, no impacts to aesthetic/urban design or visual resources either within or around the SDIA Project Area would occur under this alternative.

### **5.13.6 Construction Impacts**

#### **5.13.6.1 Proposed Project - With and Without Parking Structure**

The Proposed Airport Land Use Plan would not result in any construction related aesthetics impacts because specific projects are not being proposed both with and without a parking structure and would not be under construction.

The Proposed Airport Implementation Plan results in two (2) short-term impacts during the course of construction. The first impact would be associated with the construction related activities. These activities would be visible by the public as they approach the Terminal 2 West buildings or from the public areas of Spanish Landing. These would include views of construction activities, storage and use of materials and equipment, truck traffic, stockpiling of soils and of the general construction staging areas at various locations. These visual changes to the airport facilities character, although short term, would be considered significant and require mitigation. With improvement as a project component during construction, those impacts would be reduced to a less than significant level.

- During construction activity, the construction contractor shall ensure that construction material; equipment and staging areas are screened from the public wherever feasible. Appropriate screening material, such as temporary fencing with opaque material, shall be used to buffer and screen views of construction activity and the construction site.

The second short-term impact would be lighting and glare during the course of construction. These impacts would typically be limited to nighttime lighting required for security purposes or related to nighttime construction work on the taxiways, terminal building and the parking structure. All construction lighting and security lighting would be required to meet FAA standards to insure that “spill-over” lighting does not occur and would not effect pilots using this facility. Also, the shielding of construction lighting would be required to avoid impacts to motorists accessing the airport or traveling on nearby streets such as North Harbor Drive. During construction, lighting and glare impacts would be reduced to a level of less than significant as follows:

- During construction activity, the construction contractor shall ensure that construction material; equipment and staging areas are screened from the public wherever feasible. Appropriate screening material, such as temporary fencing with opaque material, shall be used to buffer and screen views of construction activity and the construction site.



### **5.13.6.2 East Terminal Alternative - With and Without Parking Structure**

The Airport Land Use Plan would not result in any construction related aesthetics impacts because specific projects are not being proposed and would not be under construction.

Due to the similar nature of the East Terminal Alternative, Airport Implementation Plans with the Proposed Airport Implementation Plan the discussion on temporary construction-related impacts and the project improvements would also apply to this alternative.

### **5.13.6.3 No Project Alternative**

The No Project Alternative would not result in any construction related aesthetics impacts because it does not propose any construction activities. No construction related impacts would occur under the No Project alternative.

## **5.13.7 Cumulative Impacts**

### **5.13.7.1 Proposed Airport Implementation Plan - With and Without Parking Structure**

Because the Proposed Airport Implementation Plan (Preferred Alternative with or without Parking) would not have significant impact on aesthetic and visual resources and is in compliance with plans and policies regarding both on site and surrounding areas it would not incrementally contribute to a significant cumulative effect on aesthetics.

### **5.13.7.2 East Terminal Alternative Project - With and Without a Parking Structure**

Because the East Terminal Alternative Implementation Plans (With and Without Parking Structure) would not have significant impact on aesthetic and visual resources and is in compliance with plans and policies regarding both on site and surrounding areas it would not incrementally contribute to a significant cumulative effect on aesthetics.

### **5.13.7.3 No Project Alternative**

The No Project Alternative would not have a significant impact on aesthetic and visual resources and would be in compliance with plans and policies regarding both on site and surrounding areas it would not incrementally contribute to a significant cumulative effect on aesthetics

## **5.13.8 Mitigation Measures/Other Improvements**

Mitigation measures are not required since impacts to aesthetics and visual quality caused by the Proposed Project (Preferred Alternative) and its alternatives would be less than significant.

## **5.13.9 Level of Significance after Mitigation Measures**

Impacts to aesthetic and visual resources that are due to the Proposed Project are less than significant. The Proposed Project includes construction activities as described in Section 5.213.6 help to offset potential temporary impacts during construction. Considering the proposed construction activities, any temporary construction affects are less than significant.



## 5.14 Geology and Soils

This section describes the general approach and methodology, regulatory framework, significance criteria, and environmental setting, and considers potential geology and soils impacts associated with the Proposed Project (Preferred Alternative) and its alternatives. Additionally, this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts. There were no comments in response to the NOP or the previously circulated Draft EIR specific to potential geology and soils impacts.

The changes to the Proposed Project and alternatives that are included in this ~~recirculated Draft~~ Final EIR do not affect the results of the geology and soils analysis presented in the previously circulated Draft EIR. The proposed changes to the Proposed Project and alternatives would not cause new or substantially more severe impacts to geologic or soil resources in comparison to the Proposed Project and alternatives evaluated in the previously circulated Draft EIR. Similarly, the potential geotechnical constraints associated with development of Airport property would be essentially the same as described in the previously circulated Draft EIR. Potential impacts associated with geology and soils would be associated with the initial development and operation of any proposed new facilities (for example, design measures to accommodate potential seismic activity would need to be incorporated into applicable structures prior to and during construction). Accordingly, while extending the horizon year from 2015 to 2030 extends the potential timeframe during which a potential geology or soils impact could occur (for example, an earthquake could occur between 2015 and 2030); it does not change the previously circulated assessment of geology and soils impacts (as provided below).

### 5.14.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

This section describes existing geologic conditions within SDIA and its vicinity, identifies associated regulatory requirements, and evaluates potential impacts and mitigation measures related to implementation of the project alternatives. Baseline information for the following analysis was derived from a number of sources, including published and unpublished technical materials from sources such as the California Geological Survey (CGS, formerly the California Division of Mines and Geology [CDMG]), and previous environmental analyses for projects in the SDIA vicinity.

### 5.14.2 Regulatory Framework

The project alternatives are subject to a number of regulatory requirements and/or guidelines related to potential geologic issues. These standards typically involve measures to evaluate risk and address potential hazards through geotechnical evaluation, as well as project/facility design and construction techniques. Specific requirements and guidelines applicable to the project alternatives include: (1) the California Seismic Hazards Mapping Act; (2) the Alquist-Priolo Earthquake Fault Zoning Act; (3) the International Conference of Building Officials (ICBO 2000) Uniform building Code (UBC); (4) the California Building Code (CBC); (5) the Greenbook Committee Standard Specifications for Public Works Projects (Greenbook) 2003; (6) applicable specifications of the ASTM International (originally known as the

American Society for Testing and Materials); and (7) National Pollutant Discharge Elimination System (NPDES) General Groundwater Extraction Waste Discharge Permit (Groundwater Permit, NPDES No. CAG919001, RWQCB Order No. 2000-90). The listed regulatory requirements and industry standards are summarized below and discussed as applicable under the evaluation of potential project impacts. Discussion of erosion control requirements under NPDES standards is provided in EIR Section 5.6, Hydrology and Water Quality, due to the relationship between this issue and water quality concerns.

### **California Seismic Hazards Mapping Act**

The California Seismic Hazards Mapping Act (Public Resources Code; Division 2, Chapter 7.8, §2690 *et seq.*) provides a statewide seismic hazard mapping and technical advisory program to assist local agencies in protecting public health and safety relative to seismic hazards. The Act provides direction and funding for the State Geologist to compile seismic hazard maps and to make those maps available to local governments. The Act, along with related standards in the Seismic Hazards Mapping Regulations (California Code of Regulations [CCR]; Title 14, Division 2, Chapter 8, Article 10, §3270 *et seq.*), also directs local governments to require the completion and review of appropriate geotechnical studies prior to approving development projects.

### **Alquist-Priolo Earthquake Fault Zoning Act**

The Alquist-Priolo Act<sup>172</sup> is intended to prevent the construction of buildings used for human occupancy on or adjacent to the surface trace of active faults, and defines “[t]hose areas within which fault-rupture hazard investigations are required prior to building structures for human occupancy.” (i.e., structures which are expected to have a human occupancy rate of more than 2,000 person-hours per year, CDMG 1999). The law requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones (previously called Special Studies Zones and Fault-Rupture Hazard Zones) around the surface traces of active faults, and to distribute maps of these zones to all affected cities, counties and state agencies. The Act also requires completion of a geologic investigation prior to project approval, to demonstrate that proposed buildings will not be constructed across active faults, and/or that appropriate set backs from such faults (generally 50 feet) are included in the project design.

### **UBC, Greenbook, and ASTM Standards**

The UBC and Greenbook standards are produced through joint efforts by industry groups such as the American Public Works Association (APWA) and ICBO to provide standard specifications for engineering and construction activities, including measures related to geologic issues. The referenced guidelines, while not comprising formal regulatory requirements, are widely accepted by regulatory authorities and are routinely included in related standards such as the CBC (see below) and local planning documents/codes. The UBC and Greenbook guidelines are regularly updated to reflect current industry standards and practices, including criteria from sources such as ASTM International. ASTM International produces industry standards for a wide variety of materials and procedures, including geologic criteria such as soil borings and sampling; fill composition, compaction and moisture content; and laboratory analyses.

### **CBC Standards**

As previously noted, the CBC<sup>173</sup> encompasses a number of requirements related to geologic issues, including seismic safety (Chapter 23); foundation and retaining wall design (Chapter 29); site demolition and excavation (Chapter 33); and grading, drainage and erosion control (Chapter 70). The CBC is based on the previously described UBC, with appropriate amendments and modifications to reflect site-specific conditions in California.

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<sup>172</sup> California Public Resources Code §2621 *et seq.*

<sup>173</sup> California Code of Regulations, Title 24, Part 2.

## **NPDES Standards**

Conformance with the noted General Groundwater Extraction Waste Discharge Permit is required by the RWQCB prior to disposal of extracted groundwater to San Diego Bay or associated tributary flows. This requirement is applicable to all discharges and is intended to ensure compliance with applicable Basin Plan water quality and beneficial use objectives, as well as specific discharge requirements identified in the permit text. Conformance with the Groundwater Permit typically requires best management practices (BMPs) involving the best available economically achievable (BAT) level of treatment. Specifically, this may entail number of physical and/or chemical parameters such as (depending on site-specific conditions) erosion/sedimentation controls and testing/treatment of extracted groundwater prior to disposal.

### **5.14.3 Significance Criteria**

The Proposed Project would have a significant impact related to geology and soils if one or more of the following thresholds are exceeded:

- The project would expose people or property to substantial risk related to seismic hazards including ground rupture, ground acceleration, liquefaction and dynamic settlement, and tsunamis/seiches;
- The project would expose people or property to substantial risk from unstable geologic and related conditions including landsliding/manufactured slope stability; expansive or corrosive soils; compressible materials; and foundation/pavement design.
- Geologic, soil or related conditions within the project site such as shallow groundwater or shallow bedrock/oversize material would substantially constrain project construction or operation.

The identified significance thresholds are based on criteria identified in Appendix G of the *State CEQA Guidelines*, as well as and the regulatory requirements/industry standards discussed above in this section. These thresholds are intended to ensure conformance with existing regulatory and industry standards, as well as to protect public safety and private property from geologic and related hazards.

### **5.14.4 Environmental Setting**

#### **5.14.4.1 Geologic Setting**

##### **Regional Geology/Topography**

SDIA is located in the western portion of the Peninsular Ranges Geomorphic Province, a region characterized by northwest-southeast trending structural basins and generally parallel intervening fault zones. The Peninsular Ranges Province extends approximately 900 miles from the Transverse Ranges/Los Angeles Basin area to the southern tip of Baja California, and varies in width from approximately 30 to 100 miles. In San Diego County, the eastern portion of the province exhibits mountainous terrain composed primarily of Mesozoic (between approximately 65 and 250 million years old) igneous and metamorphic rocks, while the coastal region consists of low-lying terraces encompassing predominantly marine and non-marine Tertiary (between approximately 65 and 2 million years old) and Quaternary (less than approximately 2 million years old) age sedimentary strata. This sequence of sedimentary rocks in southwestern San Diego County (also known as the San Diego Embayment) was deposited during a series of sea level transgression-regression cycles (i.e., advances and retreats) over approximately the last 55 million years.

Topographically, the Peninsular Ranges Province is composed of generally parallel ranges of steep-sloping hills and mountains separated by alluvial valleys. More recent uplift and erosion in western San Diego has resulted in the characteristic canyon and mesa topography present today, as well as the deposition of surficial materials including Quaternary alluvium, colluvium and topsoil.

##### **Site Geology/Topography**

The SDIA site is generally level, and has been previously developed in association with existing airport and related facilities. Prior to 1925, the SDIA site encompassed a tidal mudflat characterized by the

deposition of fine-grained sediments (silt and clay) from tidal fluctuations. Between 1925 and 1949, the SDIA site was filled with material derived from a series of harbor dredging projects, and brought to its current elevation of approximately 15 feet above mean sea level (AMSL). Underlying strata within the SDIA and surrounding areas include a number of Quaternary, Tertiary and Cretaceous (between approximately 65 and 144 million years old) age sedimentary units, with additional discussion of surficial and geologic deposits in the project site and vicinity provided below under Stratigraphy.

## **Stratigraphy**

As noted above, the SDIA site consists predominantly of artificial fill related to previous development, with underlying units in the site and vicinity encompassing the Quaternary Bay Point and Lindavista formations; the Tertiary San Diego, Mount Soledad and Mission Valley formations; and the Cretaceous Cabrillo Formation. These materials are described below in order of increasing age and shown on [Figure 5.14-1](#), with stratigraphic descriptions derived primarily from technical publications<sup>174</sup> and several previous environmental studies for unrelated projects in the SDIA vicinity (such as the *North Bay Redevelopment Plan*).<sup>175</sup>

### **Artificial Fill and Related Deposits (Qaf)**

On-site fill materials extend to maximum depths of approximately 20 feet, and consist generally of loose to medium-dense sand with variable and lesser amounts of gravel, silt and clay. In addition to the described fill, deposits of rock and concrete riprap have been placed along waterfront areas of the SDIA to provide protection from wave-related erosion.

### **Bay Deposits (not mapped on [Figure 5.14-1 5.118](#))**

Holocene (less than approximately 11,000 years in age) bay deposits are likely present beneath the above described fill within the SDIA, and occur in nearby portions of San Diego Bay and intertidal areas to the south. These materials generally consist of loose, locally organic-rich silt and clay, and are typically unconsolidated and saturated.

### **Alluvium (Qal)**

Holocene alluvial deposits occur in areas north and west of the SDIA in association with larger active drainage courses such as the San Diego River. Localized alluvium may also be present beneath fill deposits within the SDIA, in association with previous surface drainages. Alluvial materials typically consist of sandy clay, silty sand and clayey sand deposits, with variable amount of gravel and cobbles.

### **Bay Point Formation (Qbp)**

The Pleistocene (between approximately 11,000 and 2 million years old) Bay Point Formation occurs in most areas surrounding the site, and likely underlies portions of the fill deposits within the SDIA as well as nearby bay deposits. The Bay Point Formation consists generally of poorly consolidated, moist to saturated, fine- to medium-grained marine and non-marine sandstone, with occasional clayey silt beds. This formation exhibits an overall thickness of approximately 120 feet in the SDIA vicinity, and generally occurs between 0 and 10 feet below the surface.

### **Lindavista Formation (Qln)**

The Pleistocene Lindavista Formation was deposited on an extensive wave-cut platform (or terrace), occurs widely in areas east, west and north of the SDIA, and locally extends beneath San Diego Bay. This formation consists generally of fine- to coarse-grained, reddish-brown marine and non-marine sandstone with conglomerate interbeds. This unit is typically well-consolidated and resistant, with the reddish color derived from iron (hematite) content in the cemented sandstone.

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<sup>174</sup> California Division of Mines and Geology. 1975. Geology of the San Diego Metropolitan Area, California. Bulletin 200, 1975.

<sup>175</sup> City of San Diego, North Bay Revitalization Area (including the North Bay Redevelopment Project). *Final Environmental Impact Report, Volumes I and II*. Prepared by Cotton/Beland/ Associates, Inc. March.1998.

### **San Diego Formation (Tsd)**

The Pliocene (between approximately 2 and 5.1 million years old) San Diego Formation occurs in areas to the east and north of the site, and underlies portions of the SDIA and surrounding areas at depth. This formation consists of fine- to medium-grained, poorly consolidated marine sandstone, with interbeds of cobble conglomerate, bentonite, marl and mudstone.

### **Mount Soledad Formation (Tm)**

The Eocene (between approximately 38 and 55 million years old) Mount Soledad Formation occurs west of the SDIA on the Point Loma Peninsula. This formation consists of a marine cobble conglomerate with medium-grained, poorly consolidated sandstone interbeds.

### **Mission Valley Formation (Tmv)**

Minor exposures of the Eocene Mission Valley Formation are present just north of SDIA, with more extensive occurrences further north near the San Diego River. This formation consists generally of fine- to medium-grained, soft and friable marine sandstone, with cobble conglomerate interbeds.

### **Cabrillo Formation (Kcs)**

The Cretaceous Cabrillo Formation occurs west of the site on the Point Loma Peninsula, and unconformably underlies the Bay Point and Mount Soledad formations in the SDIA vicinity. This formation consists of massive (i.e., without distinct structural features such as bedding), moderately consolidated, medium-grained sandstone with cobble conglomerate interbeds.

## **Groundwater**

Shallow, unconfined groundwater has been reported at depths of between 5 and 12 feet below the surface in the SDIA. Groundwater levels within the SDIA are generally static due to the proximity of the bay and lack of substantive withdrawals (i.e., through wells and/or pumping), although aquifer levels can vary locally in accordance with mean high tide elevations and diurnal tidal fluctuations. Overall groundwater movement in the site and vicinity is west and south toward San Diego Bay, although this movement may also vary locally.<sup>176</sup>

## **Faulting and Seismicity**

SDIA is within a broad seismically active region characterized by a series of northwest trending fault zones associated with the San Andreas Fault System ([Figure 5.14-2](#)). A number of these fault zones and the associated individual faults are classified as active or potentially active by the CGS. Active faults are defined as those exhibiting historic seismicity or displacement of Holocene strata, while potentially active faults have no historic seismicity and displace Pleistocene but not Holocene materials. Major active and potentially active fault zones within approximately 60 miles of the SDIA are shown on [Table 5-15.1 5-14.1](#), along with associated seismicity data. As seen from this information, the maximum identified peak horizontal ground acceleration value on the SDIA site is 0.63 g (where g equals the acceleration due to gravity), in association with a maximum credible Richter magnitude 7.0 earthquake event along nearby segments of the Newport Inglewood-Rose Canyon Fault Zone. A maximum credible earthquake is defined as the maximum earthquake considered capable of occurring under the presently known tectonic framework. Based on a probabilistic seismic hazard assessment for the western United States prepared by the U.S Geological Survey (USGS), SDIA is within a zone where the peak horizontal ground acceleration that has a 10 percent probability of being exceeded in a 50-year period is 0.3g<sup>177</sup>.

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<sup>176</sup> San Diego Unified Port District and United States Marine Corps Recruit Depot (USMCRD), San Diego. *2001 Final Environmental Assessment and Initial Study for the Extension of Taxiway C, San Diego International Airport*. Prepared with assistance from CH2M HILL. July 2001.

<sup>177</sup> San Diego Unified Port District. *Proposed North Embarcadero Alliance Visionary Plan. Draft Master Environmental Impact Report*. Prepared by BRG Consulting, Inc. December 1999.

An additional potential concern involves the concept of repeatable high ground acceleration. Evaluation of this phenomenon involves consideration of the full extent of ground acceleration values as opposed to a single peak. Specifically, depending on seismic and related parameters such as event duration, motion frequency and underlying soil/geologic conditions, a single peak of intense motion may contribute less to overall potential seismic effects than several cycles of less intense shaking. Repeatable high ground acceleration is generally given as 65 percent of peak acceleration for areas within 20 miles of an earthquake epicenter, and 100 percent of peak values at greater distances. Based on these criteria, repeatable high ground acceleration values for maximum credible earthquake events along major regional faults range between approximately 0.07 and 0.41g (as detailed in [Table 5-14.1](#)).

Table 5-14.1  
Regional Fault Location and Seismicity Data

Fault Zone	Distance/Direction from SDIA (miles)	MCE Magnitude	Peak Ground Acceleration	Repeatable High Ground Acceleration
Newport Inglewood-Rose Canyon	<1/E	7.0	0.63	0.41
La Nacion	5E	6.8	0.4	0.26
Palos Verdes-Coronado Bank	12/W	7.8	0.33	0.21
San Diego Trough	23/W	7.5	0.23	0.23
San Miguel-Vallecitos	32/SE	7.0	0.09	0.09
Whittier-Elsinore	43/NE	7.5	0.09	0.09
San Clemente	47/W	7.3	0.07	0.07

Source: Phase I Environmental Site Assessment: Marine Corps Recruit Depot Parcels 1 Through 5, San Diego, California. Prepared by Ninyo & Moore. September 9.

No Alquist-Priolo Earthquake Fault Zones (or other known fault hazard designations) are located within the SDIA, although recently (2003) designated Earthquake Fault Zones occur near the current southeastern SDIA boundary and in areas further east and south (CGS 2006, refer to [Figure 5.14-2](#)). These Fault Zone designations are associated with segments of the Spanish Bight, Coronado and Silver Strand faults, and occur in an area that is transitional between the Rose Canyon Fault Zone and the offshore Descanso Fault. The described CGS Earthquake Fault Zone designations are intended to address potential hazards related to the construction of buildings used for human occupancy on or adjacent to the surface trace of active faults, with additional information provided in Section 5.14.2 *Regulatory Framework*.

## 5.14.5 Impact Analysis

The following evaluation of impacts is focused on permanent (long-term) effects to and from the Proposed Project (Preferred Alternative) and its alternatives. Section 5.14.6 *Construction Impacts* describes the related (short-term) effects of the project implementation.

### 5.14.5.1 Proposed Project (Preferred Alternative)

As described in Section 4.2 *Airport Land Use Plan* of this document, implementation of the Proposed Project (Preferred Alternative) would include adopting both the Proposed Airport Land Use Plan and the Proposed Airport Implementation Plan. The Land Use Plan includes both existing and proposed uses within the current SDIA boundaries, as well as future planning areas encompassing properties not presently under SDCRAA's control but contemplated for future airport uses. The Implementation Plan includes a number of specific proposed additions and modifications to current SDIA facilities. All proposed Implementation Plan elements are within the boundaries of the proposed Land Use Plan, and both plans would require site-specific geotechnical analysis prior to construction as described below. Accordingly, the following analysis of potential geologic and soil impacts includes the entire Land Use Plan area and is generally applicable to all elements of both described plans, with differences in



geotechnical requirements and/or conclusions called out specifically for individual plan elements only where appropriate.

Prior to final design and construction, a detailed geotechnical investigation would be conducted for the Proposed Project (Preferred Alternative) to assess site-specific geologic conditions and proposed design elements. This investigation would include development-specific subsurface exploration (e.g., boring and trenching), laboratory analysis and geotechnical conclusions/recommendations. Specifically, geotechnical project site information acquired and/or generated during detailed investigation would allow identification of development-specific geologic conditions and hazards, as well as associated remedial requirements/opportunities related to project design, engineering and construction. Based on these efforts, conformance with applicable regulatory requirements and industry standards as noted above (e.g., the UBC), and review/monitoring of pertinent plans and activities by project geotechnical engineers (e.g., review of grading plans and field monitoring of grading/construction efforts), all identified potential geotechnical hazards and issues would be addressed as part of the project design and development process. Anticipated geotechnical analyses, regulatory/industry standards and remedial efforts associated with individual geologic hazards for the Proposed Project (Preferred Alternative) are discussed below.

## **Seismic Hazards**

### **Ground Rupture**

Seismically-induced ground rupture and related effects such as lurching (i.e., the rolling motion of surface materials associated with passing seismic waves) can adversely affect surface and subsurface structures including buildings, foundations, pavement and utilities. While no active or potentially active faults are known to underlie the SDIA and adjacent areas within the Proposed Airport Land Use Plan boundaries, several designated Earthquake Fault Zones occur in close proximity to the south and east as described above and shown on [Figure 5.14-2](#). Due to the extent of existing development in the SDIA and surrounding areas, surface or near-surface evidence of many local faults (e.g., offset strata) has been obscured or destroyed. As a result, the overall location, extent and recent activity status of faulting in the SDIA vicinity are generally not well known, and currently unmapped faults (including one or more of the active structures associated with the above described Earthquake Fault Zones) may potentially extend within the SDIA and/or the Proposed Airport Land Use Plan area. The location of active fault traces within the SDIA and/or Proposed Airport Land Use Plan area could result in potentially significant impacts to proposed or planned facilities if seismically-induced ground rupture or related effects occur therein. These potential effects are considered less than significant for the following reasons: (1) the probability of a seismic event of sufficient magnitude to induce surface rupture occurring within the SDIA or Proposed Airport Land Use Plan area is considered low; (2) the project-specific geotechnical investigation would include a fault evaluation study for all proposed structures intended for human occupancy (as previously defined), and would either verify that active faults are not present or that adequate buffers occur, or would identify additional measures to address associated potential impacts (e.g., relocating structures to provide appropriate buffers); and (3) the project-specific geotechnical investigation would identify design and construction measures to address potential ground rupture effects for additional proposed facilities such as utilities and pavement, including efforts such as the use of engineered fill (e.g., proper composition and placement methodology), appropriate subgrade design and reinforced concrete, and shorter pipeline lengths with flexible joints. Assuming that the results of the described geotechnical investigation, as well as appropriate elements of regulatory/industry standards such as UBC, Greenbook and/or ASTM are incorporated into project design and construction, potential impacts related to seismically induced ground rupture would be avoided or reduced below a level of significance.

### **Ground Acceleration**

Ground acceleration is an estimation of the peak bedrock or ground motion associated with specific seismic events. As previously described, it is expressed in terms of “g” forces, where g equals the acceleration due to gravity. Based on the preliminary data provided in [Table 5-85 5-14.1](#), the estimated maximum potential peak and repeatable high ground acceleration levels within the project site from a maximum credible earthquake along the Rose Canyon Fault Zone are approximately 0.63g and 0.41g, respectively. Such acceleration levels could potentially result in significant impacts to proposed facilities such structures, foundations or utilities, depending on site- and event-specific factors such as event

duration, motion frequency and underlying soil/geologic conditions. The project design, however, would incorporate measures to accommodate projected seismic loading, pursuant to the recommendations in the described site-specific geotechnical investigation, as well as existing regulatory/industry standards such as the UBC, Greenbook and/or ASTM International. Specific measures from the noted standards (and/or other pertinent sources) that may be used in the project design to accommodate seismic loading include proper fill composition, depth, moisture content and compaction (pursuant to ASTM requirements); use of properly reinforced concrete and masonry; anchoring (or other means for securing applicable structures); and use of appropriate pipeline materials and/or flexible joints. Assuming that the results of the described geotechnical investigation, as well as appropriate elements of regulatory/industry standards are incorporated into project design and construction, potential impacts related to seismically induced ground acceleration would be avoided or reduced below a level of significance.

### **Liquefaction and Dynamic Settlement**

Liquefaction is the phenomenon whereby soils lose shear strength and exhibit fluid-like flow behavior. Loose, granular soils are most susceptible to these effects, with liquefaction generally restricted to saturated or near-saturated soils at depths of less than 50 feet. Liquefaction most typically results from seismic ground acceleration, and along with related effects such as dynamic or differential settlement (i.e., varying degrees of settlement over short distances) can potentially result in significant impacts to surface and subsurface facilities. SDIA is underlain by relatively loose to medium-dense granular soils, with shallow groundwater present as noted above in Section 5.14.2., *Regulatory Framework*. Based on these conditions, the potential for seismically induced liquefaction and related effects is generally high within the project site. This assessment is consistent with the City of San Diego Seismic Safety Study, which identifies the SDIA and vicinity as within *Hazard Category 31-Liquefaction*, with this designation indicating a generally high potential for liquefaction.<sup>178</sup> The project design would incorporate measures to address potential liquefaction and related effects, pursuant to recommendations in the described site-specific geotechnical investigation and the previously noted regulatory/industry standards. While certain standard measures to remediate liquefaction effects such as ground modification (e.g., dynamic compaction) or the use of deep foundations may not be feasible for the Proposed Project (Preferred Alternative) due to the nature and extent of existing on-site improvements, additional equally effective measures would be employed. Specifically, this may include efforts such as: (1) removal/recompaction and/or replacement with engineered fill of liquefiable deposits; (2) use of subdrains to control shallow groundwater; (3) use of pile-supported structures where appropriate; (4) grouting of appropriate deposits to provide support; and (5) surcharging of compressible deposits to accelerate consolidation and use of settlement monitoring (i.e., via monuments) to verify adequate compaction prior to construction. Assuming that the results of the described geotechnical investigation, as well as appropriate elements of regulatory/industry standards, are incorporated into project design and construction, potential impacts related to seismically induced liquefaction and related effects would be avoided or reduced below a level of significance.

### **Tsunamis and Seiches**

Tsunamis (commonly referred to as tidal waves) are seismic sea waves produced by event such as submarine earthquakes, volcanic eruptions or landslides, and can generate impacts related to inundation in low-lying coastal areas. The Pacific Ocean rim is highly tectonically active, and is the source of most tsunami generation worldwide. Southern California south of Point Conception is much less susceptible to tsunami effects than areas further north, however, due to coastal orientations. The project site is further protected from the effects of tsunamis by the presence of natural obstructions including Point Loma, Harbor Island and the Silver Strand. These features comprise effective barriers that would dissipate most wave energy associated with a tsunami prior to reaching the SDIA. Based on these conditions, as well as the fact that the SDIA is located at an elevation of approximately 15 feet AMSL, no significant impacts related to tsunamis are anticipated from implementation of the Proposed Project (Preferred Alternative).

Seiches are defined wave-like oscillatory movements of enclosed or semi-enclosed bodies of water such as lakes, reservoirs or bays, and are most typically associated with seismic activity. This phenomenon

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<sup>178</sup> San Diego, City of. Seismic Safety Study. 1995.

can result in flooding damage and related effects (e.g., erosion) in surrounding areas from spilling or sloshing water. Based on the presence of natural barriers (particularly Harbor Island) and the SDIA elevation as described above for tsunamis, no significant impacts related to seiches are anticipated from implementation of the Proposed Project (Preferred Alternative).

## **Non-Seismic Hazards**

### **Landsliding/Manufactured Slope Stability**

As described in Section 5.14.2. *Regulatory Framework*, the project site and adjacent areas exhibit generally level and low-lying topography. Based on these conditions and the fact that post-development topographic conditions would be essentially unchanged (i.e., no substantial manufactured slopes are proposed), no significant impacts related to landsliding or manufactured slope stability are anticipated from implementation of the Proposed Project (Preferred Alternative).

### **Expansive Soils**

Expansive (or shrink-swell) behavior is attributable to the water-holding capacity of clay minerals and can adversely affect the integrity of facilities such as pavement or structure foundations. As noted above in this section, a detailed geotechnical investigation would be conducted prior to final design to identify site-specific geologic conditions, potential hazards, and associated design, engineering and construction requirements. If the project geotechnical investigation identifies potential hazards related to expansive soils, the project design would incorporate appropriate measures to address such conditions. Pursuant to site-specific recommendations in the project geotechnical investigation and the previously noted regulatory/industry standards, such measures may include the removal and treatment or replacement (i.e., with engineered fill) of unsuitable materials such as clay soils, as well as the use of subdrains in applicable areas to reduce near-surface moisture content. Assuming that the results of project geotechnical investigation and regulatory/industry are utilized, potential project impacts related to expansive soils would be avoided or reduced below a level of significance.

### **Corrosive Soils**

Local fill materials may potentially exhibit corrosive hazards related to effects such as pH levels, electrical resistivity or chloride content. Long-term exposure to corrosive soils could result in deterioration and eventual failure of underground facilities such as concrete and metal structures. As previously noted, a detailed geotechnical investigation would be conducted prior to final design to identify site-specific geologic conditions, potential hazards, and associated design, engineering and construction requirements. If the project geotechnical investigation identifies potential hazards related to corrosive soils, the project design would incorporate appropriate measures to address such conditions. Pursuant to site-specific recommendations in the project geotechnical investigation and the previously noted regulatory/industry standards, such measures may include removal of unsuitable deposits and replacement with non-corrosive fill, use of corrosion-resistant construction materials, and/or installation of cathodic protection devices. Assuming that the results of the described geotechnical investigation and appropriate regulatory/industry standards are incorporated into project design and construction, potential project impacts related to corrosive soils would be avoided or reduced below a level of significance.

### **Compressible Materials**

The project site encompasses a number of deposits that may potentially be susceptible to compression under load, including fill, bay deposits and alluvium. A detailed geotechnical investigation would be conducted prior to final design to identify site-specific geologic conditions, potential hazards, and associated design, engineering and construction requirements. If the project geotechnical investigation identifies potential hazards related to compressible soils, the project design would incorporate appropriate measures to address such conditions. Pursuant to site-specific recommendations in the project geotechnical investigation and the previously noted regulatory/industry standards, such measures would likely involve similar measures as described above under Liquefaction and Dynamic Settlement, including surcharging of compressible deposits to accelerate consolidation and use of settlement monitoring (i.e., via monuments) to verify adequate compaction prior to construction. Assuming that the results of the described geotechnical investigation and appropriate regulatory/industry standards are incorporated into

project design and construction, potential impacts related to compressible materials would be avoided or reduced below a level of significance.

### **Foundation and Pavement Design**

The site-specific project geotechnical investigation would include evaluation of proposed foundation and pavement design, including assessment of proposed grading and excavation; drainage characteristics; structure locations/loading conditions; foundation bearing pressures; and pavement type, thickness, aggregate base, and subgrade preparation. Assuming that the results of the described geotechnical investigation and appropriate regulatory/industry standards are incorporated into project design and construction, potential impacts related to foundation and pavement design would be avoided or reduced below a level of significance.

#### **5.14.5.2 East Terminal Alternative**

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the proposed Airport Land Use Plan see Chapter Four, section 4.2.1 *Airport Land use Plan* for a detailed explanation. Therefore the East Terminal Alternative includes the Proposed Airport Land Use Plan. Potential long- and short-term (as described in the following Section 5.14.5, *Construction Impacts*) geologic and soil impacts associated with this alternative would be essentially the same as those described above for the Proposed Project (Preferred Alternative). This conclusion is based on the following considerations: (1) both development alternatives would entail implementing the proposed Airport Land Use Plan involving identical geographic boundaries, planned development, and geotechnical investigation requirements; (2) geologic and soil conditions for this alternative would be the same as those described for the Proposed Project (Preferred Alternative); and (3) while some differences occur, the nature, location and extent of proposed facilities under the Airport Implementation Plan for this alternative are generally similar to those evaluated under the Proposed Project (Preferred Alternative).

#### **5.14.5.3 No Project Alternative**

The No Project Alternative would not result in any additional (i.e., beyond existing conditions) long- or short-term impacts related to geology and soils. The existing airport facilities and operations would, however, continue to be subject to potential long-term seismic and non-seismic effects as described for the Proposed Project (Preferred Alternative).

### **5.14.6 Construction Impacts**

Potential construction impacts would be associated with both the Proposed Project (Preferred Alternative) and the East Terminal Alternative as described above. Because both alternatives would entail generally similar construction types and extents, the following assessment of associated potential impacts is applicable to both the Proposed Project (Preferred Alternative) and the East Terminal Alternative.

#### **5.14.6.1 Erosion and Sedimentation**

Proposed short-term grading, excavation and construction activities would increase the potential for erosion and the off-site transport of eroded material (sedimentation). As noted above in Section 5.14.2, *Regulatory Framework*, discussion of erosion control requirements under NPDES standards is provided in Section 5.6, *Hydrology and Water Quality*, due to the relationship between this issue and water quality concerns.

#### **5.14.6.2 Shallow Groundwater**

As described in Section 5.14.2, *Regulatory Framework*, shallow groundwater is present within the SDIA at approximate depths of between 5 and 12 feet below the surface, and would likely be encountered during construction of the Proposed Project. The occurrence of shallow groundwater within the project site could potentially affect construction activities such as excavation and grading. Specifically, the presence of shallow groundwater in proposed cuts or excavations could require temporary dewatering to allow access by construction equipment and/or personnel. Dewatering activities would require conformance with applicable NPDES permit requirements as previously discussed under Section 5.14.2.2, *Regulatory Framework*. The majority of these requirements are associated with water quality concerns such as

potential erosion/sedimentation effects (e.g., if extracted groundwater is discharged onto graded or unstablized areas), and the occurrence of contaminants in local aquifers. Conformance with identified discharge requirements in the NPDES Groundwater Permit would avoid or reduce these associated potential impacts below a level of significance.

The presence of shallow groundwater could also potentially affect the stability of proposed excavations (e.g., trench walls), resulting in safety or damage impacts to construction workers and equipment from caving. Project construction would be conducted in accordance with applicable Occupational Safety and Health Administration (OSHA) and CAL/OSHA standards related to (among other issues) the stability of excavations (e.g., 29 CFR Part 1926, Occupational Health Standards-Excavations). Conformance with these (or other appropriate) requirements would avoid or reduce potential impacts related to the stability of open excavations below a level of significance.

#### **5.14.6.3 Shallow Bedrock/Oversize Materials**

The generation of oversize rock fragments during grading and excavation can pose potential development hazards if improperly handled or placed onsite. Specifically, the presence of oversize materials in engineered fills can result in effects such as differential compaction and settlement, with related issues including adverse effects to overlying structures, pavement or drainage. As described in Section 5.14.2, *Environmental Setting*, the SDIA and adjacent areas typically encompass approximately 20 feet of artificial fill, with underlying bay deposits consisting of unconsolidated silt and clay materials. Based on these conditions and the nature of proposed grading and excavation, bedrock is not expected to be encountered during project construction, and no significant impacts related to shallow bedrock or oversize materials are anticipated from implementation of the Proposed Project.

#### **5.14.7 Cumulative Impacts**

As described above in this section, all project-specific geotechnical impacts would be avoided or reduced below identified significance thresholds through conformance with recommendations to be provided in the site-specific project geotechnical investigation, as well as established regulatory/industry standards. Potential geology and soils effects are inherently restricted to the areas proposed for development, and would not contribute to cumulative impacts associated with other planned or proposed development. Specifically, identified issues (including ground rupture, ground acceleration, liquefaction/settlement, tsunamis/seiches, landsliding/slope stability, expansive/corrosive soils, compressible materials, foundation/pavement design and shallow groundwater/bedrock) represent effects to (and not from) the proposed development, and/or are specific to on-site conditions. Accordingly, addressing these potential hazards for the proposed development involves using measures to conform with existing regulatory/industry standards, and/or site-specific design and construction efforts that have no relationship to, or impact on, off-site areas (e.g., avoiding liquefaction impacts through excavation/replacement of susceptible surficial deposits would not affect or be affected by similar deposits/hazards in off-site areas). Because of the site-specific nature of these potential hazards and the measures to address them, there is no connection to similar potential issues or cumulative effects to or from other properties.

#### **5.14.8 Mitigation Measures/Other Improvements**

Because no significant impacts related to geology and soils were identified for the project alternatives, no associated mitigation is necessary.

#### **5.14.9 Level of Significance after Mitigation Measures**

Potential impacts to geology and soils due to the Proposed Project are less than significant therefore mitigation measures will not be applied for this impact category. The level of significance specific to geology and soils impacts remains less than significant.



## 5.15 Hazards and Hazardous Materials

This section describes the general approach and methodology, regulatory framework, significance criteria, environmental setting, as well as considers potential hazards and hazardous materials impacts associated the operation of the Airport Land Use Plan, Proposed Airport Implementation Plan, Airport Implementation Plan Alternative and the No Project Alternative at SDIA. Comments in response to the NOP specific to potential hazards and hazardous material were received from the following agencies:

- Cal-EPA Department of Toxic Substances Control - Compliance with hazardous materials regulations; identification of contaminated properties; closure and/or remediation activities and approvals; and asbestos containing materials (ACM) and lead-based paint (LBP) disposal requirements
- County of San Diego Department of Environmental Health Land and Water Quality Division – construction on former General Dynamics site should include monitoring of all soil excavation and removal.

All written and oral comments received during the NOP process are provided in [Appendix A](#). Comments received specific to hazards and hazardous materials impacts are addressed within this section of the EIR.

Additionally, this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts.

### 5.15.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

Impacts related to hazards and hazardous materials associated with the proposed AMP Alternatives were analyzed following a three-step process that (1) address the potential for encountering existing environmental contamination or hazardous materials in the project area, (2) identify the types and quantities of hazardous materials generated during the operation and construction of the project, and (3) evaluate these findings with respect to appropriate significance criteria. With respect to hazardous materials, the information described in this section includes an overview of the regulatory context by which these substances are managed; what is known about hazardous materials at the Airport and in surrounding areas; and a determination as to whether the planned improvements to SDIA represent potentially significant environmental impacts in connection with these materials. Mitigation measures are also identified and discussed.

The changes to the Proposed Project and alternatives that are included in this ~~recirculated Draft~~ Final EIR do not affect the results of the hazard and hazardous materials analysis presented in the previously circulated Draft EIR. Specifically, the changes to the Proposed Project and alternatives do not include any new facilities that would potentially expose environmental contamination or hazardous materials. Additionally, based on the nature of the Proposed Project and alternatives and considering their potential effects to population and housing, extending the horizon year to 2030 would not change the findings of the previously circulated analysis of impacts.

For the purposes of this assessment, hazardous materials are meant to include the regulatory-defined terms of hazardous materials, hazardous wastes, hazardous substances and dangerous goods; environmental contamination to soil, surface waters and groundwater; as well the range of similarly regulated substances such as fuel and other petroleum-based products.

Other hazards evaluated include those related to the safety of nearby residents and workers, emergency response plans and wildland fires.

## **5.15.2 Regulatory Framework**

Hazardous materials are regulated by a number of federal laws and regulations - most of which are promulgated by the U.S. Environmental Protection Agency (EPA). These include the Resource Conservation & Recovery Act (RCRA), the Comprehensive Environmental Response Compensation & Liability Act (CERCLA), the Clean Air and Clean Water Acts (CAA, CWA), the Safe Drinking Water Act (SWDA), Hazardous Materials Transportation Act (HMTA) and the Emergency Planning & Community Right to Know Act (EPCRA). Together, these regulations serve as guiding principles governing the storage, use and transportation of hazardous and other regulated materials from their time of origin to their ultimate disposal. The recovery and clean-up of environmental contamination resulting from the accidental or unlawful release of these materials and substances are also governed by these regulations.

On the state level, the agency with similar authority to EPA over hazardous materials is the California Environmental Protection Agency (Cal-EPA). Specifically, the Cal-EPA Department of Toxic Substances Control (DTSC) is responsible statewide for matters concerning the use, storage, transport and disposal of hazardous materials. Similarly, California Integrated Waste Management Board (CIWMB) is responsible for the management of solid wastes and the Cal-EPA Office of Environmental Health Hazard Assessment (OEHHA) is involved in the evaluation of risks to public health and the environment posed by hazardous materials and environmental contamination. Importantly, Cal-EPA delegates much of the enforcement responsibility for hazardous materials to local governments under the Certified Unified Program Agency (CUPA) program.

Locally, the San Diego Department of Environmental Health (DEH) serves as the CUPA and is responsible for regulating hazardous materials, hazardous wastes and underground storage tanks (USTs) county-wide. The California (San Diego Region) Regional Water Quality Control Board (RWQCB) also has jurisdiction over the management of potential sources of surface and groundwater contamination such as the cleanup of UST and aboveground storage tank (AST) spill sites. The City of San Diego Solid Waste Department is designated as the Local Enforcement Agency (LEA) by the CIWMB and is responsible for enforcing regulations pertaining to solid waste disposal units (i.e., landfills, old burn dumps, etc.). Finally, the San Diego County Air Pollution Control District (APCD) is involved in the assessment of health and environmental hazards associated with toxic (or hazardous) air pollutants.

A listing of regulations pertaining to the management of hazardous materials and other hazard conditions in San Diego are listed in [Table 5-15.1](#).



Table 5-15.1

**Regulations Pertaining to the Management of Hazards and Hazardous Materials in San Diego County**

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---- Federal ----

Comprehensive Environmental Response, Compensation & Liability Act (CERCLA) – Regulation of former and new waste disposal and spill sites. Established the “Superfund” program and the National Priority List (NPL).

Resource Conservation & Recovery Act (RCRA) – Regulation of the generation, transportation, storage, treatment, and disposal of hazardous materials.

Clean Water Act (CWA) – Regulation of discharges and spills of pollutants (including hazardous materials) to surface and ground-waters.

Safe Drinking Water Act (SWDA) – Regulation of discharges of pollutants to underground aquifers.

Clean Air Act (CAA) – Regulation of discharges of air emissions (including hazardous air pollutants) to the ambient (i.e., “outside”) air.

Hazardous Materials Transportation Act (HMTA) – Regulation of the transport of hazardous materials by motor vehicles, marine vessels, and aircraft.

Emergency Planning & Community Right to Know Act (EPCRA) – Regulation of facilities that use hazardous materials in quantities that require reporting to emergency response officials.

---- State ----

Hazardous Materials Release Response Plans & Inventory Act – Requires facilities using hazardous materials to prepare Hazardous Materials Business Plans.

Hazardous Waste Control Act – Similar to RCRA on the federal level in regulating the generation, transportation, storage, treatment, and disposal of hazardous materials.

Safe Drinking Water & Toxic Enforcement Act – Similar to the SWDA and CWA on the federal level in regulating the discharge of contaminants to groundwater.

California Government Code Section 56962.5 – Requires the DTSC to compile and maintain lists of potentially contaminated sites throughout the State.

Emergency Services Act – Similar to EPCRA on the federal level.

---- Local ----

APCD Rules 50, 51, and 59 – Requires permits, monitoring plans, and other dust mitigation measures for large scale construction projects and waste sites.

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### 5.15.3 Significance Criteria

For hazards and hazardous materials, the criteria used to evaluate the potential impacts associated with the construction and implementation of the planned improvements to SDIA are derived from State of California CEQA guidelines and the City of San Diego, Development Services Department, *Draft CEQA Significance Thresholds*.<sup>179</sup> According to these guidelines, a project may have significant hazards or hazardous materials impacts if it could:

- Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Specific conditions include:
  - Located within 1,000 feet of a known contamination site.
  - Located within 2,000 feet of a known “border zone property” (i.e., “Superfund” site) or a hazardous waste property subject to corrective action pursuant to applicable health and safety codes.

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<sup>179</sup> 2006 CEQA Guidelines, Consulting Engineers and Land Surveyors of California, 2006 and City of San Diego, *Draft Significance Determination Thresholds*, California Environmental Quality Act (CEQA), Development Services Department, Land Development Review Division, Environmental Analysis Section, November, 2004.

- Involve excavation at a DEH closed site that could disturb contaminated soils.
- Located on or near an active or former landfill.
- Properties historically developed with industrial or commercial uses that involve dewatering in association with major excavation in an area of high groundwater.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.<sup>180</sup>
- For a project located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

#### **5.15.4 Environmental Setting**

Based upon the review of available documents, discussions with SDIA staff and an in-the-field survey of existing conditions, the types, characteristics and utilization of hazardous materials and other similarly regulated substances at SDIA are typical of most metropolitan airports that offer commercial service. Activities and facilities that involve the use of these materials include the fueling, servicing and repair of aircraft, ground support equipment (GSE) and motor vehicles; the operation and maintenance of the airfield, main terminal complex and passenger concourses; and a range of other special purposes connected with commercial aviation (i.e., rental car and air cargo facilities, navigation and air traffic control functions, etc.).<sup>181,182,183,184</sup>

By far, the overall largest quantities of substances used at SDIA that are classifiable as hazardous include aircraft and motor vehicle fuels. These fuels are contained in USTs and ASTs ranging in size from less than 500 to greater than 1,000,000 gallons and are located on airport property or at the adjoining rental car facilities. The aircraft fuel types predominately include Jet-A and Av-gas and the motor vehicle fuels include gasoline and diesel.

Other, smaller amounts of petroleum-products (e.g., lubricants and solvents), waste materials (i.e., used oils, cleaning residues, and spent batteries) and manufactured chemicals (i.e., herbicides, fertilizers, paints, fire-fighting foam, de-icing fluids, etc.) are used in various locations throughout the airport. These are characteristically used on a routine basis in support of aircraft, GSE and motor vehicle maintenance

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<sup>180</sup> California Government Code Section 65962.5 – Requires the DTSC to compile and maintain lists of potentially contaminated sites throughout the state.

<sup>181</sup> Brown and Caldwell, *Fate and Transport Modeling Report: Chlorinated Hydrocarbons, Lindbergh Field Plant, Building No. 1 Area*. Prepared for General Dynamics Division, April 1998.

<sup>182</sup> Brown and Caldwell, *Convair Lagoon PCB Technical Report*. Prepared for San Diego Unified Port District, January 2002.

<sup>183</sup> Essentia, Limited Environmental Baseline Summary (EBS) Report, General Dynamics Lindbergh Field Plant Facility. Prepared for San Diego County Regional Airport Authority, May, 2004.

<sup>184</sup> MACTEC, Storm Drainage System BMP Program Final Site Audit Report for San Diego International Airport, prepared for San Diego county Regional Airport Authority, June 2005.

activities and for a range of other functions to keep the airport operational and meet aviation safety requirements.

The SDCRAA and many of the tenants at SDIA have developed and implemented Stormwater Management Plans (SWMP) containing Best Management Practices (BMPs) intended to eliminate or reduce the release of contaminants into the environment. A number of these BMPs pertaining to hazardous materials include secondary containment and covered storage facilities; procedures and equipment for the clean up of spills and accidental releases; training, auditing, and other work practices.

There are also a number of sites and facilities located on, or adjacent to, Airport property that are known, or have the potential, to contain environmental contamination of the soil and/or groundwater. The identification of these sites is again based upon documents and other sources of information possessed by SDIA staff; an electronic search of federal, state and local agency databases; and an in-the-field survey of existing conditions. From this assessment, 15 individual sites (8 on the Airport and 7 off the Airport) are identified and discussed below, listed in [Table 5-15.2](#) and located on [Figure 5.15-1](#).

Table 5-15.2

**Sites and Facilities Reported or with the Potential to Contain Hazardous Wastes or Environmental Contamination in the Vicinity of SDIA**

Site No.	Name	Location	Summary Description
----- On Airport Property -----			
1.	Former Naval Training Center (NTC) Inactive Landfill	S.W. sector of airport, N. of Harbor Dr., E. of Navy Lagoon and W. of Term. 2W.	52-acre site formerly used by NTC and MCRD from the 1940s to 1971 as a municipal landfill for consumer waste, burn ash and construction debris. Presently vacant with a portion covered with asphalt for motor vehicle parking. A Closure Plan for waste removal and environmental review are under development.
2.	Former Rental Car Facility Fuel Farm	S.W. sector of airport, N. of Harbor Dr. and S. of Term. 2W.	2-acre site formerly used as a rental car facility and contained USTs. The buildings and tanks have been removed and the site is now covered by an asphalt roadway and parking lot. Residual soil/groundwater contamination remains in place.
3.	Former Lindbergh Field Fuel Farm	S.-central boundary of airport, N. of Harbor Dr. and W. of the Commuter Term.	5-acre site formerly used until 1995 as a fuel storage facility for jet fuel, av-gas and motor vehicle fuel. The tanks have been removed and the site is presently occupied with a one story office building and adjoining asphalt parking lot. Residual soil/groundwater contamination remains in place.
4.	Former US Air Hangar and Maintenance Facility (Commuter Terminal)	S. central sector of airport, N. of and adj. to the Commuter Term.	4-acre site formally occupied by an aircraft/GSE maintenance facility. Now covered with asphalt and concrete apron, the residual soil and groundwater contamination is not reported to be significant.
5.	Former Teledyne-Ryan Facility	S.E. sector of airport, N. of Harbor Dr.	Also known as the former Northrop Grumman Corp. and Ryan Aeronautical Company facility, this 47-acre site is presently occupied with vacant buildings and other supporting infrastructure. The environmental condition of the property is currently under litigation.
6.	Airport Fuel Farm	N. central sector of airport.	Site of the existing airport fuel farm. Contains two 1 million-gallon aboveground storage tanks for jet fuel. No reported environmental contamination or significant leaks.
7.	Former Lindbergh Field Live-Fire Training Facility	N. central sector of airport near Runway 13.	This 3-acre site was used until 1987 for live-fire training. Now covered with dirt or asphalt, the extent of residual soil/groundwater contamination (if any) is unknown.
8.	Former General Dynamics (Lindbergh	N.E. sector of airport; S. of	90-acre site formerly used for manufacturing of aircraft and other military equipment Presently vacant and

Table 5-15.2

**Sites and Facilities Reported or with the Potential to Contain Hazardous Wastes or Environmental Contamination in the Vicinity of SDIA**

<b>Site No.</b>	<b>Name</b>	<b>Location</b>	<b>Summary Description</b>
	Field Plant) Facility	Pacific Hwy.	serves as a staging area for unloading trucks and parking cars. Chemicals of concern include chlorinated hydrocarbons, petroleum hydrocarbons and chromium. Designated for "open field" land-uses.
<u>9.</u>	<u>Jimsair UST</u>	<u>S.E. of Site No. 8</u>	<u>Underground storage tank (UST) associated with an existing Fixed-base operator (FBO)</u>
<b>----- Off Airport Property -----</b>			
<u>9.</u> <u>10.</u>	Rental Car Facilities	S. of airport property, S. of Harbor Dr.	Sites contain USTs for storage of motor vehicle fuel. No report soil or groundwater contamination or significant spills.
<u>40.</u> <u>11.</u>	Convair Lagoon	S. of airport property, W. of the U.S. Coast Guard facility and S. of Harbor Dr.	10-acre shallow embayment, site of stormwater conveyance system outfall. Evidence of PCB contamination in sediments reported in 1979. Sampling indicates the former Teledyne-Ryan Facility is the primary source.
<u>44.</u> <u>12.</u>	U.S. Coast Guard Facility	S.E. of airport property, and S. of Harbor Dr.	Facility is listed on federal and state lists for hazardous materials and USTs. No report soil or groundwater contamination or significant spills.
<u>42.</u> <u>13.</u>	Solar Turbines Site	S.W. of airport property, N. of Harbor Dr.	Site of former aircraft parts manufacturing facility. Site is listed on federal and state lists for environmental corrective action.
<u>43.</u> <u>14.</u>	Former Rental Car Company	S.E. of airport property, E. of Runway 27	Site of former rental car service facility. Soil and groundwater contamination reported but is not expected to migrate onto adjoining properties.
<u>44.</u> <u>15.</u>	U.S. Marine Corps Recruit Depot	N.W. of and adjoining airport property.	Facility is listed on federal and state lists for hazardous materials use and USTs. No report soil or groundwater contamination or significant spills.
<u>45.</u> <u>16.</u>	Baron-Blakeslee Facility	N.E. of airport between Pacific Hwy. and I-5.	Chemical use and storage facility listed on state lists for environmental corrective action.

**Former Naval Training Center (NTC) Inactive Landfill - Site No.1**

Located in the southwest sector of the Airport, the majority of this 52-acre site is vacant with portions used by SDCRAA for long-term public vehicle parking and the temporary storage of construction debris. From the 1940s to 1971, the site was formerly used by NTC and U.S. Marine Corps Recruit Depot (MCRD) as a municipal landfill for solid waste.

Since 1986, numerous subsurface investigations have been performed both on the landfill and in adjoining areas to identify the waste types and delineate the horizontal and vertical extents of the buried material. The wastes are characterized primarily as consumer refuse (i.e., household garbage), burned refuse/ash (i.e., broken glass, charred metal and charcoal) and construction/landscaping debris (i.e., concrete, asphalt, bricks, wood, pipes, etc.). No evidence of drums or other containers of hazardous materials have yet been detected, but the dumping of such waste exists in historical reports. Located two to eight feet (ft.) below grade surface (bgs), the consumer refuse and burned refuse/ash are generally confined within trenches under the northern half of the site and the construction/landscaping debris is mostly located in the southern half.

Environmental test results indicate that some of the soils located between and beneath the trenches have been impacted and are contaminated with heavy metals and petroleum

hydrocarbons. Notably, the groundwater underlying the landfill (located 7 to 10 ft. bgs) has not been impaired by the waste materials.

SDCRAA plans call for this site to undergo closure: a process by which the buried wastes and impacted soils will be excavated and transported off site to approved disposal facilities.<sup>185</sup> A *Closure Plan for the NTC Inactive Landfill Site*, is under preparation in accordance with state and local guidelines, details the overall approach, clean-up criteria other environmental requirements for this action.<sup>186,187</sup>

In summary, the Closure Plan will be undertaken by a qualified contractor and involve the removal of an estimated 25,000 cubic yards (cy) of burned refuse/ash, approximately 150,000 cy of consumer refuse and roughly 25,000 cy of impacted soils. The removal and/or recompaction of the construction debris in the southern portion of the site is not part of this closure project. Prior to implemented, all the necessary permits, approvals and safeguards will be obtained and in-place. These will include an *Excavation, Well Abandonment, Coastal Development, Wastewater and Stormwater Discharge Permit(s); an Air Monitoring, Traffic Management, Waste Management and Disposal, Field Sampling and Analysis, Drainage and Stormwater Pollution Prevention Plan(s);* and a *Community Health & Safety Plan*<sup>188</sup> to address issues pertaining to noise and exhaust from heavy equipment (including diesel emissions), and potential mitigation measures for fugitive dust and odors. Post-closure requirements, if any, would also be determined.

As the lead agency under CEQA, SDCRAA's approach to the Closure Plan comprises an *Initial Study* (to verify that there would be no significant environmental impacts) and to prepare an environmental review document; also in compliance with CEQA. Importantly, this clean-up plan is being implemented in order to permanently eliminate any long-term environmental threats and to discontinue the ongoing maintenance and monitoring requirements associated with the NTC Inactive Landfill. Therefore, the action has independent utility from the proposed AMP improvements and will be accomplished whether or not the Airport improvements go forward. As a result, the CEQA review processes for these two projects are treated separately. The SDCRAA released the Final EIR for the Former NTC Landfill Remediation November, 2007.

Further coordination between RWQCB (the lead agency for the project), DEH, APCD, LEA and SDCRAA staff are presently underway to update and attain approval for the plan. Community notifications and informational meetings will also be held.

### **Former Rental Car Facility Fuel Farm - Site No. 2**

Located in the southwest sector of the airport, south of Terminal 2W and north of Harbor Drive, this 2-acre site was formerly used as by rental car companies to maintain and refuel motor vehicles. The buildings and USTs were removed in 1976 and the site is now covered by the Terminal 2 egress roadway and parking lot. Environmental testing from the mid-1990s reveals fuel-based soil and groundwater contamination are still present, but do not present a significant environmental threat.<sup>189</sup>

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<sup>185</sup> Correspondence John Robertus, Executive Officer to Ms. Thella Bowens, President, San Diego County Regional Airport Authority, June 6, 2005.

<sup>186</sup> Ninyo & Moore, *Clean Closure Plan, Naval Training Center Inactive Landfill*, San Diego California, prepared for San Diego Unified Port District, November 2002.

<sup>187</sup> Title 27 California Code of Regulations "General Closure and Post-Closure Maintenance Standards Applicable to Waste Management Units for Solid Wastes."

<sup>188</sup> Ninyo & Moore, *Community Health and Safety Plan, Former Naval Training Center Inactive Landfill Clean Closure*, San Diego California, prepare for San Diego county Regional Airport Authority, March 13, 2006.

<sup>189</sup> SDCRAA, Communication between Rick Adcock and Michael Kenney, KB Environmental Inc. regarding Former Rental Car Facility – Terminal 2 Parking Lot, San Diego County Regional Airport Authority, 2006.

### **Former Lindbergh Field Fuel Farm - Site No. 3**

This site is located along south-central border of the Airport, north of Harbor Drive and west of the Commuter Terminal. Used from 1955 to 1995 as a fuel storage facility for jet fuel, Av-gas, automotive fuel and waste oil, this 5-acre site contained approximately 35 USTs over the years.<sup>190</sup> The storage tanks and piping as well as most of the residual fuel and contaminated soil were removed in 1997. The site is presently occupied by a SDCRAA one-story office building and asphalt parking lot for employees. The roundwater plume, bounded by Harbor Drive and Stillwater Road (now the Commuter Terminal Egress Road), was treated in-place with bioremediation.

### **Former US Air Hangar and Maintenance Facility - Site No. 4**

Located in the south-central sector of the Airport, north of and adjacent to the existing Commuter Terminal, this area is now used as an aircraft apron. Formally the site was occupied by US Air and used as an aircraft/GSE maintenance facility, which has been demolished. Environmental testing revealed petroleum- and chlorinated-hydrocarbons in the underlying soils and groundwater.<sup>191</sup> However, the overall impacts are not reported to be significant.

### **Former Teledyne-Ryan Facility - Site No. 5**

Located in the southeast sector of the airport, east of the Commuter Terminal and north of Harbor Drive, this site was also known as the former Ryan Aeronautical Company and the former Northrop Grumman facility. Approximately 47-acres in size, this site is presently occupied with a large factory assembly building, paint shops, laboratory and other support facilities that are empty or no longer in use. The entire facility is undergoing litigation and the clean-up requirements will be determined during the course of this process.<sup>192,193</sup>

### **Airport Fuel Farm - Site No. 6**

Located in the north-central area of the Airport, this facility contains two large ASTs for the storage of jet fuel. The tanks have secondary containment, overfill protection and other environmental safeguards. There have been no reported spills or incidents of environmental contamination at this site.

### **Former Lindbergh Field Live-Fire Training Facility - Site No. 7**

Located in the north-central sector of the Airport near the end of former Runway 13, this site was used for live-fire training from 1953 to 1987. Now covered with dirt or asphalt, it is not known if any residual environmental contamination exists at this site.<sup>194</sup>

### **Former General Dynamics Facility - Site No. 8**

Located in the northeast sector of the Airport adjacent to the Pacific Highway and among a mixture of commercial and light industrial business, this 89-acre site is presently used by the San Diego Port Authority as a staging area for unloading trucks and parking cars. From 1937 to 1995, the site (also known as the Consolidated Aircraft Corporation ("Convair" facility) contained a manufacturing complex for military aircraft which involved a variety of industrial processes such as electroplating, vapor degreasing and the painting of parts and equipment.<sup>195</sup> The buildings and

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<sup>190</sup> AMEC Earth & Environmental, *Historical Review of Lindberg Field, San Diego International Airport*, prepared for Port of San Diego, June 14, 2002.

<sup>191</sup> Ibid, AMEC.

<sup>192</sup> Ibid, AMEC.

<sup>193</sup> Clean Up and Abatement Order (CAO) No. R9-2004-0258 from the California Regional Water Quality Control Board.

<sup>194</sup> Ibid, AMEC.

<sup>195</sup> Ibid, Brown and Caldwell; Ibid, Essentaia.

supporting facilities (i.e., holding tanks, USTs/ASTs, pipelines, etc.) were demolished or removed and the site permanently decommissioned by 1998.

For the purposes of conducting follow-up subsurface investigations, the site has been segregated into several areas based upon their historical uses and environmental condition. From these investigations, it has been determined that the primary soil and groundwater contaminants consist of total petroleum hydrocarbons, chlorinated hydrocarbons and chromium. In most cases, the presence of these compounds is limited to only a few areas, confined to below the water table (i.e., 7 to 10 ft., bls) and are diminishing in concentrations from natural attenuation.

Currently, the site is covered with an impermeable layer of a compacted crushed gravel/sand mixture and sealed with an asphalt emulsion. Stormwater runoff is controlled through a system of storm drains. Because of these conditions and as there are no groundwater supply wells or sensitive receptors (i.e., daycare centers, schools, hospitals or nursing homes) nearby, portions of the site have been approved by DEH for "open field" land uses as long site conditions remain the same (i.e., the impervious cap is not disrupted and no sub-surface structures are constructed). Further coordination between DEH (the lead environmental agency for the site), LEA and SDCRAA staff is presently underway to extend this land-use designation to other areas of the site.

#### **Jimsair UST – Site No. 9**

Located southeast and adjacent to Site No. 8, the site is a fixed-base operator (FBO) that contains underground storage tanks (UST) for fuel. It is not known if this site contains environmental contamination.

#### **Rental Car Facilities - Site No. 9 10**

Located off-airport property, south of Harbor Drive, this site is used by several rental car companies for the parking, maintenance and refueling of cars. These facilities appear on state lists of USTs but no significant spills or leaks are reported.<sup>196</sup>

#### **Convair Lagoon - Site No. 40-11**

Located off airport property, south of Harbor Drive and west of the U.S. Coast Guard facility, this area (also known as the "Tow Basin") is the site of two stormwater system outfalls. Consisting of a 10-acre shallow embayment, evidence of polychlorinated biphenyls (PCB) contamination in sediments was first reported in 1979.<sup>197</sup> Subsequent environmental investigations and testing indicates the former Teledyne-Ryan Facility (Site No. 5) was the primary source of these contaminants. As a precautionary measure, the remaining sediments in the two stormwater systems were removed and BMPs are in place to prevent further PCB contamination.

#### **U.S. Coast Guard Facility – Site No. 44-12**

Located off airport property, south of Harbor Drive and east of the Rental Car facilities, this facility is on several federal and state lists for hazardous materials and USTs. However, there are no reports of significant spills or environmental contamination.<sup>198</sup>

#### **Solar Turbines Site – Site No. 42-13**

Located off airport property and southeast of the U.S. Coast Guard facility, this is a site of a former aircraft parts manufacturing facility that is on both federal and state lists for environmental corrective actions.<sup>199</sup>

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<sup>196</sup> EDR, Radius Map, San Diego International Airport, San Diego CA, Inquiry No. 1547851.2s, Environmental Data Resources, prepared for KB Environmental Sciences, Inc., November 8, 2005.

<sup>197</sup> Ibid, Brown and Caldwell, 2002.

<sup>198</sup> Ibid, EDR.

<sup>199</sup> Ibid.

#### **Former Rental Car Facility - Site No. 13-14**

Located off airport property at the intersection of Pacific Highway/Laurel Street and near the end of Runway 27, this site was reported to have limited soil/groundwater contamination from a UST. Environmental tests from 1998 indicate the contaminants would not likely migrate off-site and onto airport property.<sup>200</sup>

#### **U.S. Marine Corps Recruit Depot - Site No. 14-15**

Located adjacent to the northern boundary of airport property, this facility is listed on federal and state lists for hazardous materials use and USTs. However, there are no reports of significant spills or environmental contamination.<sup>201</sup>

#### **Baron-Blakeslee Facility - Site No. 15-16**

Located off the northeastern border of the airport between the Pacific Highway and I-5, this site is reported in federal and state listings sites requiring environmental corrective actions.<sup>202</sup>

Importantly, there are no sites or facilities at SDIA or in the immediate vicinity that are listed on the federal "Superfund" National Priorities List (NPL).

### **5.15.5 Impact Analysis**

This section considers potential hazards and hazardous materials impacts associated with the Proposed Project (Preferred Alternative) and its alternatives.

Impacts related to hazards and hazardous materials associated with the proposed AMP Alternatives were analyzed following a three-step process that (1) address the potential for encountering existing environmental contamination or hazardous materials in the project area, (2) identify the types and quantities of hazardous materials generated during the operation and construction of the project, and (3) evaluate these findings with respect to appropriate significance criteria.

The first step was accomplished by mapping areas of known and/or potential environmental contamination identified above in Section 5.15.4, *Environmental Setting*, and then comparing these sites to the locations of the AMP improvements. For those areas where no existing source(s) or evidence of environmental contamination or hazardous materials exists, no additional analysis was conducted. However, in cases where the planned improvements are located on or adjacent to properties where these substances and materials could be encountered, the potential impacts were further evaluated. For the purposes of this analysis, the evaluation focused on the disruption or spreading of environmental contamination and the creation of other potential hazards.

The second step was performed by evaluating the types of projects included in the AMP with emphasis on the use, storage and disposal of hazardous materials during the operational and construction phases. The basis of this assessment was developed from what is known about existing land-uses and facilities at the Airport (also reported in Section 5.15.4, *Environmental Setting*) combined with information about current construction practices.

The third step was conducted by comparing the findings from Steps 1 and 2 to the regulatory requirements and guidelines and the CEQA significance thresholds listed above in Sections 5.15.3 (*Significance Criteria*) and 5.15.4 (*Environmental Setting*), respectively. The outcome of this analysis is reported in the sections that follow, by alternative (i.e., Land Use Plan, Airport Implementation Plan, Airport Implementation Plan Alternative, and the No Project Alternative).

Another facet of the assessment pertains to the project's potential to create hazards to humans or the environment through the use, storage, transport, or accidental release of hazardous materials. The

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<sup>200</sup> Ibid, AMEC.

<sup>201</sup> Ibid, EDR.

<sup>202</sup> Ibid.



potential for the project to impair or interfere with emergency response plans was also evaluated. These findings are also discussed in the sections that follow.

### **5.15.5.1 Proposed Project (Preferred Alternative)**

#### **Proposed Airport Land Use Plan**

The Proposed Airport Land Use Plan for SDIA could involve some of the conditions contained in the Significance Criteria listed above in Section 5.15.3, *Significance Criteria*. As shown in **Figure 5.15-2**, elements of the proposed improvements to SDIA are planned in areas that contain hazardous materials and/or environmental contamination. These sites are listed in **Table 5.15-2** under the On-Airport section and include former aircraft fueling and manufacturing facilities; a former rental car facility; and a former landfill. However, plans are already in place or under development to avoid or mitigate any potential impacts associated with these sites.

Because the Airport Land Use Plan will not involve the generation, use or storage of hazardous materials in quantities or types that are substantially different from those that are currently associated with the Airport, the proposed plan would not create additional long-term risks to the public or the environment from these substances. Similarly, there are no other potential hazards to public safety, impairment to emergency response or evacuation plans or an increased risk of wildland fires associated with the Proposed Airport Land Use Plan.

#### **Proposed Airport Implementation Plan**

As shown in **Figure 5.15-2**, elements of the Proposed Airport Implementation Plan are located in, or adjoining, areas of the Airport that contain hazardous materials and/or environmental contamination. Therefore, the adoption of the plan would involve some of the conditions contained in the Significance Criteria listed above in Section 5.15.3. Specifically, these impacts are summarized as follows:

- The expanded terminal, additional aircraft gates, new aircraft parking aprons and the aircraft taxi-lane as well with the new surface parking lot associated with the expanded Terminal 2 West are partially located on the Former NTC Landfill (Site No. 1). However, a *Closure Plan* for the complete removal of wastes from this site as well as environmental review documentation are under current development by SDCRAA.
- The new parking structure and vehicle circulation improvements serving Terminal 2 are located in the area of the Former Rental Car Facility Fuel Farm (Site No. 2) and Former Lindbergh Field Fuel Farm (Site No. 3). In both areas, the extent of residual contamination has been fully delineated, is petroleum-based and, therefore, can be addressed in accordance with state and local requirements during the construction phase, if necessary.
- The reconfiguration of SAN Park Pacific Highway, the new access road to the North Area facilities, the new General Aviation facilities, the reconstruction of Taxiway C, and the multi-modal Transit Center to be associated with the CONRAC facility / public parking structure in the north area, are all located in the vicinity of the former General Dynamics Facility (Site No. 8), and the Jimsair UST (Site No. 9). Because the residual contaminants underlying ~~this~~ the former General Dynamics Facility site are covered with an impervious layer and are not a hazard to neighboring land-uses or the environment, the majority of this area has been designated for “open field” land-uses. Further coordination with local agencies is underway by SDCRAA to extend this designation to other areas of the site. The Jimsair site UST will be addressed according to appropriate fuel clean-up guidances, should contamination exist.
- The former Teledyne-Ryan Facility is currently under a Clean Up and Abatement Order. Therefore, the full extent of any involvement with ACM and/or LBP as well as the delineation of underlying environmental contamination will be determined by the responsible parties and independently from the AMP process. Based upon the outcomes of these assessments, the necessary abatement and clean-up actions required under federal, state and local regulations will be determined. Until these requirements are further identified and achieved, no actions or projects associated with the Airport Implementation Plan will be undertaken that could potentially interfere with these measures.

As the previously described impacts require action to limit their potential effect to a less than significant level the following project improvements are included:

- For the former NTC landfill, A Closure Plan will address all the necessary mitigation measures including those pertaining to groundwater, dust, odors, surface traffic, water management, public health, and safety, etc.
- For the former Rental Car Fuel Facility and Lindbergh Field Fuel Farm, the AMP construction plans and specifications will include provisions for the handling, treatment and/or disposal of petroleum-contaminated soils and/or groundwater, should they be encountered. These provisions may include the excavation and off-site disposal of impacted soils and the proper recovery and treatment of impacted groundwater.
- In addition to maintaining the impervious layer that covers the former General Dynamics site, these same provisions discussed above will also apply to any contaminants encountered at this location.
- For any areas on or surrounding the former Teledyne-Ryan Facility, the necessary abatement and clean-up actions required under federal, state and local regulations will be determined as part of the Clean Up and Abatement Order. Until these requirements are further identified and achieved, no actions or projects associated with the site will be undertaken that could potentially interfere with these abatement and clean up actions.

With incorporation of these project improvements and because the Proposed Airport Implementation Plan would not involve the generation, use or storage of hazardous materials in quantities or types that are substantially different from those that are currently associated with the Airport, the Proposed Project (Preferred Alternative) would not create a significant long-term hazard to the public or the environment. Moreover, the projects would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within ¼ mile of a school nor are they located within 2,000 ft. of a Superfund site.

There are no other potential hazards to public safety associated with the Proposed Airport Implementation Plan as the projects would not substantially change the operational characteristics of the airfield, impair or interfere with emergency response or evacuation plans nor involve wildland fires.

### **5.15.5.2 East Terminal Alternative**

#### **Airport Land Use Plan**

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the proposed Airport Land Use Plan (see Chapter Four, section 4.2.1, *Airport Land Use Plan*, for a detailed explanation). Therefore, the East Terminal Alternative includes the Proposed Airport Land Use Plan. As under the Proposed Project (Preferred Alternative), the East Terminal Alternative would not create additional long-term risks to the public or the environment from these substances. Similarly, there are no other potential hazards to public safety, impairment to emergency response or evacuation plans or an increased risk of wildland fires associated with the East Terminal Alternative.

#### **Airport Implementation Plan Alternative**

As shown in **Figure 5.15-3** elements of the Airport Implementation Plan Alternative are located in, or adjoining, areas of the Airport that contain hazardous materials and/or environmental contamination. Therefore, the adoption of the plan would involve some of the conditions contained Section 5.15.3. *Significance Criteria*. Specifically, these impacts are summarized as follows:

- The new aircraft gates, new aircraft parking and RON aprons and the aircraft taxi-lane as well with the new surface parking lot associated with the expanded Terminal 2 West are partially located on the Former NTC Landfill (Site No. 1). However, a *Closure Plan* for the complete removal of wastes from this site as well as environmental documentation is currently under development by SDCRAA.
- The new parking structure and vehicle circulation improvements serving Terminal 2 are located in the area of the Former Rental Car Facility Fuel Farm (Site No. 2) and Former Lindbergh Field

Fuel Farm (Site No. 3). In both areas, the extent of residual contamination has been fully delineated, is petroleum-based and, therefore, can be addressed in accordance with state and local requirements during the construction phase, if necessary.

- The reconfiguration of SAN Park Pacific Highway, the new access road to the North Area facilities, the new General Aviation facilities, the reconstruction of Taxiway C, and the multi-modal Transit Center to be associated with the CONRAC facility / public parking structure in the north area, are all located in the vicinity of the former General Dynamics Facility (Site No. 8), and Jimsair UST(Site No. 9). Because the residual contaminants underlying ~~this~~ the former General Dynamics Facility site are covered with an impervious layer and are not a hazard to neighboring land-uses or the environment, the majority of this area has been designated for “open field” land-uses. Further coordination by SDCRAA with local agencies is underway to extend this designation to other areas of the site. The Jimsair UST will be addressed according to appropriate clean-up guidelines for fuel contamination, should it exist.
- The former Teledyne-Ryan Facility is currently under a Clean Up and Abatement Order. Therefore, the full extent of any involvement with ACM and/or LBP as well as the delineation of underlying environmental contamination will be determined by the responsible parties and independently from the AMP process. Based upon the outcomes of these assessments, the necessary abatement and clean-up actions required under federal, state and local regulations will be determined. Until these requirements are further identified and achieved, no actions or projects associated with the Airport Implementation Plan will be undertaken that could potentially interfere with these measures.

As the previously described impacts require action to limit their potential effect to a less than significant level the following project improvements are included:

- For the former NTC landfill, a Closure Plan will address all the necessary mitigation measures including those pertaining to groundwater, dust, odors, surface traffic, water management, public health, and safety, etc.
- For the former Rental Car Fuel Facility and Lindbergh Field Fuel Farm, the AMP construction plans and specifications will include provisions for the handling, treatment and/or disposal of petroleum-contaminated soils and/or groundwater, should they be encountered. These provisions may include the excavation and off-site disposal of impacted soils and the proper recovery and treatment of impacted groundwater.
- In addition to maintaining the impervious layer that covers the former General Dynamics site, these same provisions discussed above will also apply to any contaminants encountered at this location.
- For any areas on or surrounding the former Teledyne-Ryan Facility, the necessary abatement and clean-up actions required under federal, state and local regulations will be determined as part of the Clean Up and Abatement Order. Until these requirements are further identified and achieved, no actions or projects associated with the site will be undertaken that could potentially interfere with these abatement and clean up actions.

With incorporation of these project improvements and because the Airport Implementation Plan Alternative would not involve the generation, use or storage of hazardous materials in quantities or types that are substantially different from those that are currently associated with the Airport, the projects would not create a significant long-term hazard to the public or the environment. Moreover, the projects would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within ¼ mile of a school nor are they located within 2,000 ft. of a Superfund site.

There are no other potential hazards to public safety associated with the Airport Implementation Plan Alternative as the projects would not substantially change the operational characteristics of the airfield, impair or interfere with emergency response or evacuation plans, nor involve wildland fires.

### **5.15.5.3 No Project Alternative**

Adoption of the No Project Alternative would not impact any of the Significance Criteria listed in section 5.15.3, *Significance Criteria*. This is because this alternative would not involve construction or other subsurface activities that could encounter hazardous materials or environmental contamination nor would it have any affect on the types or quantities of hazardous materials currently used at the Airport.

### **5.15.6 Construction Impacts**

As discussed above in Section 5.15.5, *Impact Analysis*, elements of the Proposed Airport Implementation Plan and the Airport Implementation Plan Alternative are located in, or adjoining, areas of the Airport that contain hazardous materials and/or environmental contamination. For the Former NTC Landfill (Site No. 1), a *Closure Plan* (to be published separately) would address all of the potential construction-related impacts including those associated with stormwater, surface traffic, waste management and waste disposal.<sup>203</sup> In the areas of the Former Rental Car Facility Fuel Farm (Site No. 2) and Former Lindbergh Field Fuel Farm (Site No. 3), petroleum-contaminated soil and/or groundwater may be encountered by the construction contractor. Therefore, the Plans and Specification for the Proposed Project would require the contractor(s) to include provisions for handling and disposing of these materials in accordance with state and local regulations, if it becomes necessary. The same precautions would be required for the Former General Dynamics Facility (Site No. 8).

During the construction of the Proposed Airport Implementation Plan or the Airport Implementation Plan Alternative, hazardous materials (i.e., fuel, waste oil, solvents, paint, and other hydrocarbon-based products) would be used in quantities that are typical of the construction industry. Again, the construction contract documents would require these materials be stored, labeled and disposed of in accordance with state and local regulations. The contractors would also be held responsible for reporting any discharges of hazardous materials or other similar substances (in amounts above their reportable quantities).

### **5.15.7 Cumulative Impacts**

There are several sites both on, and adjoining, SDIA that are known or have the potential to contain hazardous materials and environmental contamination. The most potentially significant of these are the former NTC Landfill, former Teledyne-Ryan Facility, and former General Dynamics Facility.

At the former NTC Landfill (Site No. 1) located in the southwest sector of the Airport, all the waste materials would be removed following a Closure Plan and under a separate environmental review and approval process. Therefore, although this action would proceed independently from either the Proposed Airport Implementation Plan or the Airport Implementation Plan Alternative, it would be accomplished in accordance with all the necessary regulatory safe-guards and requirements.

The former Teledyne-Ryan Facility (Site No. 5), located in the southeast sector of the Airport, the necessary abatement and clean-up actions required under federal, state, and local regulations would be determined as part of the Clean Up and Abatement Order. Until these requirements are further identified and achieved, no actions or projects associated with the site would be undertaken that could potentially interfere with these abatement and clean up actions.

The former General Dynamics Facility (Site No. 8), located in the northeast sector of the Airport, is covered with an impervious layer and the majority of the site is designated for open field land uses. Therefore, the underlying soil/groundwater contamination poses no significant risk to human health or the environment.

The Jimsair UST (Site No. 9), located next to the former General Dynamics Facility, will be addressed according to appropriate fuel contamination clean-up criteria, should it exist.

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<sup>203</sup> A Community Health and Safety Plan has been developed for the former NTC Landfill (Ninyo & Moore, *Community Health and Safety Plan, Former Naval Training Center Inactive Landfill Clean Closure*, San Diego California, prepare for San Diego county Regional Airport Authority, March 13, 2006).

The other sites that are known or have the potential to contain environmental contamination on, or in the immediate vicinity of SDIA (i.e., the Former Rental Car Facility and Lindbergh Field Fuel Farms (Site Nos. 2 and 3), the former USAir Hangar and Maintenance Facility (Site No. 4), Solar Turbines Site (Site No. 12), etc.) will all be addressed independently based upon their individual timelines and requirements.

Based on the above and because of the requirements and safeguards imposed by federal, state and local regulations associated with hazardous materials and environmental contamination, it is very unlikely that the cumulative impacts to public health or the environment would become significant with respect to these sites.

### **5.15.8 Mitigation Measures/Other Improvements**

Because the project improvements are provided to reduce potential impact associated with hazards and hazardous materials resulting from the Proposed Project there would be a less than significant impact due to hazards and hazardous materials.

### **5.15.9 Level of Significance after Mitigation Measures**

According to the information in Section 5.15.3, *Significance Criteria*, the only significance criteria applicable to project implementation involve environmentally-contaminated sites that are located in close proximity to the Proposed Project (Preferred Alternative). These include the former NTC Landfill, former Rental Car Fuel Facility, former Lindbergh Field Fuel Farm, former General Dynamics site, and the former Teledyne-Ryan facility.

For the former NTC Landfill, the Closure Plan would address all the necessary mitigation measures including those pertaining to groundwater, dust, odors, surface traffic, waste management, public health and safety, etc. For the former Rental Car Fuel Facility and Lindbergh Field Fuel Farm, the construction plans and specifications would include provisions for the handling, treatment and/or disposal of petroleum-contaminated soils and/or groundwater, should they be encountered. These provisions may include the excavation and off-site disposal of impacted soils and the proper recovery and treatment of impacted groundwater. In addition to maintaining the impervious layer that covers the former General Dynamics site, the same sets of provisions would also apply to any contaminants encountered at this location. In the case of the former Teledyne-Ryan facility, the mitigation requirements will be determined as part of the ongoing clean-up and abatement order, and no activity would be undertaken at this site until this process is completed.

Based on this assessment of sites and facilities containing hazardous materials and/or environmental contamination in the vicinity of SDIA combined with the proposed project improvements discussed within the impact analysis for this impact category, the Proposed Project is not expected to:

- Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- Result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with and adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

## 5.16 Human Health Risk Assessment

This section describes the approach and methodology, regulatory framework, CEQA Significance Criteria and the results of a human health risk assessment (HHRA) conducted for the Proposed Airport Implementation Plan, the Airport Implementation Plan Alternative and the Proposed Airport Land Use Plan at SDIA. Comments in response to the NOP specific to potential human health risks and effects were received from the following agencies and individuals:

- Department of Toxic Substances Control and California Air Resources Board (CARB) - Risks to human health from release of hazardous air pollutants (HAPs)
- CARB - Health effects of diesel PM.
- General Public - Health impacts from surface traffic and potential effects on cancer risks.

All written and oral comments during the NOP process are provided in [Appendix A](#). Review comments on the previous Draft EIR circulated in May 2006 that pertain to human health were submitted by the Peninsula Community Planning Board and the San Diego Unified Port District and include the following:

- Address the effects to human health of the nearby residents from increased flights.
- Address the effects to the health of on-site workers.

These comments are addressed in this section. Other review comments received pertaining to human health are addressed in Section 5.5, *Air Quality*.

### 5.16.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

In general terms, a HHRA evaluates the potential impacts upon cancer risks and other human health effects associated with the exposure to HAPs (or “toxic” air pollutants).<sup>204, 205</sup> The assessment methods are designed to estimate the highest possible (i.e., upper bound) risks to the most sensitive members of the population (i.e., children, elderly, infirm) as well as those that are potentially exposed to HAPs on a routine and prolonged basis (i.e., residents and workers).

The results of the HHRA are used to compare the potential changes in cancer and health risks between the ~~Baseline (2005) and future year~~ conditions under the No Project Alternative and those under the Project Alternatives (Preferred Project and Airport Plan Alternatives) during (2010, 2015, 2020, 2025, and 2030) conditions, both with and without the planned improvements to SDIA. For this reason, it is termed

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<sup>204</sup> For the purposes of this assessment, the term “hazardous air pollutants” (“HAPs”), is meant to mean the same as “toxic air pollutants” (“TAPs”) and “toxic air contaminants” (“TACs”).

<sup>205</sup> Human health effects (i.e., non-cancer) comprise disorders such as eye watering, respiratory or heart ailments, and other related diseases.

an “incremental” HHRA as the differences between the ~~existing conditions with and without the Project and future conditions~~ are important; not the absolute values.

Importantly, because the emissions of airport-related HAPs are directly linked to the emissions of other regulated pollutants (i.e., hydrocarbons (HC) and particulate matter (PM)), this HHRA is based in large part on the air quality impact assessment presented previously in Section 5.5, *Air Quality* for the “criteria” air pollutants. For example, the same sources of emissions (i.e., aircraft, GSE, motor vehicles), levels of activity and operations and other modeling parameters (i.e., receptor locations, meteorological data, etc.) are used for both sets of analyses. This HHRA was also conducted in accordance with technical guidelines developed by the U.S. and California Environmental Protection Agencies (U.S. EPA and CalEPA) and the San Diego Air Pollution Control District (SDAPCD) in support of this specialized topic.<sup>206,207,208</sup>

### **5.16.1.1 Terms and Definitions**

As the practice of conducting a HHRA is particularly complex and involves concepts that are not altogether familiar to most reviewers, several terms and definitions are provided below that are considered essential to the understanding of the approach, methodology and results:

*Acute effect* – a health effect (non-cancer) produced within a short period of time (few minutes to several days) following an exposure to HAPs.

*Cancer risk* – the probability of an individual contracting cancer from a lifetime (i.e., 70 years) exposure to HAPs in the ambient air.<sup>209</sup>

*Chronic effect* – a health effect (non-cancer) produced from a continuous exposure occurring over an extended period of time (weeks, months, years).

*Criteria air pollutants* – a series of common air pollutants regulated by the Federal or California Clean Air Acts (i.e., CO, NO<sub>2</sub>, O<sub>3</sub>, particulate matter, etc.).

*Hazard Index (HI)* – the unitless ratio of an exposure level over the acceptable reference dose (RfC). The HI should be less than 1.0 and can be applied to multiple compounds in an additive manner.

*Hazardous Air Pollutants (HAPs)* – any air pollutants that can cause health effects in humans that are not regulated as “criteria” pollutants.

*Human Health Effects* - comprise disorders such as eye watering, respiratory or heart ailments, and other (i.e., non-cancer) related diseases.

*Human Health Risk Assessment (HHRA)* – an analysis designed to predict the generation and dispersion of HAPs in the outdoor environment, evaluate the potential for exposure of human populations, and to assess and quantify both the individual and population-wide health risks associated with those levels of exposure.

*Incremental* – under CEQA, the net difference (or change) in conditions or impacts when comparing the ~~baseline (existing) to future year~~ conditions with and without the project.

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<sup>206</sup> *Air Toxics Risk Assessment Reference Library, Technical Resource Manual*, U.S. Environmental Protection Agency, 2004.

<sup>207</sup> *Air Toxics Hot Spots Program Risk Assessment Guidelines*, Parts I-IV and Appendices, California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, 1997 - 2003.

<sup>208</sup> *Supplemental Guidelines for Submission of Air Toxics “Hot Spots” Program Health Risk Assessments (HRAs)*, San Diego Air Pollution Control District, March 2005.

<sup>209</sup> An individual lifetime cancer risk of 100 in 1 million indicates that an individual continuously exposed to the specified concentration of HAPs over the course of a 70-year lifetime would have a 100 in 1 million increase in risk of contracting cancer. According to the American Cancer Society, Americans are subject to a cancer risk of 250,000 in 1 million during their lifetimes, by comparison.

*Maximum exposed individual (MEI)* – an individual assumed to be located at the point where the highest concentrations of HAPs, and therefore, health risks are predicted to occur.

*Non-cancer risks* – health risks such as eye watering, respiratory or heart ailments, and other non-cancer related diseases.

*Pathway* – the means by which humans come into contact with HAPs in the ambient environment (i.e., inhalation, ingestion or absorption).

*Receptors* – the locations where potential health impacts or risks are predicted (schools, residences and work-sites).

*Reference concentration (RfC)* – an estimate of the amount of contaminate inhaled that is likely to be without risk or other deleterious health effects over a lifetime of exposures.

*Reference exposure level (REL)* – a hazard quotient less than 1.0 indicates there is very little likelihood of adverse health effects.

*Speciation profiles* – the numerical fraction (or percent) of HAPs as part of total hydrocarbons or particulate matter.

Notably, many other terms apply to this and other HHRA but they are used less frequently or have some other special or unique applications that are not used in this analysis. Therefore, they are not listed or defined here for purposes of brevity.

### **5.16.1.2 Limitations and Uncertainties**

There are also a number of important limitations and uncertainties commonly associated with a HHRA due to the wide variability of human exposures to HAPs, the extended timeframes over which the exposures are evaluated and the inability to verify the results. These factors are no more pronounced than when conducting a HHRA for airports – facilities that are traditionally not subject to such an analysis and for which “real world” information is just beginning to emerge<sup>210</sup>. Among these challenges are the following:

- Neither airports, aircraft or GSE meet the definitions of the source categories that are regulated under Section 112 (*Hazardous Air Pollutants*) of the Federal CAA, the California Air Toxics Hot Spots Information and Assessment Act or by the San Diego Air Pollution Control District (SDAPCD).<sup>211,212,213</sup>
- The current guidance and methodologies for modeling HAPs and conducting a HHRA are principally intended and designed to assess “stationary point” (i.e., smokestack) sources of air emissions. By comparison, an airport is an assemblage of moving (or “mobile”) “line” sources (i.e., runways, taxiways, roadways) and “area” sources (i.e., aircraft aprons, fuel farms and motor vehicle parking facilities).
- HAPs speciation profile data for aircraft engines are currently very limited and based upon aircraft types that are not commonly associated with commercial aviation. Therefore, the HAPs emissions

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<sup>210</sup> *Select Resource Materials and Annotated Bibliography on the Topic of Hazardous Air Pollutants (HAPs) Associated with Aircraft, Airports and Aviation*, prepared for the Federal Aviation Administration, Office of Environment and Energy, July 1, 2003

<sup>211</sup> *Clean Air Act*, as amended (42 U.S.C. 7401 et seq.) Section 112, Hazardous Air Pollutants, <http://www.epa.gov/oar/caa/caa112.txt>

<sup>212</sup> *Air Toxics Hot Spots Information and Assessment Act of 1987*, California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, <http://www.arb.ca.gov/ab2588/general.htm> and *California Air Toxics “Hot Spots” Information and Assessment Act (AB 2588)*, 2003 Air Toxics “Hot Spots” Program Report for San Diego County, San Diego Air Pollution Control District, December 2004.

<sup>213</sup> Communication between Mr. Archi dela Cruz, San Diego County Air Pollution Control District and Michael Kenney, KB Environmental Sciences, Inc. March 24, 2006.



from aircraft and the predicted ambient concentrations of these pollutants from this source are not entirely reliable.

- The HHRA exposure estimates do not take into account that people do not usually reside at the same location for 70 years and that other exposures (i.e., school children and workers) are also of much shorter durations than is assumed in this analysis. Therefore, the results of the HHRA are highly overstated.
- Other limitations and uncertainties associated with HHRA and identified by the CalEPA include: (a.) lack of reliable monitoring data; (b.) extrapolation of toxicity data in animals to humans; (c.) estimation errors in calculating HAPs emissions; (d.) concentration prediction errors with dispersion models; and (e.) the variability in lifestyles, fitness and other confounding factors of the human population.<sup>214</sup>

Therefore, according to CalEPA guidelines, the results of a HHRA should not be interpreted as the expected rates of cancer or other potential human health effects, but rather as estimates of potential risk based on current knowledge, a number of highly conservative assumptions and the best assessment tools presently available.<sup>215</sup>

## 5.16.2 Regulatory Framework

In San Diego County, the regulation and management of HAPs and the health risks they potentially impart involves federal, state, and local governmental agencies. These agencies are identified in [Table 5-16.1](#) accompanied with a brief description of their roles and responsibilities.

It should be re-emphasized that, as a whole, airport-related HAPs are not directly regulated under Section 112 (*Hazardous Air Pollutants*) of the Federal CAA, the California Air Toxics Hot Spots Information and Assessment Act or by the SDAPCD. For example, regulatory permits from any federal, state, and/or local agencies are not issued (nor required) for the emission of HAPs at SDIA. Rather, the information reported in this section is to aid in the evaluation of the potential risks and impacts airport-related HAPs may have on human health.

Table 5-16.1

**Agencies Involved in HAPs and HHRA in San Diego County**

<b>Agency</b>	<b>Roles and Responsibilities</b>
<i>Federal agency</i> – U.S. Environmental Protection Agency (EPA)	Sets national clean air policies under the Federal CAA; regulates 189 HAPs under Section 112 of the CAA; also regulates aircraft engine emissions. (All of California is located in EPA Region 9, located in San Francisco).
<i>State agency</i> - California Environmental Protection Agency (CalEPA)	<i>Office of Environmental Health Hazard Assessment (OEHHA)</i> - Responsible for conducting HHRA of chemical contaminants found in air, water, etc. including those identified as HAPs or on the list of chemicals under the <i>Air Toxics Hot Spots Act</i> .  <i>California Air Resources Board (CARB)</i> - Establishes state-wide clean air policies and rules, regulates mobile sources (i.e., motor vehicles) of emissions, and is involved in the review of airport air quality assessments (including those pertaining to HAPs) prepared under CEQA. (Located and headquartered in Sacramento.)
<i>Local agency</i> – San Diego County Air Pollution Control District (SDAPCD)	Enforces federal and state air quality regulations county-wide, permits stationary sources of emissions, and conducts HHRA for facilities that emit HAPs in quantities above regulatory thresholds. (Located in San Diego.)

Source: KB Environmental Sciences, Inc. 2007.

<sup>214</sup> CalEPA OEHHA Air Toxics Hot Spots HRA Guidelines, Ibid.

<sup>215</sup> Ibid.

### 5.16.3 Significance Criteria

The City of San Diego, Development Services Department has developed draft CEQA guidelines that address air quality, including human health impacts associated with HAPs (see Section 5.5.3, *Air Quality, Significance Criteria*). According to these guidelines, a project may have potentially significant impacts if it could:

- Expose sensitive receptors (i.e., schools, hospitals, day-care facilities, etc.) to substantial pollutant concentrations, including HAPs such as diesel particulates.<sup>216</sup>

Because the term “substantial pollutant concentrations” is not well defined, the following significance criteria for evaluating human health risks developed by the *OEHHA* are also applicable.<sup>217</sup>

- Increase in cancer risk of 10 in 1 million; and
- A Hazard Index (HI) greater than one (1.0) for acute or chronic health (non-cancer) risks.

Importantly, these significance criteria are based upon the “incremental” changes in cancer incidences and health risks by comparing the ~~2005 Baseline~~ to future conditions with and without the planned improvements to SDIA. Specifically, impacts due to the Proposed Project are determined by comparing the No Project Alternative to the Project Alternatives (Preferred Project and Airport Plan Alternatives).

### 5.16.4 Impact Analysis

This section evaluates the potential human health risks associated with the Proposed Airport Implementation Plan, the Airport Implementation Plan Alternative and the Airport Land Use Plan. The results are based on the outcome of the HHRA combined with what is known about HAPs and HHRAs in the vicinities of other large metropolitan airports in California and nationwide.

#### 5.16.4.1 Human Health Risk Assessment

As mentioned above, the HHRA for the SDIA AMP was conducted in general accordance with guidelines established by the U.S. EPA, CalEPA, and SDAPCD.<sup>218,219,220</sup> Following these guidelines, the assessment consisted of the four following standard components of a HHRA:

- **Hazard Identification** – This step involves the identification of HAPs associated with SDIA that pose the greatest potential risk to public health on, and in the vicinity of, the Airport. The outcome is comprised of a listing of the HAPs of primary concern and is based in large part upon the results of HHRAs recently conducted for other airports.<sup>221</sup> Another important source of information that was consulted during this step is the FAA Resource Document on Airport

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<sup>216</sup> City of San Diego, *Significance Determination Thresholds, California Environmental Quality Act (CEQA)*, Development Services Department, Land Development Review Division, Environmental Analysis Section, January 2007. Notably, these guidelines are intended to assess human health risks and impacts from stationary sources and not mobile sources, such as aircraft, GSE, and motor vehicles.

<sup>217</sup> *2006 CEQA Guidelines*, Consulting Engineers and Land Surveyors of California, 2006.

<sup>218</sup> *Air Toxics Hot Spots Program Risk Assessment Guidelines*, Parts I-IV and Appendices, California Environmental Protection Agency, 1997 - 2003.

<sup>219</sup> *Air Toxics Risk Assessment Reference Library, Technical Resource Manual*, U.S. Environmental Protection Agency, 2004.

<sup>220</sup> *Supplemental Guidelines for Submission of Air Toxics “Hot sports” Program Health Risk assessments (HRAs)*, San Diego Air Pollution Control District, March 2005.

<sup>221</sup> The HHRAs relied upon for this information include the following: 1.) Ambient Air Quality Human Health Risk Assessment prepared for the Port of Oakland, Oakland California, contained in the *Draft Oakland International Airport – Airport Development Program Supplemental Environmental Impact Report*, September 2003; 2.) Human Health Risk Assessment for the *Los Angeles International Airport Proposed Master Plan Improvements, Supplemental Environmental Impact Report*, prepared for the City of Los Angeles, 2003; 3.) *Long Beach Airport Terminal Area Improvement Project Draft Environmental Impact Report*, November, 2005.

HAPs.<sup>222</sup> Based on the information obtained from these resources, the HAPs selected for this analysis comprise the following:

- 1,3-Butadiene – most commonly formed during the combustion of fossil fuels, also found in tobacco smoke and a known human carcinogen by inhalation.
- Acetaldehyde – a byproduct of the combustion of fuels and tobacco smoke. Acute exposure may result in eye and respiratory tract irritation. Chronic exposure may result in skin irritations.
- Acrolein - formed during the combustion of fossil fuels, wood, tobacco, and from the heating of cooking oils; a possible non-cancer health hazard usually limited to eye irritation.
- Benzene - a human carcinogen formed during the combustion of fossil fuels, contained in motor vehicle exhaust and an evaporative component of gasoline. Acute exposures can result in irritation of the respiratory tract and chronic exposures can result in blood disorders.
- Diesel Particulate Matter (diesel PM) – regulated as a human carcinogen in California and formed from the combustion of diesel fuels in motor vehicles, construction and farm equipment and other off-road machinery.
- Formaldehyde – similar to acrolein (discussed above) and considered to be the most prevalent species of HAPs in aircraft engine exhaust.

These six HAPs were selected for this HHRA as they have the combined characteristics of being those that are normally associated with airports and represent the greatest potential risk to human health from airport-related sources. The overall premise to this approach is that other HAPs that were not analyzed represent lower levels of potential risk, by comparison.

- **Exposure Assessment** – This step involves an assessment of the potential pathways humans might be exposed to airport-related HAPs on or near SDIA. Again, this analysis is based upon the outcomes of the HHRA previously conducted for other airports in California. Based on these results, inhalation (i.e., breathing) of ambient air is determined to be the principal pathway for human exposures to airport-related HAPs in the vicinity of an airport. Other potential exposures through dermal (i.e., skin) contact and absorption or ingestion (i.e., eating and drinking) of food or water are not considered to be significant pathways. This interpretation is also consistent with recent efforts by federal and state agencies to assess the potential effects of HAPs in the areas of large metropolitan airports.<sup>223</sup> These studies focused on levels of HAPs that occur in the outside air and are susceptible to inhalation.
- **Toxicity Assessment** – This step addresses the potential toxicity of the analyzed HAPs based upon the highest predicted receptor concentrations within the study area. Again, because the HHRA and the air quality analysis conducted in support of Section 5.5, *Air Quality* are so closely linked, the same set of receptors were used for both analyses<sup>224</sup> (see [Figure 5.16-1](#)). For additional consistency, the EDMS AERMOD dispersion program was also used to predict HC and PM concentrations, then these results were converted to individual HAPs using appropriate

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<sup>222</sup> FAA, *Select Resource Materials and Annotated Bibliography on the Topic of Hazardous Air Pollutants (HAPs) Associated with Aircraft, Airports and Aviation*, prepared for the Office of Environment and Energy, July 1, 2003.

<sup>223</sup> These studies include the following: 1) Rhode Island Department of Environmental Management Air Monitoring Program Near T.F. Green Airport, Providence, R.I. 2) Massachusetts Department of Health Assessment of Health Impacts from Airport-Related Emissions in the vicinity of Boston-Logan International Airport. 3) Assessment of HAPs in the Vicinity of Los Angeles International Airport by the EPA, FAA, CARB, South Coast Air Quality Management District and Los Angeles World Airports.

<sup>224</sup> A total of 33 receptors were analyzed. These represent locations on and closest to the Airport where the workers and the general public have unrestricted access. These include residences, a school, off-site workers and nearby recreation areas. The results for each receptor type are based on the highest predicted levels of HAPs and for the Maximally-Exposed Individual.

speciation profiles.<sup>225</sup> As with the EDMS modeling of the criteria pollutants, one year of meteorological data collected at SDIA was used. For brevity, the EDMS dispersion modeling methodology, other input parameters and assumptions nor the results are discussed in this section (see Section 5.5, *Air Quality* and [Appendix E](#)).

- **Risk Characterization** – This final step of the HHRA involved the evaluation of the potential magnitude of the health risks attributable to airport-related HAPs. In accordance with OEHHA guidelines, this was accomplished by applying the highest estimated concentrations of HAPs at the receptors analyzed to the established cancer risk estimates and acceptable reference concentrations (RfC) for non-cancer health effects.<sup>226</sup>

In order to compare the outcome of the HHRA to the appropriate CEQA significance criteria (see Section 5.16.3, *Significance Criteria*), the results are expressed as (1.) the incremental change in potential cancer risks (in units of increased incidences per million exposed people) when compared to the conditions under the No Project Alternative and (2.) as a HI (a unit less ratio of an estimated exposure level over the acceptable reference dose) for chronic and acute non-cancer risks when compared to the conditions under the No Project Alternative.

#### **5.16.4.2 Existing (Baseline) Conditions**

~~As discussed above, under CEQA and following conventional HHRA methodology the potential effects on human cancer risks and other health impacts associated with the SDIA Project Alternatives are based on the incremental differences between the Baseline (2005) and the future year conditions both with and without the projects. More precisely, it is the differences (or changes) in these conditions that are most important and, therefore, the assessment of Baseline conditions are used for comparative purposes only. Consequently, the results of a HHRA for existing conditions in the vicinity of SDIA are not presented here, but are contained in Appendix H, *Human Health Risk Assessment*.~~

#### **5.16.4.3 Proposed Project Alternatives**

~~As discussed above, the potential effects on human cancer risks and other health impacts associated with the SDIA Project Alternatives are based on the incremental differences between the No Project Alternative and the Project Alternatives (Preferred Project and Airport Plan Alternatives). More precisely it is the differences in conditions between the No Project Alternative and the Project Alternatives in these alternatives that are most important and, therefore, the assessment of the No Project Alternative is used for comparative purposes only.~~

The results of the HHRA for, the Proposed Airport Implementation Plan, the Airport Implementation Plan Alternative, the Proposed Airport Land Use Plan and the No-Project Alternative are discussed in this section. For convenience, [Table 5-16.2](#) also contains a summary listing of the outcomes, by alternative and receptor (i.e., residence, school, recreation, etc.). The values reported in Table 5.16.2 are summary data and, consistent with HHRA conventions, are reflective of the predicted cancer and non-cancer risks over a long-term exposure period (i.e., 70 years). Therefore, the results are inclusive of the entire study period (i.e., 2010 to 2030) evaluated in this EIS. In this case, the values of cancer/ non-cancer risks for the individual analysis years (i.e., 2010, 2015, 2020, 2025, 2030) are not applicable and not reported. For example, predicted cancer/non-cancer risks in 2010 will differ in subsequent years in response to the forecasted changes in airport operations, motor vehicle traffic volumes, and other time-dependant variables contained in the HHRA.

Similarly, the No-Project Alternative serves as the basis for predicting the incremental future-year changes in cancer/non-cancer risks associated with the proposed Airport Project Alternatives. Therefore,

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<sup>225</sup> The HC/PM-to-HAPs speciation profiles used in the analysis for aircraft are based on the CARB-recommended data developed for the Oakland International Airport Supplemental EIR HHRA and for GSE, motor vehicles and stationary sources are those listed in the CARB Organic Gas Speciation Database. These speciation profiles are contained in Appendix E of this document.

<sup>226</sup> These cancer risk estimates and acceptable reference concentrations (for non-cancer health effects) are contained in the OEHHA Hot-Spots Health Risk Analysis Module, CalEPA *HARP User Guide, Software for Emission Inventory Database Management, Air Dispersion Modeling Analyses and Health Risk Assessment*, California Air Resources Board, December 2003.

the HHRA results for the No-Project condition by itself are likewise not applicable and not reported in Table 5.16.2.

Finally, it is also important to note that the values contained in Table 5.16.2 are the highest predicted (i.e., “worst-case”) results for all of the individual receptors and pollutants (i.e., benzene, acrolein, diesel PM) analyzed in the HHRA. As such, they may represent different receptor locations and pollutant levels between the Project Alternatives. Specifically, the Table 5.16.2 provides a comparison of the “worst-case” cancer/non-cancer risks but the values shown may not represent conditions at the same location in every case. The narrative explanations that follow are also consistently arranged by Incremental Cancer Risks and Incremental (Non-Cancer) Health Impacts meaning the increased risk when compared against the No Project Alternative.

For the purposes of this assessment, it is assumed that the potential impacts associated with the proposed alternatives are the same “With” or “Without” the Parking Structure. It should be noted that the air quality analysis of the “with and with parking structure” variations of the Proposed Airport Implementation Plan and the Airport Implementation Plan Alternative found that the “with parking structure” variation had slightly higher concentrations of CO and NO<sub>2</sub>.

## **Proposed Airport Implementation Plan**

### **Incremental Cancer Risks**

The incremental cancer risks for this alternative range from ~~4.68 up to 0.87~~ <0.1 to 1.5 in 1 million for the MEI receptors analyzed (i.e., residence, school, recreational). These values are well within the CEQA Significance Threshold of 10 in 1 million and are largely attributable to diesel PM from GSE.

### **Incremental Health (Non-Cancer) Impact Risks**

The chronic (long-term) incremental health impacts (non-cancer) are well within the recommended HI (1.0) for the residence and school and only slightly above the recommended HI for off-site worker (1.07). By comparison, the acute (short term) health impacts (non-cancer) are above the recommended HI (1.0) for the residence (~~2.30~~ 1.7), school (~~15.0~~), off-site worker (~~32.5~~ 26.5) and recreation area (~~44.2~~ 3.3) receptors. This outcome is driven principally by acrolein with lesser contributions from formaldehyde (both compounds largely attributable to aircraft, GSE, and motor vehicles). Importantly, the health risks associated with acrolein from aircraft engines is likely overstated as measurements of air near airports have not identified this compound at levels considered to be unhealthy.

## **Airport Implementation Plan Alternative**

### **Incremental Cancer Risks**

The incremental cancer risks for this alternative range from ~~2.44 up to 0.69~~ 0.1 to 1.5 in 1 million for the MEI receptors analyzed. Again, these values are well within the CEQA significance threshold of 10 in 1 million and are mostly attributable to diesel PM from GSE.

### **Incremental Health (Non-Cancer) Impact Risks**

The chronic (long-term) incremental health impacts (non-cancer) for this alternative are within the recommended HI (1.0) for the residence and school, and worker receptor and equal the recommended HI for off-site worker (1.0). By comparison, the acute (short term) health impacts (non-cancer) are above the recommended HI (1.0) for the residence (~~3.30~~ 1.7), school (~~15.0~~), off-site worker (~~55.6~~ 43.3) and recreation area (~~6.5~~ 3.3) receptors. This outcome is driven principally by acrolein with lesser contributions from formaldehyde (both compounds largely attributable to aircraft, GSE, and motor vehicles).<sup>227</sup>

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<sup>227</sup> The health risks associated with acrolein from aircraft engines is likely overstated as measurements of air near airports have not identified this compound at levels considered to be unhealthy.

## **Proposed Airport Land Use Plan**

The Proposed Airport Land Use Plan was considered on a program level and worst case scenario assumptions were used for assessing impact.

### **Incremental Cancer Risks**

The incremental cancer risks associated with this alternative range from ~~0.17 to 1.21~~ 0.1 to 2.0 in 1 million for the MEI receptors analyzed. Again, these values are well within the significance threshold of 10 in 1 million and are mostly attributable to diesel PM from GSE.

### **Incremental Health (Non-Cancer) Impact Risks**

The chronic (long-term) incremental health impacts (non-cancer) are also well within the recommended HI (1.0) for the residence and school and equal the recommended HI for off-site worker (1.0) for all the receptors (i.e., residential, school and off-site worker) analyzed. By comparison, the acute (short term) health impacts (non-cancer) are above the recommended HI (1.0) for the residence (1.7), off-site worker (32.24) and recreation area (3.42) receptors. ~~but below the recommended HI for residence and school receptors. As discussed above, t~~ This outcome is driven principally by acrolein with lesser contributions from formaldehyde (both compounds largely attributable to aircraft, GSE, and motor vehicles).

## **No Project Alternative**

### **Incremental Cancer Risks**

~~The incremental cancer risks for this alternative range from 2.10 up to 0.66 in 1 million for the MEI receptors analyzed (i.e., residence, school and worker). These values are well within the significance threshold of 10 in 1 million and are largely attributable to diesel PM from GSE.~~

### **Incremental Health (Non-Cancer) Impact Risks**

~~The chronic (long-term) incremental health impacts (non-cancer) are well within the recommended HI (1.0) for the residence and school but above the recommended HI for off-site worker (2.94). The acute (short term) health impacts (non-cancer) are above the recommended HI (1.0) for the residence (4.0), school (14.4), worker (23.1) and recreation area (8.1) receptors. This outcome is driven principally by acrolein with lesser contributions from formaldehyde (both compounds largely attributable to aircraft, GSE, and motor vehicles).<sup>228</sup>~~

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<sup>228</sup> Ibid.

Table 5-16.2

**Summary Results of Comparison Between Proposed Airport Project Alternatives HIRA Incremental Risk and No Project Alternative HIRA Risk Summary Results<sup>a b</sup>**

Receptor Type <sup>b</sup>	Risk Category	Airport Implementation Plan	Airport Implementation Plan Alternative	Airport Land Use Plan	No Project
Residence	Cancer Incidence	<del>(1.68)</del> 2.0	<del>(2.41)</del> 1.5	<del>(1.93)</del> 2.0	<del>(2.10)</del>
	Chronic Health (Non-Cancer) Impact	<del>(0.07)</del> 0.1	<del>(0.06)</del> <0.1	<del>(0.07)</del> 0.1	0.10
	Acute Health (Non-Cancer) Impact	2.30 1.7	3.30 1.7	2.30 1.7	4.00
School	Cancer Incidence	<del>(0.13)</del> <0.1	<del>(0.15)</del> 0.1	<del>(0.14)</del> 0.1	<del>(0.09)</del>
	Chronic Health (Non-Cancer) Impact	0.09 0.1	0.10 0.1	0.09 0.1	0.17
	Acute Health (Non-Cancer) Impact	15.00 0.6	15.00 0.6	15.00 0.6	14.40
Recreational	Acute Health (Non-Cancer) Impact	11.20 3.3	6.50 3.3	11.2 3.2	8.10
Off-Site Worker	Cancer Incidence	0.87 1.4	0.69 1.3	0.83 1.5	0.66
	Chronic Health (Non-Cancer) Impact	1.07 1.0	0.99 1.0	1.07 1.0	2.94
	Acute Health (Non-Cancer) Impact	32.50 26.5	55.60 43.3	44.70 32.4	23.10

The CEQA Criteria are as follows:

- Increase in cancer risk of 10 in 1 million; and
- A Hazard Index (HI) greater than one (1.0) for acute or chronic health (non-cancer) risks.

Results shown in parentheses (~~0.02~~) represent a decrease in risks compared to the Baseline Condition.

<sup>b</sup> The reported values are the worst-case conditions and may not be from the same location or receptor. The values within the table have been completely updated to provide the comparison between the No Project Alternative and the Proposed Alternatives in replacement of the data provided in the Draft EIR. The updated values do not represent significant new information because they do not affect the significance determinations presented in the Draft EIR.

Source: KB Environmental Sciences, Inc. 2008Z.

### 5.16.5 Construction Impacts

Construction-related emissions of HAPs are primarily associated with the exhaust from heavy equipment, delivery trucks and construction worker vehicles; for site preparation and demolition activities; and the storage/transfer of raw materials. Small amounts of HAPs emissions from paint, architectural coatings and asphalt also occur. These emissions are temporary in nature and generally confined to the construction site and the access/egress roadways. Therefore, they are not expected to cause a significant incremental change in cancer incidences or health risks to the receptors located in the vicinity of the Airport.

Diesel PM from construction vehicles and equipment is of particular concern because of its carcinogenic properties. For this reason, mitigation measures have been developed for this pollutant and are discussed in Section 5.16.7, *Mitigation Measures*.

### 5.16.6 Cumulative Impacts

The components of this HIRA are inclusive of all airport-related sources of HAPs emissions (i.e., aircraft, GSE, on- and off-site motor vehicles, etc.) under ~~Baseline as well as~~ future-year conditions, with and without the planned improvements to SDIA. Non-airport motor vehicle traffic traveling on the off-site roadways and freeways was also included.

Emissions and potential health impacts associated with the closure of the former NTC Landfill were not included as this project will be completed before the construction and operation of the planned improvements to SDIA begin.

### **5.16.7 Mitigation Measures/Other Improvements**

As discussed previously, the incremental differences in the HHRA between the Proposed Project Alternatives and the ~~Baseline No Project Alternative conditions~~ exceed the thresholds for acute non-cancer health effects and nearly exceed the chronic health impacts. The non-cancer effects are attributable primarily to acrolein<sup>229</sup> and the impacts can be overstated due to the aircraft engine speciation profiles used in the analysis. As noted in Section 5.16.4.3, the Proposed Airport Land use plan was considered on a program level and as the elements of the Proposed Airport Land Use Plan become specific projects they will undergo project level analysis within CEQA documentation to determine specific impacts and potential mitigation.

Notwithstanding these outcomes and limitations of the HHRA, the following mitigation measures are specifically proposed to help minimize the potential effects of airport-related HAPs on the health of residents and other receptors located in the vicinity of the Airport.

#### **Airport Terminal Design**

MM5.16-1 Encourage and facilitate the use of gate-furnished power and air conditioning as a means of reducing emissions from aircraft GSE and APUs. This will be accomplished by the installation of electrical and conditioned air hook-ups at all new gates that are constructed as part of the Airport Implementation Plan and Airport Implementation Plan Alternative.

#### **Airport Tenant Mitigation**

MM5.16-2 Encourage and facilitate the replacement of diesel-fueled GSE with low- and no-emitting equipment and vehicles. This will be accomplished by coordinating a GSE replacement program with the airlines and by providing the necessary infrastructure to accommodate the newer, less polluting GSE fleet.

#### **Airport Mitigation**

Because the emissions of airport-related HAPs are inherently related to the emissions of HC and PM, the same ~~mitigation measures~~ additional actions proposed for construction improvements under Section 5.5, *Air Quality*, for the “criteria” pollutants are equally effective for HAPs. These additional actions are mitigation measures with respect to human health risk impacts specific to for-operational emissions and are comprised of the following:

MM5.16-3 By improving taxiways, the number of runway crossings by aircraft can be reduced to increase the overall efficiency of the airfield system.

MM5.16-4 Reconstructing taxiways and hold aprons to better meet the current and future fleets of aircraft will improve operational performance of the airfield (i.e. large aircraft will be able to taxi unimpeded past other aircraft, ground vehicles and ground obstructions).

MM5.16-5 Reconstructing Taxiway C, adding new apron hold pads and a new taxiway east of Taxiway D allows aircraft to bypass those on the existing aprons and provide more efficient access to new GA facilities.

MM5.16-6 The new access/egress roadway configurations and expanded curbsides in the main terminal area will help to improve surface traffic circulation, lessen stop-and-go driving

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<sup>229</sup> Currently, CARB does not have certified emission factors or an analytical test method for acrolein. Therefore, since the appropriate tools needed to implement and enforce acrolein emission limits are not available, some District (BAAQMD) will not conduct a HRA for emissions of acrolein. In addition, due to the significant uncertainty in the derivation, OEHHA is currently re-evaluating the acute REL for acrolein.



and reduce excess motor vehicle idling.

- MM5.16-7 The new multi-level parking structure will also include dedicated departure curbs and a transit plaza accommodating high-occupancy shuttles, buses and vans. New access roadways from North Harbor Drive directly into the structure also eliminate the need for vehicles to utilize the curbside roadways. Combined with the elevated pedestrian walkways connecting the parking structure with the terminal, all these improvements will also help to enhance surface traffic circulation, lessen stop-and-go driving and reduce excess motor vehicle idling.

### **Construction Mitigation**

These mitigation measures for construction-related emissions (with and emphasis on diesel PM) comprise the following:

- MM5.16-8 Prevent construction equipment and delivery trucks from excess idling during periods of inactivity.
- MM5.16-9 Substitute low- and zero-emitting construction equipment whenever possible.
- MM5.16-10 Implement a construction-employee shuttle service, rideshare program and/or on-site food service to reduce vehicle trips.
- MM5.16-11 Encourage the use of clean-burning diesel engines wherever possible.<sup>230</sup>
- MM5.16-12 Use electrical drops in place of temporary electrical generators wherever possible.

To help insure these mitigation measures are implemented, the Authority will prepare an Air Quality Management Plan that will identify the steps, provisions, and timetables necessary for their effectiveness to be achieved.

### **5.16.8 Level of Significance after Mitigation Measures**

The level of significance for acrolein as determined by the HHRA is above the CEQA threshold of significance and cannot be mitigated to levels below significant and, thus, are unavoidable. However, the implementation of the mitigation measures listed in Section 5.16.7, *Mitigation Measures* will further reduce the potential impacts on the health of nearby receptors. Further, as discussed previously, studies and data suggest that the results of the HHRA for acrolein are conservative and may actually overstate the pollutant's effects. Notably, air monitoring of HAPs in the vicinities of other large metropolitan airports did not detect this compound. Acrolein also degrades quickly in air and its content in aircraft exhaust is recognized to be substantially overstated in the currently available speciation profiles for aircraft engines. An understanding of these tendencies is critical for a proper assessment of acrolein's potential impacts.

Therefore, the implementation of the mitigation measures listed in Section 5.16.7, *Mitigation Measures* will only further reduce the potential impacts on the health of nearby receptors. Otherwise, the level of significance for this pollutant as determined by the HHRA is above the threshold of significance and is therefore considered unavoidable.

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<sup>230</sup> In 2000, CARB implemented the Diesel PM Reduction Plan to reduce diesel emissions from both existing and new diesel-fueled engines and vehicles. The goals of the plan are to reduce diesel PM emissions and the associated cancer and health risks by 75 percent in 2010 and by 85 percent in 2020.

## 5.17 Public Services

This section describes the general approach and methodology, regulatory framework, significance criteria, and environmental setting, as well as considers potential public services impacts associated with the Proposed Project (Preferred Alternative) and its alternatives. Additionally, this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts. There were no comments in response to the NOP or the previously circulated Draft EIR specific to potential public services impacts.

Public services addressed in this section are fire protection/emergency medical services and law enforcement (police protection and civil aviation security). Public service impacts to recreation/parks, schools, and libraries are addressed elsewhere in this document (see for example, Section 5.18, *Recreation*, and Section 5.20, *Effects Found Not to Be Significant*).

### 5.17.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

The changes to the Proposed Project and alternatives that are included in this ~~recirculated-Draft~~ Final EIR would not generate a demand for public services, or affect public service providers, in a way that is measurably different than what was evaluated in the previously circulated Draft EIR. Accordingly, there is no change the assessed significance of public services impacts. Where applicable, the analysis in this ~~recirculated-Draft~~ Final EIR has been extended to 2030. It would be speculative, however, to assess the impacts of the Proposed Project on public services to such a distant horizon year. Public services are affected over time by a number of factors, including funding, changes in the demand for public services (due to changes in population levels or changes in crime rates, for example), changes in technology (e.g., police or fire equipment), changes in public service standards (such as how Airport law enforcement requirements changed after September 11, 2001), etc. In light of these factors, extending the analysis of potential public service impacts beyond 2015 to 2030 would be speculative, and this ~~recirculated-Draft~~ Final EIR does not speculate on potential 2030 public service impacts.<sup>231</sup>

The locations of public services providers were identified through review of maps, documents, and field reconnaissance. In addition, local agencies' plans and regulations (including those of the San Diego Harbor Police Department [SDHPD] and City of San Diego Fire-Rescue Department [SDFD]) were consulted to identify pertinent issues regarding capacities, and public service policies and regulations. Potential impacts to public services were assessed by (a) qualitatively assessing the potential for the alternatives to increase demand for public services and (b) comparing the ability of the service

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<sup>231</sup> As stated in Section 15145 of the *State CEQA Guidelines*, "If, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact."

provider/public facility to serve the proposed developments and accommodate the associated increase in demand (see also “Thresholds of Significance”).

### **5.17.1.1 Fire Protection**

The potential effects of the proposed alternatives on fire protection and emergency services were assessed by comparing the existing conditions with future conditions expected to occur with implementation of the proposed alternatives. Characterization of the baseline conditions includes a description of existing fire protection facilities, staffing, equipment levels, and response times. This information was obtained from the fire departments serving the fire protection study area.

The fire protection study area includes the SDIA property (including the airfield [i.e., runways and tarmac] and landside areas [i.e., terminals and Airport roadways]), as well as areas surrounding SDIA that would be potentially directly affected by implementing the Proposed Project, including all of the Airport Land Use Plan area. Aircraft Rescue and Fire Fighting (ARFF), staffed and operated by SDFD at Airport Station, is the primary fire protection agency serving the airfield. While there are multiple SDFD fire stations within and around the fire protection study area capable of responding to landside incidents, the staff and equipment of the ARFF generally must remain on the airfield at all times, in preparation for an emergency airfield incident. The ARFF is only authorized to leave the airfield in response to a major (i.e., catastrophic) non-airfield aircraft incident.

The primary basis for establishing fire protection needs and capabilities with regard to the Proposed Project was through a review of SDFD’s annual reports and strategic plans, as well as direct consultation with SDFD staff (at Airport Station), the primary fire protection agency serving the study area.

This analysis acknowledges that SDFD would define its actual staffing needs more specifically through its ongoing assessments of service levels. The analysis of effects on emergency vehicle access and response times is based on how Airport development, Airport-generated traffic, and transportation improvements would affect traffic congestion at key intersections within the Project study area (see Section 5.3, Traffic and Circulation).

### **5.17.1.2 Law Enforcement**

To assess potential effects on law enforcement services, baseline conditions were compared with conditions expected to result from the implementation of the alternatives. Characterization of the baseline conditions includes a discussion of the regulatory framework for law enforcement services, the agencies that provide law enforcement services at SDIA, and a summary of current staffing and facilities. Information on staffing and facilities was obtained from various reports by the police departments serving the law enforcement study area.

The geographic extent of the law enforcement study area includes the Airport Land Use Plan area and off-site areas where project-related traffic congestion could affect response times. The intersections and roadway links evaluated in relation to response times are described in Section 5.3, Traffic and Circulation.

Because there are no set standards or formulas for estimating long-range staffing needs at SDIA, this analysis acknowledges that SDHDPD would define its actual staffing needs more specifically through their ongoing assessments of service levels. The analysis of effects on police vehicle access and response times is based on how Airport development, Airport generated traffic, and transportation improvements would affect traffic congestion at key intersections within the law enforcement study area.

## **5.17.2 Regulatory Framework**

### **5.17.2.1 Federal Laws and Regulations**

Federal laws and regulations applicable to fire protection, emergency services and/or law enforcement at SDIA include the National Fire Protection Association (NFPA) Code, which provides the basis for fire protections and emergency services, and the Aviation and Transportation Security Act. Federal agencies that have law enforcement, fire protection and/or emergency services jurisdiction over activities at SDIA each also have their own applicable regulations. These agencies include the Federal Aviation Administration (FAA), U.S. Coast Guard, and Transportation Security Administration (TSA). [Table 5-17.1](#)

includes a partial list of applicable federal regulations, a summary of their provisions, and a list of responsible federal agencies.

Table 5-17.1  
**Federal Regulations, Provisions, and Regulatory Agency**

Regulation	Summary of Provisions	Regulatory Agency
Federal Aviation Administration Regulations (FAR) 139.315 through 139.319	Aircraft Rescue and Fire Fighting (ARFF)	FAA
FAR 139.325 (f)	Requires Airport Emergency Plans to provide for Air/Sea Disaster Response	FAA/ U.S. Coast Guard
FAR 139.325 (4)	Airport Rescue natural disasters	FAA
National Fire Protection Association Code	Establishes fire safety provisions	N/A
Transportation Security Regulations	Civil aviation security	TSA

### **5.17.2.2 Federal Aviation Administration Regulations**

FAA Regulations (FAR) generally serve as the basis for the Airport Rules and Regulations Manual and Disaster Preparedness Plans. All of the fire and fire-related safety provisions found in these documents are also in accordance with applicable sections of the Uniform Fire Code (UFC) and/or the National Fire Protection Association Codes and Standards. FAR mandate many aspects of emergency response services, including vehicle response times and readiness. Compliance with FAR regarding fire safety is required under SDIA’s operating permit.

#### **Aircraft Rescue and Fire Fighting (ARFF)**

ARFF is regulated under FAR Sections 139.315 through 139.319. Handling and storage of hazardous substances and materials, which require fire safety training in fuel farm and storage areas, and required compliance with locally adopted fire codes are provided for under FAR 139.321. Under FAR 139.325, airport safety plans require coordination with fire fighting services and provision of rescue vehicles large enough to handle the maximum persons carried aboard the largest aircraft that can be served. ARFF protocol requires at least one airport rescue and firefighting vehicle to reach the midpoint of the farthest runway serving air carrier aircraft from its assigned post, or reach any other specified point of comparable distance on the movement area which is available to air carriers, and begin application of foam, dry chemical, or halon 1211 within three minutes from the time of the alarm. All other rescue vehicles are required to respond within four minutes from the time of alarm. Should equipment become inoperable for a period exceeding 48 hours, the FAA requires that equipment be replaced immediately with equipment having at least equal capabilities. If replacement equipment is not available immediately, airport operations should be limited to the response capability of equipment in operative condition unless waived by the FAA. The ATCT is responsible for activating the emergency telephone system, which notifies airlines when they are involved in safety-related operations.

#### **Air/Sea Disaster Response**

Due to its unique nature, an accident involving an aircraft over water requires a two-part command and control system. FAR 139.325(f) requires that airport emergency plans also provide a plan “for the rescue of aircraft accident victims from significant bodies of water or marsh lands adjacent to the airport.” The U.S. Coast Guard, Sector San Diego, is responsible for coordinating the search and rescue operations, including shore-side coordination and support with the assistance of representatives from the SDHPD.

#### **Natural Disaster**

Natural disasters are emergency situations declared by the President of the United States in response to and in agreement with a request from the respective state governor. Emergency action plans are generally addressed by 29 CFR 1910.38, “Employee Emergency Plans and Fire Prevention Plans.” FAR 139.325(4) regulate the requirement for preparation of airport response to a natural disaster. In the event

of a natural disaster, the ATCT generally issues a Notice to Airmen (NOTAM)<sup>232</sup> if it is determined that this is necessary. In the event that the condition of the airport or any part of the airport is determined to be unsafe for landings or takeoffs, a NOTAM is issued closing the airport or any of its parts. The ATCT also verifies that the Navigational Aids system is operating.

### **5.17.2.3 The National Fire Protection Association Code**

The National Fire Protection Association (NFPA) develops, publishes, and disseminates more than 300 consensus codes and standards intended to minimize the possibility and effects of fire and other risks. Individual communities adopt these codes into their own fire protection and emergency services operations on a voluntary basis; there are no legislative enforcement mechanisms in place.

### **5.17.2.4 Transportation Security Administration Regulations**

The TSA was created in response to the terrorist attacks of September 11, 2001 as part of the Aviation and Transportation Security Act signed into law in November 2001. The TSA issues and administers Transportation Security Regulations (TSRs), which are codified in 49 CFR, Parts 1500 through 1699. Many TSRs are former rules of the FAA that were transferred to TSA (Portions of 14 CFR parts 91, 107, 108, 109, 121, 129, 135, 139, and 191) when the TSA assumed the FAA's civil aviation security function in February 2002. These regulations contain rules that cover all segments of civil aviation security and require airport operators to adopt and carry out a security program approved by TSA. Among other items, the TSRs describe requirements for security programs, including establishing secured areas, air operations areas, security identification display areas, and access control systems.<sup>233</sup>

### **5.17.2.5 State Regulations**

#### **State of California Uniform Fire Code**

State regulations include the UFC, which sets the framework for fire protection and safety within the State of California. The UFC contains several sections that provide authority and standards that pertain to operations at airport facilities.

#### **Fire Fighting Authority**

Article 2 provides standards for the organization, authority, duties and procedures for fire fighting. Division I, "Organization and Authority," Section 2.105 provides for the exercise of police powers by fire fighters. Division II, "Duties and Procedures," Section 2.201 provides for fire inspection and characterizes what can be declared an unsafe building.

#### **Fire Access**

Article 10, "Fire Protection Systems and Equipment," Division II, "General Provisions," Section 10.207 specifies access roadway requirements for fire apparatus. Article 12, "Maintenance of Means of Egress and Emergency Escapes," Section 12.109, provides standards for stair, ramp, and escalator enclosures.

#### **Air Service Operations**

Article 24, "Aviation Facilities" provides standards for airports, heliports, and helistops in Division I "General" Sections 12.013 "Dispensing Flammables or Combustible Liquids," 12.104 "Transferring Fuel," 24.105 "Application of Flammable or Combustible Liquid," and Sections 24.111-24.116, which provide aircraft service and repair standards. Provisions for safety standards of fuel system maintenance and use is provided in Article 24, Division II "Refueler Units," Section 24.202 "Operation Maintenance and Use of Aircraft Refueler," 24.203 "Fueling and Defueling," and Article 79 "Flammable and Combustible Liquids," Division I "General," Section 79.114 "Fire Protection," Division II "Container and Portable Tank Storage

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<sup>232</sup> NOTAM is a notice containing information concerning the establishment, condition, or change in any aeronautical facility, service, procedures, or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

<sup>233</sup> Transportation Security Administration. "Law and Policy, Transportation Security Regulations," located at <http://www.tsa.gov/>. 2006.

Inside Buildings,” Section 79.205 “Fire Protection,” and Division VI “Tank Storage Underground, Outside or Under Buildings,” Section 79.511 “Fire Protection.”

### **Materials Handling**

Article 80 “Hazardous Materials,” Section 80.103 “General Requirements” and Section 80.110 “Designation of Cargo” provide for the identification and handling of hazardous materials sent as air cargo.

### **Fuel Farm and Fuel Dispensing Systems**

Portions of the fuel hydrant system are within the jurisdiction of the State Fire Marshal and are further discussed in the Hazardous Materials section. In addition, fuel farm siting, design, construction, and equipment is regulated under the UFC, Article 79 “Flammable and Combustible Liquids,” Division V “Stationary Tank Storage, Above Ground, Outside of Buildings,” with fire protection specifically addressed by Section 79.511.

### **The State Master Mutual Aid System**

The City of San Diego is partially dependent upon the strong state Master Mutual Aid system.<sup>234</sup> California's disaster planning is based on a statewide system of mutual aid. Each local jurisdiction relies first on its own resources and then calls for assistance as necessary: city to city; city to county; county to county; and county to the regional office of the Office of Emergency Services, which relays unmet requests to the State. Mutual aid extended under this agreement and the operational plans adopted pursuant thereto, are available and furnished in all cases of “local emergency,” “state of emergency,” and “under state of war” as defined in the California Emergency Services Act (1970). Mutual Aid is utilized when an incident is likely to exceed, or has exceeded, the ability of a responsible entity to control it. Agencies receiving mutual aid are responsible for logistic support to all mutual aid personnel and equipment received.

### **City of San Diego Regulations**

Development and protection of the SDIA area falls under the direction of the SDFD, and is also regulated by the Public Facilities, Services and Safety Element of the City’s General Plan, which consists of City-wide fire prevention policies.

The SDFD established policies that relate to fundamental issues of access for emergency personnel and fire protection. These include, among others, an Emergency Plan and Information, and Fire Access Roadways policies. Fire Hazards and Prevention Services (FHPS) Policy E-002 (Emergency Plan and Information) is intended to provide guidelines for emergency plan and information requirements for buildings in accordance with California Code of Regulations (CCR), Title 19, Section 3.09 and the UFC, Article 13. FHPS Policy A-001 (Fire Access Roadways) clarifies Fire and Life Safety Services’ access roadway requirements as outlined in UFC 901.4.2 and California Vehicle Code Section 22500.1.

### **City Emergency Management Plans**

SDFD staff maintains the City's Emergency Operations Center (EOC), Emergency Operations Plan (EOP) and Major Incident Response Plans (MIRPs). The EOP is the template for all activities within the EOC during activation and the MIRPs are incident-specific checklists for each department representative. In an emergency, disaster, or large scale-event, the EOC provides a platform for the City directorship to coordinate the executive-level concerns associated with response and recovery. At full activation, the EOC is staffed by several senior City managers and associated non-city agencies and their support staff. At such times, the EOC serves as an information clearinghouse for the collection, collation and distribution of situational status reports.

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<sup>234</sup> City Manager's Report 05-200 “Disaster Preparedness and Management,” October 2005.

## **City of San Diego Emergency Plan**

Pursuant to the authority conveyed by the California Emergency Services Act, the San Diego City Council enacted the Emergency Services Ordinance in 1974. The ordinance created the City of San Diego Disaster Council, which was charged with developing and recommending for City Council adoption an emergency plan for the City. The plan provides for the effective mobilization of all the resources of the City, both public and private, to meet any condition constituting a local emergency; and provides for the organization, powers and duties, services and staff of the emergency organization.

## **San Diego County Regional Airport Authority Codes**

The Airport Authority Act, as amended, establishes the fundamental powers and functions of SDCRAA. The Airport Authority Act empowers SDCRAA's Board to adopt more specific rules to guide the conduct of the Board, officers and employees of SDCRAA, and those persons and entities that interact with SDCRAA or utilize the premises and property of SDCRAA. In exercising that power SDCRAA adopted a comprehensive set of Codes and Policies that include Article 7 "Safety and Security," Part 7.2 "Emergency Measures." Specifically, Part 7.2 states:

*a) In the event of a disaster or emergency, the Executive Director or his or her designee (the "Executive Director") of the San Diego County Regional Airport Authority (the "Authority") may: (1) utilize city and county departments, law enforcement agencies, local medical resources and disaster preparedness groups for assistance; and (2) issue such directives and take such action as necessary to protect people, property and assets, and promote the safe operation of the facilities and airports under the jurisdiction of the Authority.*

The Executive Director, in the event of a disaster or emergency, may order all occupants to leave the facilities and airports under the jurisdiction of SDCRAA, or portions thereof, and prevent access to such areas for such time as may be necessary to assure the safety of the public and employees. During such an event, the Executive Director also may close or restrict the use of all airport roadways to vehicular traffic in the interest of public safety.

### **5.17.3 Significance Criteria**

The approach to evaluating impacts on public services is largely based on whether conditions under the alternatives would meet key criteria set forth by the City, SDFD, SDHPD, and by state and federal regulations. Both the SDFD and SDHPD assess and respond to staffing needs through ongoing evaluation; there are no uniform methods or SDHPD, SDFD, or FAR standards for projecting long-range staffing needs. As a result, this analysis does not include quantitative estimates of demand for additional fire and law enforcement personnel.

#### **5.17.3.1 Fire Protection**

A significant impact on fire and emergency services would occur if the direct and indirect changes in the environment that may be caused by an alternative would potentially result in one or more of the following future conditions:

- Inadequate fire hydrant services or street access;
- Use, manufacture or storage of toxic, readily-combustible, or otherwise hazardous materials;
- Restricted emergency access as determined by Fire and Life Safety staff to be non-conformant with the California Fire Code and Fire and Hazard Prevention Services Policy A-00-1;
- Increased response times due to lack of facilities, traffic congestion, or a lack of personnel, equipment, or budget—i.e., whether an alternative would substantially affect the five-minute fire-rescue response time from the time an alarm is received to arrival of the first engine at the scene of the incident (one minute chute plus four minutes travel) and nine minute response time (one minute chute plus eight minutes travel) for initial full alarm assignment (three engines and one truck);
- Requires, but does not adequately provide for, a new fire station or the expansion, consolidation,

or relocation of an existing facility to maintain adequate service levels.

### **5.17.3.2 Law Enforcement**

A significant impact on law enforcement services would occur if the direct and indirect changes in the environment that may be caused by an alternative would potentially result in one or more of the following conditions:

- Through increased traffic congestion, changes in circulation, expansion of airport property, or the location of new land uses, emergency response times increase beyond the limits required by applicable jurisdictions within the study area (i.e., whether the project alternatives would substantially affect the priority one call goal by neighborhood from current budget);
- An increase in on-airport population that would require a substantial increase in law enforcement services to maintain adequate services or would require new or expanded facilities without providing adequate mechanisms for addressing these additional needs.

### **5.17.4 Environmental Setting**

This section describes existing law enforcement and fire/emergency services that serve SDIA. [Figure 5.17-1](#) shows the location of the SDFD stations and major medical facilities within five miles of SDIA, as well as the locations of the SDHPD headquarters and their Airport substation.

#### **5.17.4.1 Federal Jurisdiction**

As noted above, federal agencies with fire protection, emergency service and/or law enforcement responsibilities applicable to SDIA and its operations include the FAA, U.S. Coast Guard and TSA.

#### **5.17.4.2 Federal Aviation Administration**

The FAA is an element of the U.S. government with primary responsibility for the safety of civil aviation. The FAA issues and enforces regulations and minimum standards covering the manufacture, operation, and maintenance of aircraft. The agency is responsible for the rating and certification of airmen and for certification of airports serving aircraft carriers. It also enforces regulations under the Hazardous Materials Transportation Act applicable to shipments by air.

The FAA's Western Pacific Regional Headquarters is located at 15000 Aviation Boulevard in Lawndale, California and there is a Flight Standards District Office at 8525 Gibbs Drive in San Diego.

#### **5.17.4.3 U.S. Coast Guard**

The U.S. Coast Guard is given primary notification in cases of potential or actual over-water emergencies. Headquartered at 2710 N. Harbor Drive, on the waterfront near SDIA, U.S. Coast Guard, Sector San Diego comprises a dynamic mix of people and resources. It consists of 230 active duty, 150 reservist, and 700 volunteer auxiliary members. Utilizing its fleet of helicopters, small boats, and cutters, Sector San Diego provides aids to navigation and marine safety inspections, among other duties. Sector San Diego is responsible for Coast Guard operations from the Mexican border northward to above San Mateo Point and offshore as far as 200 miles. Under certain circumstances, search and rescue operations can even be extended into Mexican waters. In 2005 San Diego Coast Guard completed nearly 5,000 flight hours and approximately 5,500 hours on boats. It successfully concluded nearly 600-search and rescue cases as well as 300-law enforcement and safety boardings.

#### **5.17.4.4 Transportation Security Administration**

The TSA maintains offices at SDIA and staffs security checkpoints (e.g., passenger screening) at SDIA. For security reasons, detailed descriptions of TSA's operations at SDIA are not included in this public document.



#### 5.17.4.5 Local Jurisdiction

##### San Diego Fire-Rescue Department

The City of San Diego, through the ARFF at SDFD's Airport Station, provides primary fire protection and emergency medical services to the airfield at SDIA. Airport Station is located at 3698 Pacific Highway at the cross street of Washington Street. Apparatus at the Airport Station consists of four crash and rescue rigs that do not leave the airfield (except in the event of a catastrophic off-airfield aircraft incident). Specifically, the equipment includes:

- Rescue 1 (R1), which is a P19 Oshkosh that carries 1,000 gallons of water, 130 gallons of foam (light water) and 500 pounds of Halon 1211, a chemical designed to smother fire;
- Rescue 2 (R2) and Rescue 5 (R5; Reserve Unit), which are T3000s with each carrying 3,200 gallons of water and 410 gallons of foam; and
- Rescue 3 (R3), which is a P1300 Snozzle<sup>235</sup> that carries 3,200 gallons of water and 410 gallons of foam.

An emergency paramedic (M63) unit,<sup>236</sup> currently stationed inside the security gate at Terminal 2 West, supports the Airport Station; however, unlike the Airport Station units, M63 can respond to both airfield and terminal/landside incidents. (Rescue 4 [R4] is not located at the Airport Station; R4 is a utility rig that is dispatched to the terminals and landside areas from Station 4.)

The ARFF personnel and equipment at Airport Station cannot be dispatched for terminal or landside calls, as they must remain on the airfield at all times, except in the event of a catastrophic non-airfield incident. SDFD stations 1, 3, and 8, therefore, are the designated responders to non-airfield terminal and landside incidents. These three stations, in addition to stations 20 and 22, in the vicinity of SDIA provide mutual aid assistance as may be needed to ensure that the Airport receives supplemental personnel and resources during a major emergency and conditions of extreme peril. [Table 5-17.2](#) shows each of the fire stations within a five-mile radius of SDIA, their location, equipment, and distance/time from the Airport.

The SDFD responds to various alerts at the Airport, which include both on (ARFF/Airport Station) and off (Stations 1, 3, and 8) the airfield crashes. These types of alerts are highlighted in [Table 5-17.3](#).

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<sup>235</sup> A Snozzle is an elevated, extendable turret capable of reaching 12-13 feet and penetrating an aircraft hull and injecting fire retardant.

<sup>236</sup> A Paramedic Unit is a mini-emergency room on wheels equipped with among other things a gurney, bandages, medication, defibrillator and oxygen. The ambulance is equipped for advanced life support. Personnel are trained to handle any type of life threatening emergency in the field. The objective is to stabilize and transport victims to the closest appropriate facility.

Table 5-17.2

**Fire Stations within 5-miles of SDIA**

<b>Station</b>	<b>Location</b>	<b>Equipment</b>	<b>Approx Distance to SDIA (Main Entrance)</b>
Airport: ARFF responds to airfield incidents only	3698 Pacific Highway	3 Crash/Rescue (R1, R2, R3 with Snozzle)  1 Limited-use Reserve Unit (R5)	2.2 miles
Airport: M63 responds to both airfield and terminal/landside incidents	SDIA Terminal 2 West	1 Paramedic Unit (M63)	N/A
Station 1*	1222 First Avenue	1 Battalion Chief Vehicle 2 Fire Engine 1 Truck 1 Light and Air 1 Chemical Rig 1 Mobile Canteen 1 Explosive Device Team and X-ray Unit 1 Utility Rig (R4)	2.2 miles
Station 3*	725 West Kalmia Street	1 Fire Engine, with Paramedic on Board	1.5 miles
Station 4	404 8th Avenue	1 Fire Engine 1 Heavy Rescue 1 Utility Rig	3.2 miles
Station 5	3902 9th Avenue	1 Battalion Chief Vehicle 1 Fire Engine 1 Truck	3.3 miles
Station 7	944 Crosby Street,	1 Fire Engine	3.8 miles
Station 8*	3974 Goldfinch Street	1 Fire Engine, with Paramedic on Board	2.7 miles
Station 11	945 25th Street	1 Fire Engine	3.9 miles
Station 15	4711 Voltaire Street	1 Fire Engine	4.0 miles
Station 20**	3305 Kemper Blvd	1 Fire Engine 1 Truck 1 Utility Rig 1 Paramedic Unit	4.2 miles
Station 22**	1055 Catalina Blvd	1 Fire Engine	3.8 miles

\* Stations that are routinely dispatched to SDIA terminals and landside areas.

\*\* Stations (in addition to 1, 3 and 8) that may be dispatched to SDIA terminals and landside areas.

Table 5-17.3  
**Airport Alerts**

Crashes On Airfield	
Alert I	Aircraft approaching with minor difficulty. (Airport units will respond - notify Battalion Chief [B1]).
Alert II	Aircraft approaching with major difficulty. Airport units, R4 and B1 will respond, transmit 1st alarm <sup>237</sup> only if requested by units on the field (R1, R2, R3) or B1.
Alert III	Aircraft crash on or near the Airport - immediate emergency action required (Airport units and 1 <sup>st</sup> alarm if on field, second alarm if in residential area).
Alert IV	Bomb threat aboard aircraft (one engine company, Metro Arson Strike Team [MAST] Captain, Explosives Device Team [EDT] Technician, and Battalion Chief initially respond). Bomb threat against an aircraft. Bomb threat against an Airport building. Hijack situation. Hijack is a term, which describes the unlawful seizure of an aircraft. The response to this situation is controlled by the FAA (in the air) or the Federal Bureau of Investigations (on the ground).
Crashes Off Airfield	
Alert V	Aircraft crash in a populated area. Automatic 2nd Alarm, <sup>238</sup> with closest Crash Rig available, R4 and a paramedic unit.
Reduced Alert V	Aircraft crash where there is a limited hazard. On a freeway, city street, etc., and there is no fire. Automatic 1st Alarm with closest Crash Rig.
Wildland Alert V	Aircraft crash in a wildland, unpopulated area. Crash 2 Rig, R4, Water Tender, two Brush Rigs, Utility Rig (Note: No Trucks) and a paramedic unit.

Between July 2003 and June 2004 (FY2004) a total of 1,807 emergency calls were received from the SDIA (SDFD 2005).<sup>239</sup> **Table 5-17.4** indicates the FY 2004 incidents and responses by unit (excluding canceled and test incidents and responses with invalid times) for the equipment housed at the Airport Station and Terminal 2 West (i.e., M63).

Table 5-17.4  
**Incidents, Response Time, and Losses by Unit Type**

Unit	Total No. Incidents	Fires	Medical/Rescue	Other	Active Time (Hrs:Min:Sec)	Avg. Response Time	Avg. First In Response Time
M63	672	0	654	18	22:01:20	0:02:28	0:02:29
R1	18	0	0	18	8:43:22	0:03:02	0:03:09
R2	16	0	0	16	7:48:01	0:02:55	0:01:00
R3	15	0	0	15	7:14:03	0:03:01	0:02:39

Source: SDFD Annual Statistical Report FY 2004.

The Airport Station responded to a total of 721 medical/rescue and “other” incidents. The average response time ranged from two minutes and 28 seconds to three minutes and two seconds—a response time that is faster than the City average of five to eight minutes. If the SDFD cannot respond to a call immediately, it has the ability to collaborate with other fire departments from neighboring cities via the Automatic Aid Agreement (AAA). The AAA is an agreement between the City of San Diego Fire-Rescue Department and fire departments from adjacent cities to aid each other in responding to emergencies. Under this agreement, the fire station closest to the emergency responds to the call.

<sup>237</sup> 1st Alarm refers to a specified amount of equipment and staff needed to extinguish a normal size fire or incident. For example, a 1st Alarm response for a house fire is two Engines, one Truck and a Battalion Chief.

<sup>238</sup> 2<sup>nd</sup> Alarm refers to a fire or incident of greater magnitude than a 1st Alarm. Another complement of 1st Alarm equipment is added to initial response.

<sup>239</sup> SDFD Annual Statistical Report FY 2004.

## **Emergency Response and Facilities**

According to the SDFD,<sup>240</sup> each of the 44 fire stations in the City has a paramedic/firefighter. Along with three firefighter/emergency medical technicians (EMTs), the paramedic/firefighter is one of the first people on an emergency scene. A paramedic ambulance carrying an additional paramedic and an EMT soon reinforces the paramedic/firefighter. The City of San Diego has a partnership with Rural/Metro San Diego, Inc. and together they comprise the City's 9-1-1 Medical System known as the San Diego Medical Services Enterprise, LLC. The SDFD oversees the City's medical 9-1-1 operations; provides the primary 9-1-1 emergency medical response with paramedic/firefighters on all of the City's 44 fire engines; staffs 9-1-1 ambulances; and oversees medical dispatch communications (9-1-1 Dispatchers). Rural/Metro of San Diego staffs paramedic ambulances; provides non-emergency medical transportation; provides financial management, billing and purchasing; oversees System Status Management (ensuring the appropriate number of ambulances are in an area to adequately respond to 9-1-1 calls); and infuses capital into the Emergency Medical System to help ensure on-going quality improvements. 9-1-1 emergency response times are well within established goals (and Rural/Metro contract) requirements: paramedic engine on scene in eight minutes or less, 90 percent of the time; ambulance on scene in twelve minutes or less, 90 percent of the time.<sup>241</sup>

There were 79,643 rescue and EMS incidents in the City in FY 2004, the type and number of which are presented in [Table 5-17.5](#).

Table 5-17.5  
**Rescue and EMS Incidents by Type**

<b>Incident</b>	<b>No. of Occurrences</b>
Rescue, emergency medical call (EMS), other	170
Medical assist	21
Emergency Medical Services (EMS)	78,379
Lock-In	451
Search for lost person	5
Extrication, rescue	539
Water or ice-related rescue	59
Electrical rescue	18
Rescue or EMS standby	1
<b>TOTAL</b>	<b>79,643</b>

Source: SDFD Annual Statistical Report FY 2004.

The City provides an extensive variety of healthcare providers, facilities, programs and services that handle various emergencies. The main emergency medical facilities near the SDIA include the 520-bed Scripps Mercy Medical Center, a designated level 1 regional trauma center, located approximately 3.5 miles to the northeast of the SDIA; a 226-bed Sharp Cabrillo Medical Center, approximately four miles to the northwest; the 500-bed acute care U.S. Naval Medical Center, approximately 3.8 miles to the east; the 391-bed University of California San Diego Medical Center at Hillcrest, approximately four miles to the northeast; and the 204-bed acute care Sharp Coronado Hospital and Healthcare Center, approximately seven miles to the south.

## **San Diego Harbor Police Department**

Law enforcement services for SDIA (which is on State Tidelands) is provided by the SDHPD headquartered at 3380 N. Harbor Drive, approximately one half-mile from the SDIA (Lindbergh Field).

<sup>240</sup> <http://www.sandiego.gov/fireandems/911/emergmed.shtml>

<sup>241</sup> San Diego Fire Department. <http://www.sandiego.gov/fireandems/911/emergfaq.shtml> (accessed 2/24/2006).

The SDHPD has primary jurisdiction and is the first responder to incidents in San Diego Bay, the SDIA, and on all Tidelands around the bay. The SDHPD jurisdiction extends through the five member cities of the Port District, which include San Diego, Chula Vista, Coronado, Imperial Beach, and National City. The SDHPD is staffed with 173 employees as highlighted in [Table 5-17.6](#). There are approximately 39 vehicles assigned to this station, consisting of K-9 units, mobile command centers, trailer command centers, as well as patrol and undercover vehicles.

Table 5-17.6  
SDHP Position Summary

Position	Number
Chief of Harbor Police	1
Assistant Chief of Harbor Police	2
Harbor Police Lieutenant	4
Harbor Police Sergeant	18
Public Safety Dispatch Supervisor	2
Senior Harbor Police Officer	19
Harbor Police Officer	100
Public Safety Dispatcher	14
Executive Assistant II	1
Human Resources Technician (Classified)	1
Police Records Supervisor	1
Executive Assistant I (Unclassified)	2
Staff Assistant II	1
Staff Assistant I (Unclassified)	1
Senior Police Records Assistant	1
Administrative Assistant I (Classified)	1
Human Resources Assistant (Classified)	1
Police Records Assistant	3
<b>TOTAL</b>	<b>173</b>

Source: San Diego Unified Port District FY 2005-2006 Budget.

The SDHPD provides patrols and responds to various crimes within the Airport and aboard aircrafts landing and taking off from SDIA from its sub-station located in Terminal 1. The Department of Homeland Security, as needed, will dictate specific measures to augment the Airport's existing security. Security or alert levels include: green (low), blue (guarded), yellow (elevated), orange (high), and red (severe). Increased levels of alert may initiate any or all of the following measures:

- Increased uniformed law enforcement presence in public areas;
- Increased patrols of the Airport's perimeter; and
- Random inspections of vehicles entering the airport roadways and parking lots.

The SDHP Airport Division utilizes specialized teams including: foot patrol, the K-9 team, and vehicle patrol to provide law enforcement at the SDIA.

The SDHPD Foot Patrol officers are assigned to the Commuter, West, and East Terminals and respond to radio calls and any emergencies that may arise within the terminals, parking lots, and on board aircraft. They patrol the terminal on foot on a random basis and, since September 11, 2001, officers are assigned to each security checkpoint and work closely with a variety of federal agencies, including the TSA, to provide additional security at the Airport.

The K-9 team was initially formed in 1997 and is currently comprised of four officers and their K-9 partners on-call 24 hours a day. The K-9 team is the only TSA-certified explosive detection team south of Los Angeles International Airport. The team is assigned primarily at SDIA, but is also available to respond to all parts of San Diego County through a mutual aid agreement. Each officer and his K-9 partner undergo an extremely high success/find rate annual re-certification program, which must be passed in order to remain in the detection program.

The SDHPD has a number of vehicle units assigned to patrol the runway and ramp areas as well as the parking lots and frontage roads of the SDIA. They respond to radio calls and emergencies in and around the Airport and provide assistance to officers on foot in the terminals. During emergencies involving aircraft, they transport officers to pre-assigned positions, escort the responding fire department and emergency services vehicles to the aircraft once they are on the ground and assist on scene. The vehicle units also perform random security checks in the secured areas of the Airport and assist with traffic when there is a high volume of people traveling to and from SDIA.

## **5.17.5 Impact Analysis**

This section addresses the potential for the alternatives to increase demand for fire/emergency services and law enforcement services to an extent that would result in staffing shortfalls, facility capacity constraints, inadequate fire flows or unacceptable emergency response times (as described under "Significance Criteria").

### **5.17.5.1 Proposed Project - With and Without Parking Structure**

#### **Fire Protection Services**

The adequacy of fire protection for a given area is based on required fire flow, response distance and time from existing fire stations and the respective fire department's judgment for needs in the area. In general, the required fire flow is closely related to the intended land use. The quantity of water required for fire protection varies with the type of development, life hazard, occupancy and the degree of fire hazard. In addition to these factors, the adequacy of on-site fire suppression is based on the ability of the fire department to successfully navigate the project's access and internal circulation, as well as the provision and strategic placement of on-site suppression systems.

Increases in Airport development, traffic, passenger activity, changes in aircraft operations, combined with changes in the location and size of Airport facilities would potentially contribute to increased demand for fire protection services. Significant impacts on service levels would occur if adequate response times, emergency access, fire flows, and fire prevention systems are not supported and maintained.

Aircraft-based employees are often certified in fire suppression and handling of flammable materials. SDFD's protection of new development at SDIA resulting from the Proposed Project (Preferred Alternative) (e.g., Proposed Airport Implementation Plan projects) would primarily relate to fire incidents originating from storage of aircraft, storage of cleaning and maintenance materials, etc. The Proposed Project (Preferred Alternative) is expected to have sufficient fire flow, given the capacity of the water lines serving SDIA, as described in Section 5.11, *Utilities and Service Systems*. This includes the 12- to 16-inch water mains at SDIA and the secondary system of water laterals branching off of the primary system, which consists of 8- to 16-inch water lines providing service to the terminals and apron areas, as well as the adjacent TDY facilities along Harbor Drive. Of particular note with regard to fire protection is a 10-inch fire service water line surrounding the fuel storage tank farm connected along the north side of the main runway to a 16-inch ductile iron fire service. This 16-inch fire service extends along the access road between MCRD and the former General Dynamics site, where it joins a 12-inch main near the intersection of Washington and Pacific Highway.

While additional aircraft movements, passenger activity, and cargo facility development would potentially increase the potential for fires and airfield incidents, standard procedures for plan review would ensure that new construction is developed in conformance with the Uniform Fire Code, the SDF Code, FAA Codes, and other applicable standards. As such, new development would have adequate fire hydrants, fire flow, fire prevention and warning systems, and fire equipment access to all structures and areas of the property.

The SDFD's response time is a function of the type of emergency and the equipment required; for example, it would take more time to get larger equipment to the site than smaller equipment. However, SDFD's existing Airport Station and existing stations 1, 3, and 8 would allow the SDFD to provide support and respond to the airfield and terminals/landside, respectively, on the Proposed Project (Preferred Alternative) site within a five-minute response time; thus, no impact to response time is anticipated. Traffic congestion on and near SDIA property associated with the proposed alternatives would increase compared to the current conditions. This increase in traffic congestion may hamper access or delay response times in the vicinity of SDIA, see Section 5.3 *Traffic and Circulation*.

During construction of the Proposed Project (Preferred Alternative), M63 would be moved from its present location in Terminal 2 West and temporarily relocated near a security gate within the existing Terminal 1, Terminal 2 East, or Commuter Terminal complexes. Upon completion of the Proposed Project (Preferred Alternative) (i.e., at build-out), however, M63 would be incorporated into the redesigned Terminal 2 West. Because the need for paramedic and fire protection services at SDIA is based on the volume of passengers through the Airport and the average number of incidents per passenger, the additional square footage that would be added to SDIA as part of the Proposed Project (Preferred Alternative) would not, in and of itself, result in the need for additional paramedic or fire protection units. Therefore, no new fire fighting facilities are expected to be constructed and there would be no need for existing fire stations to be relocated. It is expected that the Airport Station and stations 1, 3, and 8, with mutual aid from Stations 4, 5, 7, 11, 15, 20 and 22 would continue to provide fire protection services on the airfield and at the Airport and maintain adequate response times and service levels. In addition, the SDFD would continue to conduct ongoing reviews of staffing and equipment levels in relation to the proposed development and any changes in aircraft types, increases in aircraft movements and passenger activity.

Based on the above factors, the Proposed Project (Preferred Alternative)'s impact on fire protection and emergency medical (i.e., paramedic) services would be less than significant.

## **Law Enforcement**

The SDHPD would be expected to incur both short-and long-term impacts related to the construction and operation of the Proposed Project (Preferred Alternative). Short-term impacts would include: increase in emergency calls during construction; reports and investigations of construction thefts; and required plan checks and physical inspections; these are addressed below under "Construction Impacts." Long-term (i.e., operational) impacts would include increases in calls for service, business watch and other crime prevention services, as well as increases in case reports. The Proposed Project (Preferred Alternative) would not adversely effect the Airport substation's protection or operational activities (e.g., through physical impacts to the substation or restrictions in station personnel's access to Airport facilities).

Due to the level of security provided at SDIA for civil aviation protection reasons, incidents of theft, destruction or damage at SDIA facilities and to employee vehicles and property are not expected to increase as a result of the Proposed Project (Preferred Alternative). The Proposed Airport Implementation Plan would provide additional on-Airport parking (e.g., a parking structure); an increase in the number of vehicles parked on site would potentially result in a corresponding increase in vehicle-related incidents (e.g., thefts and break-ins). Overall, however, the Proposed Project (Preferred Alternative) would not result in a significant increase in required law enforcement workload. Furthermore, given the size of the Proposed Project (Preferred Alternative), and considering that the first response would be from SDHPD substation at the Airport, the Proposed Project (Preferred Alternative) would not measurably affect Priority 1 response time goals. In addition, the SDHPD would continue to conduct ongoing reviews of staffing and equipment levels in relation to the proposed development and any changes in activities at the Airport.

The Proposed Project (Preferred Alternative) would provide expanded and new areas for passenger screening and other TSA security activities. While this would be a benefit to the TSA, its effect on security would be nominal. This assessment reflects that the TSA and SDCRAA will ensure that appropriate civil aviation security measures are implemented at SDIA regardless of whether the Proposed Project (Preferred Alternative) is improved.

Based on the factors discussed above, the Proposed Project (Preferred Alternative) would have a less-than-significant impact on law enforcement.

## **5.17.5.2 East Terminal Alternative - With and Without Parking Structure**

### **Fire Protection**

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the proposed Airport Land Use Plan see Chapter Four, section 4.2.1 *Airport Land use Plan* for a detailed explanation. Therefore, the East Terminal Alternative includes the Proposed Airport Land Use Plan. With implementation of the East Terminal Alternative, most features influencing demand for fire protection services would be similar to those described for the Proposed Project (Preferred Alternative), differing primarily with respect to changes in facility locations and space allocations, runway development, extension and relocation.

Similar to the Proposed Project (Preferred Alternative), significant impacts on service levels would occur if adequate response times, emergency access, fire flows, and fire prevention systems are not supported and maintained. Passenger activity and aircraft operations, combined with changes in the location and size of Airport facilities, would contribute to increased demand for fire protection (including emergency medical) services. Similar to the Proposed Project (Preferred Alternative), it is not anticipated that response times would be impacted due to the incorporated project design features and compliance with standard regulations. No new fire fighting facilities would need to be constructed, and there would be no need for existing fire stations to be relocated. In addition, the SDFD would continue to conduct ongoing reviews of staffing and equipment levels in relation to the proposed development and any changes in aircraft types, increases in aircraft movements and passenger activity. As with the Proposed Project (Preferred Alternative), the effects of this alternative of fire protection would be less than significant.

### **Law Enforcement**

Similar to the Proposed Project (Preferred Alternative), this alternative would be expected to result in increased demand for law enforcement services related to both the construction and operation of the East Terminal Alternative. Expansion of terminals, parking areas and other facilities, as well as the increased size of the Airport, could potentially require additional staffing and equipment. For reasons similar to those described for the Proposed Project (Preferred Alternative), this alternative would not significantly affect the ability of the SDHPD to respond to service calls at SDIA or elsewhere within its service area. In addition, the East Terminal Alternative would not have an adverse effect on the Airport substation's protection or operational activities. The SDHPD would continue to conduct ongoing reviews of staffing and equipment levels in relation to the proposed development and any changes in activities at the Airport.

## **5.17.5.3 No Project Alternative**

### **Fire Protection**

The No Project Alternative (described in Section 4.4) assumes that no Airport Land Use Plan would be developed and no projects beyond those currently included in the Airport's Capital Improvement Program (CIP) Project list would be constructed. Aircraft operations would be handled by the existing airfield system, including apron. The No Project Alternative contains various features that are especially pertinent to the analysis of fire protection impacts. Some of these features are increases in passenger queues at security screening areas and overcrowding in holdrooms. Furthermore, without the additional gates of the Proposed Project (Preferred Alternative), aircraft turn-around time would be kept to a minimum and would be subject to disruption (e.g., in the event of a system-wide weather event).

While additional aircraft movements, passenger activity, and cargo facility development under the No Project Alternative would incrementally increase the potential for fires and airfield incidents compared to current (baseline) conditions, standard procedures for plan review would ensure that new construction is developed in conformance with the UFC, SD Fire Code, FAR, and other applicable standards. As such, new development would have adequate fire hydrants, fire flow, fire prevention and warning systems, and would provide fire equipment access to all structures and areas of the property. It is anticipated that SDFD would continue to conduct ongoing reviews of staffing and equipment levels in relation to proposed development, potential changes in aircraft types and aircraft movements, as well as increases in passenger activity.



Traffic congestion on the Airport property associated with Airport operations under the No Project Alternative would increase when compared to baseline conditions. Under this alternative, existing Airport peak hour capacity deficiencies would compound by 2015. Off-airport traffic congestion associated with Airport operations under the No Project Alternative is expected to increase, as a result of increased Airport traffic (see Section 5.3.5.3, *Impact Analysis No Project Alternative*). This increase in traffic congestion may hamper access or delay response times in the vicinity of SDIA. Because the No Project Alternative would not increase demand for fire protection services or alter the ability of the Fire Department to provide such services, it would have no fire services impact.

## **Law Enforcement**

The No Project Alternative would have consequences which could be detrimental to effective law enforcement at SDIA. Some of these include increases in passenger queues at security screening areas, overcrowding in holdrooms, and changes in traffic circulation on and off site. While these changes could require additional law enforcement oversight at SDIA, SDCRAA would address changing conditions through coordination and planning with applicable law enforcement agencies. It is also anticipated that SDHPD would continue to conduct ongoing reviews of staffing and equipment levels in relation to proposed development, traffic circulation and passenger activity. Accordingly, the No Project Alternative would not cause a significant law enforcement impact.

### **5.17.6 Construction Impacts**

#### **5.17.6.1 Fire Protection**

The traffic congestion associated with the demolition and construction of major projects within and adjacent to the SDIA property would have the potential to hamper or delay emergency response. However, temporary roadway Level of Service (LOS) deficiencies associated with compromised emergency response would be minimized through implementation of a Traffic Management Plan during construction (see Section 5.3, *Traffic and Circulation*). This would ensure proper advanced coordination with SDFD and planning of detours and emergency access routes to maintain response times. Implementation of a Traffic Management Plan during construction at SDIA would avoid potentially significant traffic-related impacts on fire protection (including emergency services) response times and ensure that adequate fire protection service levels are maintained. Therefore, impacts of construction on fire response times would be less than significant.

#### **5.17.6.2 Law Enforcement**

During periods of demolition and construction within and adjacent to the SDIA property, construction activities and associated traffic congestion would have the potential to increase response times and increase traffic patrol and other law enforcement activities. These potential impacts would be addressed through coordination and planning with law enforcement and fire protection agencies to reduce effects from construction on traffic, emergency access, and response times. The standard procedures for plan review would also address coordination with local law enforcement agencies to ensure that measures, such as detour plans, scheduling, and traffic control, are implemented where needed to avoid congestion that would hamper emergency response. Accordingly, construction impacts to law enforcement would be less than significant.

### **5.17.7 Cumulative Impacts**

As discussed under Section 5.17.4, *Environmental Setting*, existing levels of fire service at SDIA, as provided by SDFD, are considered to be adequate, with sufficient staffing and equipment and support of emergency response times. As previously discussed under Section 5.17.5, *Impact Analysis*, demand for fire services could increase at SDIA due to new development. It should be noted, however, that increases in passenger activity and employment, and increased aircraft operations are forecast with or without the Proposed Project. These impacts would be avoided or minimized through compliance with regulatory maintenance of adequate fire flows, emergency response times, and ongoing evaluations by the respective jurisdictions to ensure adequate staffing and equipment levels.

The alternatives would have only incremental off-Airport (indirect) effects on public services due to the small level of project-related increases in population that would be associated additional employment

opportunities at SDIA. Natural increase in the region and city, coupled with the population increase associated with new employment at SDIA, would potentially require increased staffing and equipment needs within individual jurisdictions and would also have the potential to compromise response times due to increased congestion. Although some jurisdictions would likely experience interim periods of degraded service, it is expected that fire and emergency services will remain the highest of priorities with overall levels of service maintained at adequate levels through long-range planning, local funding, project-by-project review, ongoing traffic mitigation and transportation improvements, as well as conditioning of new development projects.

### **5.17.8 Mitigation Measures/Other Improvements**

No mitigation measures are required. The Proposed Project (Preferred Alternative) plans would be reviewed by the SDHPD, SDFD, and other agencies to help ensure compliance with all applicable codes, ordinances, policies, and standards. Review of Proposed Project plans by various agencies would help reduce environmental contributors to criminal activity, for example, by ensuring that poorly lit areas and other unsafe design features are eliminated. Because these requirements must be complied with to obtain project approval, they are not considered mitigation. In addition, it is anticipated that SDHPD and SDFD will continue to routinely evaluate their personnel, equipment, and facility needs to keep pace with forecasted increases in activity and development at SDIA in order to maintain a high level of law enforcement and fire protection services.

### **5.17.9 Level of Significance after Mitigation Measures**

Potential impacts to public services due to the Proposed Project (Preferred Alternative) are less than significant; therefore, mitigation measures would not be applied for this impact category. The level of significance specific to public services impacts remains less than significant.

## 5.18 Recreation

This section describes the general approach and methodology, significance criteria, and environmental setting, as well as considers potential recreation impacts associated with the Proposed Project (Preferred Alternative) and its alternatives. Additionally this section describes potential construction and cumulative impacts and necessary mitigation to reduce potential environmental impacts. Comments in response to the NOP specific to potential recreation impacts were received from the following agencies and individuals:

- Oral comments during scoping meetings expressed concern – general concern over recreational areas and potential impact to tourism.

All written and oral comments during the NOP process are provided in [Appendix A](#). The comment received specific to recreation impacts is addressed within this section of the EIR. No comments specific to recreation were received in response to the previously circulated Draft EIR.

The changes to the Proposed Project and alternatives that are included in this ~~recirculated Draft~~ Final EIR do not affect the results of the recreation analysis presented in the previously circulated Draft EIR. The proposed changes to the Proposed Project and alternatives would not cause new or substantially more severe impacts to recreational facilities in comparison to the Proposed Project evaluated in the previously circulated Draft EIR, nor would they generate a greater demand for recreational facilities than would the originally evaluated Proposed Project and alternatives. Additionally, extending the horizon year for the impact evaluation from 2015 to 2030 would not be expected to change the previously circulated assessment of recreation impacts, as provided below.

### 5.18.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

Existing recreational resources near SDIA were documented through review of applicable plans (e.g., *Port of San Diego Port Master Plan*) and maps, and through field reconnaissance. As described in Section 5.1, *Noise*, the Proposed Project and its alternatives would not noticeably affect off-Airport noise levels, meaning that there would not be indirect noise impacts at parks or other recreational areas located under the SDIA flight paths (such as at Balboa Park or Ocean Beach). Similarly, because the Proposed Project would not generate increased levels of residents or visitors to San Diego, it would not result in increased demand for, or use of, parks or other recreational areas. Based on these factors, the assessment of recreational resources focused on those resources located in the immediate vicinity of the Airport.

### 5.18.2 Significance Criteria

Based on the Environmental Checklist in Appendix G to the *State CEQA Guidelines*, the Proposed Project would have a significant impact on recreational resources if it would:

- increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or

- substantially degrade or be incompatible with adjacent recreational facilities (such as parks)

### **5.18.3 Existing Conditions**

#### **Existing Parks and Other Recreational Resources**

There are a number of parks and other recreational areas near SDIA, including those maintained by the Port of San Diego, as well as the recreational opportunities associated with north San Diego Bay.

#### **San Diego Bay**

SDIA is located just north of San Diego Bay, a regionally important recreational resource. The north Bay area near SDIA includes Shelter and Harbor islands and Spanish Landing Park (described below), and it is the focal point for San Diego's North Embarcadero (also described below). Recreational opportunities associated with San Diego Bay include boating, fishing, ferry transportation/harbor tours, tourist attractions (e.g., San Diego Maritime Museum) and sightseeing.

#### **Shelter Island**

Shelter Island is an artificial island (technically, a peninsula) located approximately three miles northwest of SDIA on Port Tidelands. Recreational facilities on Shelter Island include Shelter Island Park and paved pedestrian and bike paths, picnic benches, rest rooms, a boat launch, marinas, a shoreline beach, docking slips and a public fishing pier. Shelter Island Park occupies open space around the Friendship Bell Monument and retains access to the bay and viewpoints.

#### **Harbor Island**

Located due south of SDIA, Harbor Island is another artificial island (technically, a peninsula) created on Port Tidelands. Its recreational resources include Harbor Island Drive Park, which runs along the south side of Harbor Island, scenic paved pedestrian paths and a bicycle route. Marinas and marine related commercial businesses occupy most of Harbor Island.

#### **Spanish Landing Park**

Spanish Landing Park is located along north San Diego Bay, extending east from the Navy's Anti-submarine Warfare Base to just across from SDIA. This Port of San Diego-operated park occupies approximately 11.2 acres, approximately 1.3 acres of which are used for a paved bicycle and pedestrian path along the scenic shoreline. Other recreational amenities include picnic benches/tables and a children's sandlot/playground.

#### **North Embarcadero Waterfront**

Generally consisting of the north Bay waterfront from Grape Street to Seaport Village, the North Embarcadero is lined by a scenic pedestrian and bicycle path. Recreational resources along the North Embarcadero include recreational fishing, recreational boat berthing and view points. Proposed changes to this area are described below.

#### **Planned Parks and Recreational Resources**

Planning for new recreational resources in the vicinity of SDIA is limited by the highly developed nature of this area. New facilities are planned at the former Naval Training Center (NTC) property and there are also planned changes to the North Embarcadero.

#### **Former Naval Training Center/Liberty Station**

Located to the west of SDIA is the former NTC, which occupies approximately 502 acres. Of these 502 acres, 361 acres are being developed as "Liberty Station" under the *NTC Precise Plan and Local Coastal Program*, adopted in 2001. Within Liberty Station, 40 acres are intended for a waterfront park and 6 acres are intended for a 100-foot wide pedestrian, bicycle, and recreational path along the waterfront. Planned recreational facilities for the waterfront park include picnic tables and open lawn areas. Another recreational use on the former NTC property is an existing golf course, located in the northern corner of Liberty Station.

## **North Embarcadero**

The *North Embarcadero Alliance Visionary Plan*, dated December 1998, is intended to guide development along the City's North Embarcadero (see also Section 6.2 *Growth-Inducing Impacts*). This plan is the outcome of an alliance among five government agencies with significant ownership and/or jurisdictional interests in the area: Port of San Diego, Centre City Development Corporation, City of San Diego, County of San Diego and United States Navy. The plan envisions a mix of uses, including public parks and cultural facilities, all encouraging a water orientation. With full plan implementation, new or upgraded recreational facilities in the North Embarcadero area could include 100,000 square feet of cultural facilities, revitalization of waterfront pedestrian paths, the addition of 1,770 trees and revitalization of the Broadway pier.

### **5.18.4 Impact Analysis**

This section considers potential recreation impacts associated with the Proposed Project and its alternatives.

#### **5.18.4.1 Proposed Project - With and Without Parking Structure**

For the reasons described in Chapter 3 *Project Objectives*, the Proposed Project (Preferred Alternative) would not generate increased numbers of visitors to San Diego. Similarly, the employment opportunities created by the expansion of the existing Airport facilities would be minor in comparison to the regional labor market and would not be expected to draw new residents to the San Diego area. Accordingly, the Proposed Project (Preferred Alternative) is not expected to induce new growth within the region that would create an increased demand for parks or other recreational resources.

The development of SDIA in accordance with the Proposed Airport Land Use Plan (specifically including those projects that are in the Implementation Plan) would not result in any direct impacts to park or recreational facilities. This assessment reflects that the expansion of SDIA would be limited to former aviation industrial Port Tideland leaseholds and a portion of the former NTC that has already been transferred to SDCRAA. No Airport facilities would be expanded into existing or planned recreational areas.

As described in Section 5.1, *Noise*, the Proposed Project (Preferred Alternative) would not generate noticeable changes in noise contours off Airport. Accordingly, there would be no noise-related effects to the recreational facilities near the Airport or under its approach and departure flight paths. Similarly, for the reasons described in Section 5.13, *Aesthetics*, the Proposed Project (Preferred Alternative) would not significantly affect viewers at Spanish Landing Park, Harbor Island or other areas where scenic views contribute substantially to the recreational experience.

Accordingly, the Proposed Project (Preferred Alternative) would have a less than significant impact on recreation.

#### **5.18.4.2 East Terminal Alternative - With and Without Parking Structure**

SDCRAA has determined that there are no feasible and less environmentally significant alternatives to the proposed Airport Land Use Plan see Chapter Four, section 4.2.1 *Airport Land use Plan* for a detailed explanation. Therefore, the East Terminal Alternative includes the Proposed Airport Land Use Plan. Similar to the Proposed Project (Preferred Alternative), this alternative would not (1) create an increased demand for recreational resources, (2) directly affect recreational resources or (3) cause indirect effects, such as increased noise levels, that would degrade the recreational experience at nearby parks or recreational areas. Accordingly, this alternative's impact on recreation would be less than significant.

#### **5.18.4.3 No Project Alternative**

Under the No Project Alternative, there would be no actions at SDIA that would induce growth or otherwise affect the demand for recreational resources. Similarly, because there would be no expansion of SDIA facilities, there would be no potential for such expansion to directly or indirectly affect parks or other recreational resources. Accordingly, the No Project Alternative would have no effect on recreation.

### **5.18.5 Construction Impacts**

Construction would not directly affect parks or other recreational resources for reasons similar to those described above. Specifically, the Proposed Project would not encroach into existing or planned recreational areas. With regard to indirect effects, there would be a temporary construction-related increase in traffic on North Harbor Drive, including road segments adjacent to Spanish Land Park and along the North Embarcadero. As a result, these areas would experience a temporary increase in traffic noise levels. Because these are urban parks/walkways located along a major road, traffic noise is not unexpected, and construction traffic noise generally would not be discernable from the overall level of Airport-related and other North Harbor Drive traffic. Accordingly, this short-term effect would be less than significant.

### **5.18.6 Cumulative Impacts**

Neither the Proposed Project (Preferred Alternative) nor the East Terminal Alternative would contribute to an increased demand for recreational resources or result in adverse affects to existing or planned recreational resources. As noted above, the No Project Alternative would not have any affect on recreation. Accordingly, none of these alternatives would incrementally contribute to a significant cumulative impact on recreation.

### **5.18.7 Mitigation Measures/Other Improvements**

Because the Proposed Project would not have a significant effect on recreational resources, no mitigation for recreation impacts would be required.

### **5.18.8 Level of Significance after Mitigation Measures**

Potential impacts to recreational resources due to the Proposed Project are less than significant; therefore, mitigation measures would not be applied for this impact category. The level of significance specific to recreational resource impacts remains less than significant.

## 5.19 Greenhouse Gas Emissions

This section describes the general approach and methodology, current regulatory framework, significance criteria, and environmental setting pertaining to the topic of climate change and greenhouse gases (GHG). It also characterizes and quantifies the amounts of GHG emissions impacts associated with the Proposed Project (Preferred Alternative) and alternatives. There were no comments in response to the NOP or the previously circulated Draft EIR specific to potential impacts for GHG emissions.

### 5.19.1 General Approach and Methodology

The Proposed Project evaluated in this section consists of two key components. The first is the Airport Land Use Plan, which this EIR considers on a PROGAM level. The second component this EIR considers is the specific improvements identified in the Airport Master Plan to meet demand through 2015, called the Proposed Airport Implementation Plan, which is evaluated on a PROJECT level. The introduction to Chapter Three provides more details about the distinction between the two levels of analysis and the components of this EIR. Because the Airport Land Use Plan is considered on a program level in this EIR, the SDCRAA will undertake additional environmental review on specific projects generalized in the Airport Land Use Plan as those projects are moved forward for planning and design.

The specific elements of the Airport Implementation Plan and the Airport Implementation Plan Alternative are described in detail in Sections 4.1.2, 4.1.3, 4.2.1, and 4.2.2, respectively. The Proposed Airport Land Use Plan is described in Section 4.1.1. The main differences in the projects analyzed between the Proposed Airport Land Use Plan the Airport Implementation Plan and the Airport Implementation Plan Alternative are generalized development of the Teledyne Ryan site and a public parking/consolidated rental car structure and an airport transit center.

For this assessment, GHGs associated with the planned projects at SDIA were estimated for aircraft, GSE/APU, motor vehicles, stationary sources, as well as construction equipment. Therefore, the input parameters were similar to those used in support of the emissions inventory of CO, NO<sub>x</sub>, VOC, etc. Input data such as activity levels or material throughput rates (i.e., fuel usage, vehicle miles traveled (VMT), electrical consumption) are applied to appropriate emission factors (i.e., in units of GHG emissions per gallons of fuel). However, this analysis focuses not only on the principle GHG of carbon dioxide (CO<sub>2</sub>), but also includes nitrogen oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>). The results are reported as CO<sub>2</sub>-equivalents based on Intergovernmental Panel on Climate Change (IPCC) Global Warming Potential Values and are expressed as total tons of airport-related emissions.

Emission factors were obtained from the U.S. Energy Information Administration, the IPCC, and the U.S. Environmental Protection Agency (EPA), and California Air Resources Board (CARB).<sup>242, 243, 244</sup>

### 5.19.2 Regulatory Framework

In September 2006, California passed the California Global Warming Solutions Act (CGWSA), which was added to the Health and Safety Code Section 38500 (commonly referred to as AB 32). This addition states that global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. It also requires that the state reduce emissions of GHG emissions to 1990 levels by 2020. To effectively implement the cap, CGWSA directs the CARB to develop appropriate regulations.

By January 1, 2008, CARB must determine what the statewide GHG emissions level was in 1990 and approve a statewide GHG emissions limit that is equivalent to the level to be achieved by 2020. Before January 1, 2011, CARB must also adopt GHG emission limits and emission reduction measures to

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<sup>242</sup> U.S. Energy Information Administration, *Voluntary Reporting of Greenhouse Gases Program Fuel and Energy Source Codes and Emission Coefficients*, <http://www.eia.doe.gov/oiaf/1605/coefficients.html>

<sup>243</sup> IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2, 2006, <http://www.ipcc-nggip.iges.or.jp/public/gl/invs5.htm>

<sup>244</sup> CARB, EMFAC2007 Emissions Model, November 1, 2006.

achieve the maximum technologically feasible and cost-effective reductions in GHG emissions in furtherance of achieving the statewide GHG emissions limit, to become operative beginning on January 1, 2012.

In August of 2007, California's Attorney General required that the San Bernardino County inventory historical, current, and projected greenhouse gas (GHG) emissions in the EIR for the County's General Plan. The settlement required that the county take the following steps:<sup>245</sup>

- Prepare an inventory of all known or "reasonably discoverable" sources of greenhouse gasses currently existing in the county;
- Prepare an inventory of GHG emission in 1990 and 2007 and those projected for 2020; and
- Prepare a "GHG Reduction Plan" that includes (1) a reduction target for emission attributable to the county's discretionary land use decisions and its own internal government operations, and (2) feasible GHG emission reduction measures.

This settlement will likely influence the requests for climate change analysis in CEQA documents, but it does not create a legal requirement to do so. In anticipation of future legislation, GHG emission inventories for the Proposed Project (Preferred Alternative), the East Terminal Alternative, and the No Project Alternative at SDIA are included in this document.

### **5.19.3      Significance Criteria**

There are no current CEQA Thresholds of Significance established for GHGs. However, in recognition of the emerging concern regarding GHG emissions, AB 32 calls for CARB to adopt regulations requiring the reporting and verification of GHG emissions statewide and that a limit equivalent to 1990 levels be achieved by the year 2020.

Given the complex interactions between various global and regional-scale physical, chemical, atmospheric, terrestrial, and aquatic systems that result in the physical expressions of global climate change, it is impossible to determine what levels of GHG emissions would result in altered environmental conditions.<sup>246</sup> For this analysis a project's incremental contribution to global climate change would be considered significant if due to the size or nature of the project it would generate a substantial increase in GHG emissions relative to the future should the Proposed Project not proceed (i.e., No Project Alternative) leading to significant physical impacts.

### **5.19.4      Environmental Setting**

Various gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Among prominent GHGs are CO<sub>2</sub>, CH<sub>4</sub>, O<sub>3</sub>, water vapor, N<sub>2</sub>O, and chlorofluorocarbons (CFCs). Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors.<sup>247</sup> Unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively, GHGs are a global pollutant.

Existing (or "Baseline") conditions for the three most common GHG compounds associated with SDIA are summarized in [Table 5.19-1](#). Direct emissions are those that occur on the airport site, through the aircraft Landing/Take-off Operation (LTO) and associated with airport-related motor vehicles traveling to and from SDIA. Indirect emissions are those that occur beyond the aircraft LTO.

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<sup>245</sup> "Landmark CEQA/Climate Change Settlement" Morrison & Foerster: August 2007.

<sup>246</sup> Placer Vineyards Specific Plan Final Revised EIR, October 2006

<sup>247</sup> California Energy Commission. 2006a. *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*. (Staff Final Report). Publication CEC-600-2006-013-SF. Available: <<http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF>>. Accessed in January 2007.



Table 5.19-1  
**Baseline (2005) GHG Emissions Inventory for SDIA  
(metric tons)**

Year	Compounds			Totals
	CO <sub>2</sub>	N <sub>2</sub> O	CH <sub>4</sub>	
<b>Direct Emissions</b>				
2005	166,654	492	149	188,082
<b>Indirect Emissions</b>				
2005	1,396,879	3,625	785	1,380,502
<b>Direct and Indirect Emissions</b>				
2005	1,563,533	4,117	934	1,568,584

CO<sub>2</sub> – carbon dioxide, N<sub>2</sub>O – nitrous oxide, CH<sub>4</sub> – methane  
2,000 lbs. = 1 short ton = 1 metric ton

Source: KB Environmental Sciences, Inc, 2007.

The values within the table have been completely updated to rectify incorrect data provided in the Draft EIR. The updated values do not represent significant new information because they do not affect the significance determinations presented in the Draft EIR.

### 5.19.5 Impact Analysis

For airports, GHG emissions are calculated in much the same way criteria pollutants are calculated - and that is through the use of input data such as activity levels or material throughput rates (i.e., fuel usage, vehicle miles traveled (VMT), electrical consumption) that are applied to appropriate emission factors (i.e., in units of GHG emissions per gallons of fuel). Tables E-64 through E-83 in [Appendix E](#) present the data and information concerning activity levels and material throughput used to calculate the GHG emissions for the Baseline, No Project, and Project Alternatives.

**Table 5.19-2** summarizes the GHG emissions inventory results for the Proposed Implementation Plan, the East Terminal Alternative and the No-Project conditions at SDIA.

Recognizing that there are currently no CEQA guidelines for determining significance criteria for GHG emissions, this assessment is for disclosure purposes only. CO<sub>2</sub> emission for the year 2004 in California totaled approximately 492 million gross metric tons of CO<sub>2</sub> equivalents. The information and data presented in this section fulfill the initial designs of addressing GHG's under the CEQA process by broadly quantifying the "carbon footprint" of the airport under Baseline conditions and future years, both with and without the planned improvements. More detailed GHG emission inventories of SDIA (including measures to help reduce these emissions over time) will be prepared by SDCAA once CARB completes its rule-making on this emerging topic.

### 5.19.6 Construction Impacts

Analysis for construction generated greenhouse emissions was not completed as fuel and energy consumption specifics are beyond the level of detail provided in a standard construction schedule. Therefore any analysis construction generated greenhouse emissions would be too speculative to analyze.

### 5.19.7 Cummulative Impacts

The air emissions inventory prepared for the proposed AMP improvements to SDIA are inclusive of all airport-related sources of emissions (i.e., aircraft, GSE, on- and off-site motor vehicles, etc.) under Baseline (existing) conditions as well as the Proposed Project (Preferred Alternative) and the East Terminal Alternative (With and Without the Parking Facility), the Land Use Plan, and the No Project Alternative.

Table 5.19-2  
GHG Emissions Inventory (metric tons)

No Project Alternative					Proposed Project (Preferred Alternative)				East Terminal Alternative			
Year	Compounds			Totals	Compounds			Totals	Compounds			Totals
	CO <sub>2</sub>	N <sub>2</sub> O	CH <sub>4</sub>		CO <sub>2</sub>	N <sub>2</sub> O	CH <sub>4</sub>		CO <sub>2</sub>	N <sub>2</sub> O	CH <sub>4</sub>	
<i>Direct Emissions</i>					<i>Direct Emissions</i>				<i>Direct Emissions</i>			
2010	188,672	549	147	209,497	193,479	557	148	214,262	195,204	561	148	215,732
2015	224,944	655	159	248,967	229,894	664	160	253,881	231,803	668	161	255,503
2020	251,991	734	168	278,972	256,994	743	170	284,105	258,905	747	170	285,695
2025	267,820	781	172	296,613	275,531	798	175	304,541	277,223	801	176	305,901
2030	279,141	812	175	308,245	295,142	853	184	325,069	296,750	856	184	326,479
<i>Indirect Emissions</i>					<i>Indirect Emissions</i>				<i>Indirect Emissions</i>			
2010	1,511,433	3,929	849	1,496,081	1,511,204	3,928	849	1,495,903	1,509,451	3,925	848	1,494,405
2015	1,724,331	4,482	967	1,706,572	1,724,137	4,481	967	1,706,421	1,722,126	4,477	966	1,704,698
2020	1,839,550	4,778	1,029	1,819,278	1,839,581	4,777	1,029	1,819,189	1,837,494	4,773	1,028	1,817,423
2025	1,841,086	4,777	1,029	1,819,052	1,892,411	4,912	1,058	1,870,345	1,890,504	4,908	1,057	1,868,768
2030	1,813,776	4,705	1,013	1,791,377	1,937,760	5,029	1,082	1,914,981	1,936,064	5,025	1,082	1,913,482
<i>Direct and Indirect Emissions</i>					<i>Direct and Indirect Emissions</i>				<i>Direct and Indirect Emissions</i>			
2010	1,700,105	4,478	995	1,705,579	1,704,682	4,486	997	1,710,165	1,704,655	4,486	996	1,710,137
2015	1,949,276	5,137	1,126	1,955,538	1,954,031	5,145	1,127	1,960,303	1,953,929	5,144	1,127	1,960,200
2020	2,091,541	5,512	1,198	2,098,250	2,096,574	5,521	1,199	2,103,294	2,096,399	5,520	1,199	2,103,118
2025	2,108,906	5,559	1,201	2,115,665	2,167,942	5,710	1,233	2,174,885	2,167,727	5,709	1,233	2,174,669
2030	2,092,916	5,517	1,188	2,099,621	2,232,902	5,882	1,266	2,240,051	2,232,814	5,882	1,266	2,239,962

Source: KB Environmental Sciences, Inc, 2008; HNTB Analysis 2008.

The values within the table have been completely updated to rectify incorrect data provided in the Draft EIR. The updated values do not represent significant new information because they do not affect the significance determinations presented in the Draft EIR.

## 5.20 Cumulative Impacts

This section describes the general approach and applicable plans and policies specific to cumulative impacts. Comments in response to the NOP and previously circulated draft specific to cumulative impacts were received from the following agencies and individuals:

- San Diego Unified Port District –Ongoing traffic increases association with airport operations much be considered; a cumulative impact and AA should be responsible for mitigation;
- City of San Diego City Planning and Community Investment –The forecasted passenger demand will exceed existing runway capacity
- Marine Corps Recruitment Depot (MCRD )–Additional gates will increase capacity.
- Park and Ride Airport Parking –Would like the addition of jobs/housing balance and economics factored into the report. The proposed SAN Park Pacific Highway expansion will impact Park & Ride airport Parking, Inc.

Both the Greater Golden Hill Community and the Metropolitan Transit System expressed that the projections should extend beyond the year 2015. All written and oral comments received during the NOP process are provided in [Appendix A](#). Comments received specific to cumulative impacts are addressed within this section of the EIR.

### 5.20.1 Background

Section 15355 of the *State CEQA Guidelines* defines cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” These individual effects may entail changes resulting from a single project or from a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor, but collectively significant projects occurring over a period of time.

Section 15130 of the *State CEQA Guidelines* requires that an EIR address cumulative impacts of a project when the project’s incremental effect would be cumulatively considerable. Where a lead agency determines the project’s incremental effect would not be cumulatively considerable, a brief description of the basis for such a conclusion must be included. The term “cumulatively considerable” means that the incremental effects of the individual project are considerable when viewed in connection with the effects of past projects, other current projects and the effects of probable future projects.<sup>248</sup>

Section 15130(b) of the State CEQA Guidelines requires that an evaluation of cumulative impacts include either:

- 1) A list of past, present and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or
- 2) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

The cumulative analysis for this project primarily uses the second method (adopted plans); however, where information on large proposed developments in the Airport vicinity was available and considered relevant for this analysis, those projects are addressed individually as well. The adopted community plans and other planning documents applicable to the area surrounding SDIA define the general type and intensity of foreseeable future development to which the project’s incremental impacts would be added to create cumulative impacts. These plans take into consideration projects that are proposed, planned and underway, as well as those that can be anticipated in the foreseeable future.

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<sup>248</sup> *CEQA Guidelines* Section 15065©.

The geographical scope of the cumulative impacts analysis is focused on those communities adjacent to or near the Airport.

## **5.20.2 Applicable Plans and Policies**

Given the anticipated geographic scope of cumulative impacts, the cumulative analysis for the Proposed Project is based on the following plans:

### **City of San Diego General Plan**

- ~~Progress Guide and General Plan, October 1992~~
- General Plan Housing Element, August/November 2001
- Strategic Framework Element, Sept 2002
- ~~Public Review Draft General Plan, October 2006-March 2008~~

### **Community Plans/Precise Plans**

- Final EIR for the Proposed San Diego Downtown Community Plan, Centre City Planned District Ordinance and 10th Amendment to the Redevelopment Plan for the Centre City Redevelopment Project, Volume 1A, January 2006
- Midway/Pacific Highway Corridor Community Plan, January 1999
- North Bay Revitalization Area Final EIR, March 1998
- Old Town San Diego, Community Plan, July 1987
- Peninsula Community Plan, September 1989
- Uptown Community Plan, February 1988/October 1989
- Redevelopment Agency, Naval Training Center/Liberty Station Precise Plan/EIR, January 2000/September 2001

### **San Diego Association of Governments (SANDAG) Regional Plans**

- Regional Comprehensive Plan 2004
- Mobility 2030, The Transportation Plan for the San Diego Region, April 2003
- Draft 2007 Regional Transportation Plan, June 2007

### **Port of San Diego Plans**

- Port of San Diego Master Plan, August 2004
- COMPASS Strategic Plan, 2007-2011, June 2006
- North Embarcadero Alliance Visionary Plan, December 1998 (in conjunction with the Centre City Development Corporation, the City of San Diego, the County of San Diego and the United States Navy); EIR certified April 2000
- Harbor Island Redevelopment (Staff Report), December 2005
- Woodfin Hotel Suites DEIR, February 2006
- Sunroad Marina Notice of Preparation of a DEIR, February 2006
- America's Cup Harbor Redevelopment Plan, June 2003

The community plans and precise plans provide a more detailed level of planning for specific segments of the City than that provided by the more comprehensive General Plan. In the same way, the *Port of San Diego Master Plan* is supplemented by several more specific plans for certain areas.

The major planning documents are described below, highlighting their growth projections and related anticipated environmental impacts.

## **City of San Diego General Plan**

Until recently, ~~the Progress Guide and General Plan, adopted in 1992, governs~~ governed development in the City of San Diego. ~~This document is currently undergoing an updating process; a *Final Public Review Draft (October 2006) General Plan* was circulated for public review beginning in December 2006, and its associated. A Draft Program EIR was circulated for public review from April 26 through June 25, 2007. Although it has not yet been adopted, it is reasonable to assume that a new version of the General Plan, similar to the one circulated for public review, will eventually be adopted. It is, therefore, preferable to base the cumulative analysis for this EIR on the *Final Public Review Draft General Plan*, rather than the outdated 1992 Plan; this is the approach taken below. On March 10, 2008, however, the City of San Diego Council adopted a new General Plan to guide development in the City.~~

The recently adopted ~~*Final Public Review Draft General Plan*~~ presents ten elements that together provide a comprehensive “blueprint” for the City of San Diego’s evolution over the next twenty years and beyond. Planned growth is based on a strategy called the City of Villages, which focuses on pedestrian-friendly, mixed-use village centers that are linked by a high quality transit network, and served by public facilities and supporting infrastructure and amenities. The village centers are designed to maintain the unique character of each of San Diego’s many neighborhoods, while facilitating connections among jobs, residences, local shopping, services, and public amenities such as parks and libraries. Growth is directed primarily toward aging commercial shopping areas, with the intention of protecting natural open spaces and single-family neighborhoods from development pressure.

The ~~*Final Public Review Draft General Plan*~~ is composed of ten interlinked elements described below:

- Strategic Framework. Contains citywide goals, the comprehensive City of Villages strategy, overall policy direction for future community plan updates and amendments and the implementation program. The following summaries of the other plan elements are excerpted from the Strategic Framework element.
- Land Use and Community Planning Element. Provides policies to implement the City of Villages strategy within the context of San Diego’s community planning program. The Land Use and Community Planning Element addresses land use issues that apply to the City as a whole and identifies the community planning program as the mechanism to designate land uses, identify site-specific recommendations, and refine citywide policies as needed.
- Mobility Element. The Mobility Element contains policies to promote a balanced, multi-modal transportation network intended to get people where they want to go and to minimize environmental and neighborhood impacts.
- Urban Design Element. Urban Design Element policies are intended to capitalize on San Diego’s natural beauty and unique neighborhoods by calling for development that respects the natural setting, enhances the distinctiveness of our neighborhoods, strengthens the natural and built linkages, and creates mixed-use, walkable villages throughout the City.
- Economic Prosperity Element. The Economic Prosperity Element seeks to help create an environment that fosters creativity and allows San Diego to better compete in the regional, national, and global economic setting. The Economic Prosperity Element links economic prosperity goals with land use distribution and employment land use policies. The Economic Prosperity Element also expands the traditional focus of a general plan to include economic development policies that have a less direct effect on land use. These include policies aimed at supporting existing and new businesses that reflect the changing nature of industry, creating the types of jobs most beneficial to the local economy, and preparing our workforce to compete for these jobs in the global marketplace. The Economic Prosperity Element also describes how the formation of redevelopment project areas can be used to help implement community goals.
- Public Facilities, Services, and Safety Element. The Public Facilities, Services, and Safety Element is intended to respond to the challenge of providing adequate public facilities to serve the City’s current and future population through policies that address public financing strategies, public and developer financing responsibilities, prioritization, and the provision of specific facilities and services that must accompany growth. The policies within the Public Facilities Element also apply to transportation, and park and recreation facilities and services.

- **Recreation Element.** The goals and policies of the Recreation Element were developed to take advantage of the City's natural environment and resources, to build upon existing recreation facilities and services, to help achieve an equitable balance of recreational resources, and to adapt to future recreation needs.
- **Conservation Element.** The Conservation Element contains policies intended to guide the conservation of resources that are fundamental components of San Diego's environment, that help define the City's identity, and that are relied upon for continued economic prosperity.
- **Noise Element.** The Noise Element provides goals and policies to guide compatible land uses and the incorporation of noise attenuation measures for new uses to protect people living and working in the City from an excessive noise environment.
- **Housing Element.** The Housing Element identifies and analyzes the City's housing needs; establishes goals, objectives and policies based on those needs; and sets forth a five-year program of actions to achieve, as fully as possible, the identified goals and objectives. As mandated by State law, the Housing Element is updated every five-years. The Housing Element is provided under separate cover from the rest of the General Plan due to the need for frequent Housing Element updates, and to facilitate compliance with the state reporting requirements.

## **Community and Redevelopment Plans**

### **Downtown Community Plan**

The Downtown community planning area, encompassing roughly 1,450 acres, immediately adjoins SDIA to the southwest. This area is the focus of intense planned development, both commercial and residential, which is to be guided by the goals and policies presented in the Downtown Community Plan and associated documents. Projected expansion by land use and district within the Downtown area is presented in [Table 5-20.1](#) below.

### **Midway/Pacific Highway Corridor Community Plan**

The Midway/Pacific Highway Corridor borders the project site along the east and northeast. This area encompasses approximately 800 acres of relatively flat land, divided into two zones: the northern Midway area and the narrow, linear Pacific Highway Corridor. The area is currently used primarily for urbanized commercial and industrial purposes. A few multi-family residential complexes are located in the western portion of the Midway area, bordering Point Loma.

The *Midway/Pacific Highway Corridor Community Plan*, as amended in 1999, governs development in this area. Four amendments to the *Midway/Pacific Highway Corridor Community Plan* are currently under consideration by the City of San Diego. Of these, three could change commercial or light industrial land use designations to allow for residential development, as listed in [Table 5-20.2](#). The fourth amendment would remove the Bay-to-Bay link<sup>249</sup> from the community plan.

The Midway/Pacific Highway Corridor Community also is encompassed by the North Bay Redevelopment Project and Revitalization Area plan, described below.

### **North Bay Revitalization Area**

In addition to the *Midway/Pacific Highway Corridor Community Plan*, the area described above is also subject to the goals and policies of the North Bay Redevelopment Project and the North Bay Revitalization Area. The North Bay area includes the entire Midway/Pacific Highway Corridor, but also extends into parts of the northeastern section of the Peninsula community planning area, and further north along I-5, including small portions of the communities of Clairemont Mesa, Linda Vista, Old Town, and Uptown.

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<sup>249</sup> The Bay-to-Bay Link would have entailed a park-lined canal leading from the San Diego Bay, via the former NTC Boat Channel, to Mission Bay.

Table 5-20.1  
Existing vs. Proposed Land Use by District

Land Use Type	Existing	Proposed Buildout
<b>Little Italy District</b>		
Residential	1,974 units	7,970 units
Office	978,853 s.f.	1,925,401 s.f.
Civic Office	208,000 s.f.	208,000 s.f.
Culture and Education	20,300 s.f.	63,903 s.f.
Retail	266,191 s.f.	380,607 s.f.
Hotel Rooms	1,134 rooms	1,261 rooms
Other	--- s.f.	--- s.f.
<b>Cortez District</b>		
Residential	2,700 units	6,238 units
Office	716,737 s.f.	1,192,836 s.f.
Civic Office	85,831 s.f.	85,831 s.f.
Culture and Education	125,000 s.f.	327,761 s.f.
Retail	67,300 s.f.	187,744 s.f.
Hotel Rooms	635 s.f.	667 s.f.
Other	--- s.f.	--- s.f.
<b>Civic/Core District</b>		
Residential	684 units	1,274 units
Office	4,169,900 s.f.	4,916,716 s.f.
Civic Office	1,085,618 s.f.	2,857,072 s.f.
Culture and Education	139,500 s.f.	124,500 s.f.
Retail	253,000 s.f.	402,000 s.f.
Hotel Rooms	1,116 s.f.	1,530 s.f.
Other	--- s.f.	--- s.f.
<b>Columbia District</b>		
Residential	1,132 units	3,859 units
Office	2,503,031 s.f.	6,043,011 s.f.
Civic Office	939,871 s.f.	3,290,227 s.f.
Culture and Education	115,495 s.f.	151,464 s.f.
Retail	183,880 s.f.	685,234 s.f.
Hotel Rooms	2,003 s.f.	4,321 s.f.
Other	--- s.f.	--- s.f.

Source: Centre City Development Corporation. Final EIR for the Proposed San Diego Downtown Community Plan, Centre City Planned District Ordinance and 10th Amendment to the Redevelopment Plan for the Centre City Redevelopment Project, Volume 1A, January 12, 2006.

Table 5-20.2

**Proposed Midway/Pacific Highway Corridor Community Plan Amendments/Developments**

	<b>Mission Brewery</b>	<b>Laurel and Kettner Parking</b>	<b>Hancock Brickworks</b>	<b>Stella</b>
Site Size (acres)	1.95 <u>acres</u>	0.85 acres	1.26 <u>acres</u>	0.89 acres
Current Land Use Designation	Commercial-Transportation	Industrial Small Lot Zone (IS-1-1) Zone	Light Industrial	Light Industrial
Proposed Land Use Designation	Multiple Use	Industrial Small Lot Zone (IS-1-1) Zone	Multiple Use	Very High Density Residential
Proposed Amendment/Development	164,253 s.f. mixed use development (89 residential condos, 8 commercial condos with parking below)	Add 160,043 sq. ft. to existing 442,358 sq. ft. parking structure, adding additional 489 space	53 units, 21 of which would be live-work units	86 multi-family units
CEQA Document (Type, Date)	MND April 2006	MND May 2007	N/A (no application for specific project yet on file)	MND August 2005
Proposed Operation Date	Late 2007	Unknown	Unknown	2008

## Sources:

City of San Diego Development Services, Land Development Review Division. Draft Mitigated Negative Declaration, Mission Brewery Villas. April 5, 2006. City of San Diego Planning Department (Personal communication, Tony Kempton, Community Planner);

City of San Diego Development Services Department (Personal communication, Cory Wilkinson, Development Project Manager); Draft MND for Laurel and Kettner Parking (May 2007);

City of San Diego. Report No. PC-05-021. Subject: Initiation of an Amendment to the Progress Guide and General Plan and the Midway/Pacific Highway Corridor Community Plan and Local Coastal Program to revise the land use designation on a 1.26-acre site from Light Industrial to Multiple Use. 1895 Hancock/Brickworks - Project No. 47051. January 6, 2005; City of San Diego. Report No. PC-05-302. Subject: Stella - Project No. 65484. Process Five. October 20, 2005.; Report No. PC-06-115, Mission Brewery Villas, April 27, 2006.

The development goals of the North Bay Redevelopment Project<sup>250</sup> include the following:

- Mixed-use/high density and multi-family residential uses;
- High-tech industrial and office uses to complement the Space and Naval Warfare Systems Command (SPAWAR) and the Naval Training Center re-use project;
- Light industrial manufacturing;
- Neighborhood commercial centers;
- Affordable housing;
- High-quality jobs;
- Traffic improvements; and
- Open space and community facilities;

Projects slated for development in the North Bay Redevelopment Project area include the following:

<sup>250</sup> San Diego, City Of. North Bay Redevelopment Project. 1998.



## Commercial Development

- SPAWAR High Technology District. SPAWAR is a Navy facility responsible for the research, engineering, and management of all high technology systems for the U.S. Pacific fleet. The proposed SPAWAR District would include 40 to 70 acres of land, located at the interchange of I-5 and I-8, bound roughly by Pacific Highway, Barnett Avenue, Midway, Rosecrans and Camino del Rio. This district would offer large-floor plate, campus-style buildings, parking, shopping, and other amenities.
- YMCA. The Redevelopment Agency is contributing \$575,000 to assist the Point Loma YMCA in a \$5.5 million project to expand and improve their current facility.

## Mixed Use Housing Projects

- Hancock Street Mixed-Use Project. The Redevelopment Agency is working with two local property owners to develop housing projects near the corner of Hancock and Washington Streets (Mission Brewery and Hancock Brickworks; see [Table 5-18-2 5-20.2](#)).
- Morena Vista Mixed Use Project. The Morena Vista mixed-use project is a \$32 million project being developed by City Link Investments. It consists of 161 residential units, 18,500 square feet of retail space and additional parking to support the Trolley Line.
- Upper Voltaire Street Mixed-Use Project. The Upper Voltaire Street mixed-use project proposed by PacWest Enterprises, LLC would provide a proposed 28 residential units and 6 commercial units (4,750 square feet of retail). Two other in-fill projects are being considered on the same block of Voltaire.
- Vietnam Veterans of San Diego. The Vietnam Veterans of San Diego, a social services provider for homeless Veterans, is in the process of building a campus of supportive services for their clients located at 4141 Pacific Highway. This small campus will be home to their corporate office, a counseling center, an employment and educational center, a kitchen, dining area, and a multipurpose area. It will also provide a 224-bed rehabilitation facility with an additional 24 three-bedroom apartments for program graduates.

## **Old Town San Diego Community Plan**

Just east of the Midway/Pacific Highway Corridor is the 230-acre Old Town Community Planning Area. Although separated from the project site by the narrow band of land adjoining the Pacific Highway, Old Town is close enough to the Airport to potentially contribute to and/or be subject to SDIA Master Plan-related cumulative environmental impacts.

The *Old Town San Diego Community Plan*, adopted in 1987 and designed to guide development for a period of approximately 20 years, has not been updated in recent years. The Plan directed that development of the area be oriented toward a mix of tourist-related and residential development, with the implementation of architectural and density controls to ensure compatibility with the historical atmosphere of the area.

According to the Old Town Community Planning Committee, little further development is planned in the area in the foreseeable future. Remaining room for new development is extremely limited, and combining lots is not permitted, so most current development takes the form of improvements to existing structures, such as the addition of rooms to existing hotels. The only large projects planned or in progress are the Caltrans "campus", consisting of three buildings (the largest of which is 5 stories high) in an area at the north end of Old Town that was previously slated for mixed-use development in the community plan; and the proposed construction of a new parking structure to be located at one of two possible sites.<sup>251</sup> In addition, Delaware North Companies Parks and Resorts, the new concessionaire for restaurants and retail stores in the former Bazaar del Mundo within Old Town State Historic Park, plans to begin operation of three new restaurants and 10 retail concessions in June 2006. The company plans to invest

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<sup>251</sup> Richard Stegner, member of the Old Town Community Planning Committee, personal communication: August 9, 2005.

about \$12 million to upgrade and renovate the historic structures that will include the new restaurants and retail stores, to be renamed Plaza del Pasado.

### **Peninsula Community Plan**

To the north of SDIA is the 4,409-acre (approximately seven-square-mile) Peninsula community planning area, governed by the *Peninsula Community Plan*, as amended in September 1989. This highly urbanized community consists of 11 fairly distinct residential neighborhoods, several commercial districts, a university, three major regional recreational areas (Sunset Cliffs, Shelter Island and Cabrillo National Monument), and the former Naval Training Center (see discussion of the Naval Training Center/Liberty Station Precise Plan/EIR below).

Many of the neighborhoods of the Peninsula community are designated as “protected” single-family neighborhoods with densities in the range of two to nine dwelling units/acre, in which all development or redevelopment is limited to single-family residential use. Multi-family developments are located in several other neighborhoods, most notably adjacent to the Midway community planning area.

The *Peninsula Community Plan* has not been updated in recent years. It envisioned the continued domination of the southern portion of the peninsula by Navy-related industry and the Cabrillo National Monument, with single-family residential uses occupying the majority of the rest of the area. Commercial recreational uses were expected to be prevalent in Shelter Island, North Harbor Drive and adjacent parts of Roseville, with the Roseville core/Rosecrans Street being the focus of community commercial uses, and neighborhood commercial development along Voltaire Street. Goals include conserving open space, public view access, and the character of existing single-family neighborhoods, while reducing traffic congestion and airport noise pollution, improving the transit network, and promoting multi-family infill projects and appropriate development in the commercial core.

Development of the Naval Training Center in the northeast corner of the Peninsula community planning area is subject to more recent planning efforts described below.

### **Naval Training Center/Liberty Station Precise Plan**

Immediately adjacent to the Airport to the north is the former Naval Training Center (NTC), which was transferred to the City of San Diego and established as a redevelopment area in 1997. A 361-acre portion of the NTC is being developed as “Liberty Station”, under the NTC Precise Plan and Local Coastal Program, adopted in 2001. A 72-acre adjacent area remains under Navy ownership and is being developed as a military family housing complex. [Table 5-20.3](#) summarizes the planned NTC/Liberty Station development program.

One specific recent development proposal at Liberty Station is the proposed Nickelodeon/Marriott Hotel. This resort hotel will include a 650-room facility on 18 acres and will incorporate a 100,000-square-foot water park and activity deck complex featuring a variety of pools and interactive attractions. The resort is expected to begin construction in January 2008 and open in early 2010.

### **Uptown Community Plan**

The *Uptown Community Plan* governs development in this approximately 2,700-acre area between Old Town and Balboa Park, northeast of the Downtown area, and separated from the Airport by the relatively narrow Pacific Highway Corridor. Development goals for Uptown include:

- Encouragement of mixed-use projects with residential use over street-level retail use;
- Public right-of-way improvements;
- Preservation of low-density single-family residential neighborhoods and open-space hillsides and canyons; and,
- Implementation of permanent height limits and other design elements to protect public views.

The Plan proposed land uses including 57 percent of the total area, or 1,013 net acres, designated for residential use (over half at low-density); 30 percent, or 533 acres, of parks, open space, schools, and institutional use; with the remainder designated for mixed commercial use.

Table 5-20.3

**NTC/Liberty Station Planned Development Program Summary**

<b>NTC Specific Planning Area</b>	<b>General Description</b>	<b>Gross Acreage</b>	<b>Total Gross Square Footage</b>	<b>New Construction</b>	<b>Rehabilitation</b>
Residential Area	Market rate single-family and multi-family homes	37	36,000 (pool/gym)	350 units	36,000 (pool/gym)
Educational Area	Focus on public and/or private education for children/adults	22	495,000	--	495,000
Office/Research & Development	Primarily traditional office uses	22	380,000	380,000	--
Mixed Use Commercial Precinct: Office, retail, live/work lofts, restaurants, commercial recreational facilities, museums	Reuse of buildings primarily within historic district	107 60	625,000 324,000	--	625,000 324,000
Civic, Arts, Culture Precinct: Civic, arts, cultural, nonprofit, office, museums, restaurants, specialty retail, special education	Reuse of buildings primarily within historic district	25	301,000	--	301,000
Golf Course Precinct	Golf Course	22	--	--	--
Park and Open Space	Public use open space and park	46*	19,000 (child care center)	--	19,000 (child care center)
Boat Channel	Open water area for public use	54	--	To be determined	To be determined
Visitor Hotel Area	350 rooms	2*	33,000 (conference center)	350 rooms	33,000 (conference center)
Business Hotel Area	650 rooms	16*	--	650 rooms	--
Metropolitan Waste-water Department Area	Water-Testing Laboratory	9*	140,000	140,000	--

\* This gross acreage includes the waterfront esplanade area.

Source: NTC Precise Plan and Local Coastal Program, September 2001.

At the time the *Uptown Community Plan* was produced in 1988/1989, the estimated buildout capacity for residential development was 25,410 dwelling units, compared to 20,275 dwelling units existing in 1987. This Plan has not been updated in recent years, although an *Uptown Public Facilities Finance Plan* was produced in October 2002. The *Uptown Public Facilities Finance Plan* indicated that development was proceeding according to *Uptown Community Plan* guidelines, and by 2002 had reached a total of 21,601 dwelling units. Construction of an additional 7,134 dwelling units by the year 2022 was predicted.

## **Regional Plans**

### **SANDAG Regional Comprehensive Plan**

The SANDAG Regional Comprehensive Plan (RCP), approved in 2004, provides the long-term planning framework for the San Diego region, intended to reflect and be implemented through updates of local and regional plans such as the community plans discussed above. The RCP focuses on the principles of sustainability and smart growth. SANDAG does not have the authority to make enforceable land use

designations or approve proposed development projects (this authority lies with the respective local governments, such as the City of San Diego). Because of the RCP's regional focus and SANDAG's lack of land use jurisdiction, the SANDAG RCP does not identify proposed developments in the vicinity of SDIA. See below regarding SANDAG transportation projects.

### **Mobility 2030, The Transportation Plan for the San Diego Region and 2007 Regional Transportation Plan**

*Mobility 2030, The Transportation Plan for the San Diego Region*<sup>252</sup> serves as the Regional Transportation Plan (RTP) for San Diego County. This plan is the product of collaboration between SANDAG, the 18 City governments in the area, the County government, the San Diego Metropolitan Transit Development Board (MTDB), the North San Diego County Transit District (NCTD) and the California Department of Transportation (Caltrans), as well as other agencies and many interest groups. *Mobility 2030* was designed to coordinate with the smart growth program developed in the RCP described above, and focuses on expansion of travel choices (including buses, trolleys, trains and cars), integration of transit and roadway systems, taking advantage of new technologies, reducing demand on the transportation system during peak hours, and other region-wide changes.

The RTP contemplates possible long-term ground access improvements to the Airport including direct freeway ramps from I-5 to Pacific Highway, exclusive lanes for buses/high-occupancy vehicles (HOVs) between the Old Town Transit Center and the Airport, and intersection upgrades on Laurel Street.

Other transportation options in the Airport area that are planned or explored in the RTP include the following:

- A new freeway connection between I-5 and I-8 (for movement from East to North and from South to West);
- HOV/Managed lane facilities on I-5 from SR 54 in the south through the downtown area past the Airport to I-8;
- Implementation of signal timing programs;
- Improvements to the coastal rail corridor, including completion of double-tracking from downtown San Diego to Orange County;
- Possible high-speed rail connections from downtown San Diego through Orange County to Los Angeles;
- A review of the potential for consolidating intermodal rail, truck and air cargo freight facilities;
- New or improved transit services:
  - Increases in the existing blue and orange line trolley services;
  - Services through the mid-coast from Old Town to Sorrento Mesa;
  - Services from Escondido to Centre City and the Airport via I-15/SR 94;
  - Services from Old Town to Kearney Mesa via Mission Blvd./Balboa Avenue; and
  - Services from Coronado and Centre City to Sorrento Mesa via Hillcrest/Genesee Avenue.

An update the RTP is currently being prepared by SANDAG. The Draft *2007 RTP* incorporates a new regional growth forecast, strategic initiatives from the Regional Comprehensive Plan, the Independent Transit Planning Review, and several other white papers on topics not previously covered in the RTP. The SANDAG Board of Directors accepted the Draft *2007 RTP* and its Draft EIR for distribution and public comment in June 2007. The Final *2007 RTP* and EIR are were scheduled to come to the SANDAG Board for adoption in November 2007.

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<sup>252</sup> SANDAG 2003.

## **Port of San Diego**

### **Port Master Plan**

The Port of San Diego controls tidelands in the San Diego Bay area, including two planning districts in the area of the Proposed Project site: the Harbor Island/Lindbergh Field planning district and the Centre City/Embarcadero planning district. According to the *Port of San Diego Port Master Plan* (2004), the Port's mission is "to balance regional Economic Benefits, Recreational Opportunities, Environmental Stewardship and Public Safety while protecting Tidelands Trust resources on behalf of the citizens of California."

In the 995.4-acre Harbor Island/Lindbergh Field planning district (of which 816 acres are tidelands and 180 acres are submerged tidelands), a significant portion of the land is already developed and under long-term lease commitment. Only the east end of the Harbor Island peninsula is vacant; this is currently slated for hotel development (see below). The un-submerged land use allocations for this planning area are presented in [Table 5-20.4](#).

Table 5-20.4  
**Harbor Island/Lindbergh Field Planning District Land Use Allocations**

<b>Land Use</b>	<b>Acres</b>
Commercial	90.6
Airport-Related Commercial	38.0
Commercial Recreation	52.6
Industrial	631.8
Aviation-Related Industrial	130.6
Industrial Business Park	33.1
International Airport	468.1
Public Recreation	26.2
Open Space	7.5
Park	16.4
Promenade	2.3
Public Facilities	66.8
Harbor Services	1.3
Streets	65.5
Total Land Area	815.4

Source: Unified Port District of San Diego, Port Master Plan, August 2004.

The Port of San Diego is currently evaluating proposed changes to the Harbor Island/Lindbergh Field Planning District. These include deleting SDIA from the Port Master Plan, as well as the proposed Woodfin Suites Hotel & Port Master Plan Amendment project and the East Harbor Island Redevelopment, described separately below.

The City Centre/Embarcadero planning district adjoins the Proposed Project site on its southern boundary, and encompasses 441.3 acres, of which 245.2 acres are tidelands and 196.1 acres are submerged tidelands. The un-submerged land use allocations for this planning area are presented in [Table 5-20.5](#).

A portion of the Port's City Centre/Embarcadero planning district is also within the North Embarcadero Alliance Visionary Plan, which is described below.

Table 5-20.5

**City Centre/Embarcadero Planning District Land Use Allocations**

<b>Land Use</b>	<b>Acres</b>
Commercial	109.8
Commercial Fishing	4.7
Commercial Recreation	105.1
Industrial	29.2
Aviation-Related Industrial	22.3
Marine Terminal	6.9
Public Recreation	59.5
Open Space	0.5
Park/Plaza	51.3
Promenade	7.7
Public Facilities	46.7
Streets	46.7
Total Land Area	245.2

Source: Unified Port District of San Diego, Port Master Plan, August 2004.

***COMPASS Strategic Plan***

The Port's 2006 *COMPASS Strategic Plan* identifies a number of action items for 2007-2011 that may result in development projects with the potential to incrementally contribute to cumulative impacts in the SDIA area. These include:

- Determine highest and best use for Navy Pier;
- Complete North Harbor Drive vacation and initiate construction of necessary road improvements;
- Implement Historic Waterfront and redevelopment of the old police station site;
- Monitor construction and hold ribbon-cutting ceremony for the new Hilton Convention Center Hotel;
- Implement Phase 1 of North Embarcadero Visionary Plan;
- Implement America's Cup Harbor projects for redevelopment of Shelter Island entrance;
- Negotiate and implement the option agreement(s) and monitor milestones on Lane Field development project, inclusive of the construction of a new Cruise Ship Terminal on B Street pier;
- Review, approve and facilitate tenant redevelopment plans for Harbor Island;
- Implement the option agreement and monitor milestones for the Spinnaker Hotel; and
- Evaluate and develop a plan for the best use of Pacific Highway complex.

Specific development proposals and/or projects under construction that are consistent with the Port District's identified action items are summarized below.

- Cruise Terminal Expansions. The Port District is currently evaluating proposed development concepts for the Broadway Pier and B Street Cruise Terminal Pier that would improve these facilities to serve projected growth in the San Diego cruise ship market. The improvements would be intended to meet transportation security requirements, increase terminal capacity, and improve the experience of cruise passengers, including those on transient and homeported cruise ships. Potential development concepts are undergoing evaluation and neither pier has a set

schedule for its planned major upgrade. Renovation of Broadway Pier to strengthen its pier deck is, however, ongoing and expected to be completed in 2008.<sup>253</sup>

- Lane Field Redevelopment. This proposed redevelopment project, named for the former athletic field located near B Street and Harbor Drive, includes two elements, Lane Field North and Lane Field South. The Port District Board has approved the development of a 500 to 550 room hotel on Lane Field South and a 250 to 300 room hotel on Lane Field North. These projects are currently undergoing review to determine if any additional environmental analysis is required under CEQA, or if the projects are adequately addressed under the Port Master Plan and its associated EIR.<sup>254</sup>
- West Island Palms West Hotel. The Port District approved the Island Palms West Hotel project in October 2006. The proposed Island Palms West Hotel Project, which would be located on Shelter Island, includes demolition and removal of the former Voyager Restaurant building of approximately 11,627 square feet; construction of a new three-story hotel building of approximately 25,600 square feet that includes 48 guest rooms plus marina offices and facilities; remodeling of the existing building to provide 77 guestrooms, an approximately 1,560-square foot two-story main lobby, and an approximately 1,330-square foot dining area; and other related elements.<sup>255</sup>
- Hilton San Diego Convention Center Hotel. This hotel project, located adjacent to the San Diego Convention Center, includes a 385 foot tower, 106,000 square feet of meeting space, 5,360 square feet of retail space, a 23,082 square-foot health club, 1,200 private rooms, a 14,000 square-foot restaurant, and a 4.3-acre public park. This project is currently under construction, with completion targeted for December 2008.<sup>256, 257</sup>
- Redevelopment of Old Police Headquarters and Harbor Seafood Mart. The planned redevelopment of the old police headquarters site includes retention and adaptive reuse of the old police headquarters for a mix of specialty retail, entertainment and restaurant uses; demolition of Harbor Seafood Mart and development of a smaller facility to incorporate commercial fishing uses, a waterfront fish restaurant and retail spaces; reconfiguration of parking lots; and new public park and plaza areas. Construction is expected to be complete in 2008.<sup>258</sup>
- East Harbor Island Redevelopment. The Port District is evaluating redevelopment of approximately 17.8 acres of east Harbor Island with a 600-room hotel, over 21,000 square feet of meeting space, restaurants, retail, public plazas and promenades and associated public infrastructure. The proposed site includes approximately 2.10 acres of water area and 15.70 acres of land area currently developed with two restaurants (one of which would be incorporated as part of the project), a 600-slip marina (which would remain, albeit with new marina buildings and other improvements), and a surface parking lot for airport employees.
- Woodfin Suites Hotel Project. The proposed Woodfin Suites Hotel Project involves the demolition of all existing structures on the 3.79-acre filled tidelands portion of the project site on West Harbor Island, and the construction and operation of a 165,000-foot structure, to include an eight-story (maximum 140-suite) hotel, and a 12,500-square-foot clubhouse (including spa and restaurant).

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<sup>253</sup> San Diego Unified Port District, JPA/NEVP Presentation on Cruise Terminals (PowerPoint), July 26, 2007; Press Release: Port of San Diego to go Mediterranean with Moorings for Mega Yachts. July 18, 2007; Press Release: Broadway Pier to Close Temporarily for Improvement Project. March 29, 2007.

<sup>254</sup> San Diego Unified Port District; Port of San Diego website. <http://www.portofsandiego.org/>. Accessed on August 6, 2007.

<sup>255</sup> San Diego Unified Port District, Island Palms West Hotel Notice of Determination. As referenced on CEQAnet (<http://www.ceqanet.ca.gov>). October 12.

<sup>256</sup> San Diego Unified Port District; Port of San Diego website. <http://www.portofsandiego.org/>. Accessed on August 6, 2007.

<sup>257</sup> Hensel Phelps Construction, Hilton San Diego Convention Center Hotel project website. <http://www.destinationwebcam.com/HenselPhelps/>. Accessed on August 6, 2007.

<sup>258</sup> San Diego Unified Port District; Port of San Diego website. <http://www.portofsandiego.org/>. Accessed on August 6, 2007.

In addition, 401 parking spaces would be provided (including 59 underground spaces within the hotel structure), as well as a two-story, approximately 11,200-square-foot marina services building, and an approximately 1,120-linear-foot seawall topped by a public promenade, along the northern limit of tidelands within the property. The Final EIR for the Woodfin Project was approved in July 2006.

### **Woodfin Suites Hotel and Port Master Plan Amendment Project**

On February 8, 2006, the Port of San Diego issued for public review the Draft EIR for the Woodfin Suites Hotel and Port Master Plan Amendment Project (Woodfin Project). The Draft EIR analyzes the Proposed Project and six alternatives. The proposed Woodfin Project involves the demolition of all existing structures on the 3.79-acre filled tidelands portion of the project site in West Harbor Island, and the construction and operation of a 165,000-foot structure, to include an eight-story (maximum 140-suite) hotel, and a 12,500-square-foot clubhouse (including spa and restaurant). In addition, 401 parking spaces would be provided (including 59 underground spaces within the hotel structure), as well as a two-story, approximately 11,200-square-foot marina services building, and an approximately 1,120-linear-foot seawall topped by a public promenade, along the northern limit of tidelands within the property.

The Draft EIR indicates that the Woodfin project would result in significant but mitigable to less-than-significant impacts to air quality, geology and coastal processes, hazards and hazardous materials, noise, public services and utilities, and transportation/traffic/parking. The Draft EIR also concludes that by 2030, the Woodfin Project would contribute to a significant cumulative noise impact because noise levels at the site would increase by at least 3 dB.

### **Sunroad Harbor Island Hotel & Port Master Plan Amendment**

The Port of San Diego is evaluating a proposal to redevelop approximately 17.80 acres of east Harbor Island with a 600-room hotel, over 21,000 square feet of meeting space, restaurants, retail, public plazas and promenades and associated public infrastructure. The Port of San Diego completed a staff report on the proposed redevelopment in December 2005 and issued a Notice of Preparation of a DEIR on February 6, 2006.

The proposed site includes approximately 2.10 acres of water area and 15.70 acres of land area currently developed with two restaurants (one of which would be incorporated as part of the project), a 600-slip marina (which would remain, albeit with new marina buildings and other improvements), and a surface parking lot for airport employees.

The Port's proposed project would consist of a phased development, ultimately including the following elements:

- Demolition of all existing structures on site except the Island Prime Restaurant and the Reuben E. Less Sternwheeler (which would eventually be dismantled or relocated);
- Hotel space totaling 600 rooms, including two hotel towers up to 280 feet tall, a full-service restaurant, pool terrace and approximately 15,000-square-foot spa, and 53,000 square feet of flexible indoor meeting and function space;
- Three additional restaurants, dock and dine as well as water taxi facilities within the existing marina, and retail uses at various locations in the proposed development;
- New marina buildings to replace existing marina structures;
- Up to 1,500 surface and structured parking spaces to be built in phases;
- Landscaping improvements, including a 1.75-acre central square surrounded by the retail and restaurant plaza, meandering landscaped pathways and an improved promenade along the bay;
- Narrowing of Harbor Island Drive from four lanes to three lanes; and
- Replacement and relocation of the existing traffic circle at the end of Harbor Island Drive with a smaller turnaround.

The possibility of operating a portion of the hotel under a time-share concept is also being explored.



As noted above, the Port is currently preparing a DEIR to address the proposed project. If approved, construction could potentially begin late in 2007, with completion of the first phase of the project in 2009.

### **Shelter Island/America's Cup Harbor Redevelopment**

The Port Master Plan was amended in 2003 to include a redevelopment plan for the America's Cup Harbor portion of the Shelter Island planning area. The plan includes both physical modifications and land use changes intended to promote the redevelopment of the America's Cup Harbor and enhance public access linkages, waterfront promenades and recreational opportunities throughout the area. It proposes redevelopment of the former Tarantino's Restaurant site, Sun Harbor Marina, the Kettenburg Boatyard, and the former Bay City Marine site. The plan also includes consolidation of buildings and redistribution of parking and added shoreline walkway in the Shelter Island Drive corridor; street enhancement to North Harbor Drive; development of a continuous public promenade, additional park acreage, public parking; and associated land use changes.

### **North Embarcadero Alliance Visionary Plan**

The North Embarcadero Alliance Visionary Plan, dated December 1998, is intended to guide development along the City's North Embarcadero (including a portion of the Port of San Diego's City Centre/Embarcadero Planning District). This document is the outcome of an alliance among five government agencies with significant ownership and/or jurisdictional interests in the area; these include, in addition to the Port of San Diego, the Centre City Development Corporation, the City of San Diego, the County of San Diego and the United States Navy. The plan envisions a mix of hotel, retail, office, residential and entertainment uses, as well as public parks and cultural facilities, all encouraging a water orientation. Water uses include specific areas for commercial fishing berthing, public boat docking and the ferry landing, ship anchorage, marine terminal berthing, and boat/ship navigation corridors. Eventually, the full build-out of the North Embarcadero area could culminate in up to 3.0 million square feet of office space, 175,000 square feet of restaurant, retail and entertainment uses, 3,500 hotel rooms, 100,00 square feet of cultural facilities, 800 residential units, a home port cruise ship terminal with associated customs and immigration facilities, and over 12,000 parking spaces.

## **5.20.3 Summary of Cumulative Impacts**

The analysis of cumulative impacts is presented by issue area in each of the respective subsections of Chapter Five (e.g., Sections 5.1 through 5.18). [Table 5-20.6](#), below, provides a summary of the cumulative impacts for each issue area; refer to the respective EIR sections for detailed analysis.

~~[HNTB to Update Cumulative Table (HELIX topics are OK as written)]~~

Table 5-20.6

**Summary of Cumulative Impacts by Topic**

<b>Topic</b>	<b>EIR Section</b>	<b>Incremental contribution to significant cumulative impact?</b>
Noise	5.1	The SDCRAA is not currently aware of any proposed projects that would create cumulative noise impacts in combination with aircraft and highway noise exposure levels.
Land Use Planning	5.2	Cumulative developments envisioned would be consistent with the land uses defined in the area's Community Plans or in the Port Master Plan. Consequently, these future developments when combined with the Proposed Project would not result in any significant land use impacts.
Traffic and Circulation	5.3	Since SANDAG forecasts account for all approved plans and projects within the region, all traffic estimates used in the study account for cumulative traffic. Therefore, traffic impacts represent cumulative impacts anticipated in the study area under each alternative.
Population and Housing	5.4	Proposed Project would not incrementally contribute to a significant cumulative population and housing impact because they would not require relocation of residents, demolish or relocate residences or measurably affect jobs/housing balance.
Air Quality	5.5	Conservatively high background concentrations levels were modeled to account for air emission sources outside of the study area; therefore, cumulative impacts were assessed. Although significant PM 2.5 and PM 10 concentration levels were determined ambient conditions for these pollutants already exceed CAAQS levels.
Hydrology and Water Quality	5.6	The current storm drain system is considered to be undersized; therefore, any additional flow would exacerbate this condition unless improvements to the existing system are made. All SDIA projects must adhere to the SWMP; therefore, water quality would be less than significant individually and cumulatively.
Historic, Architectural, Archaeological, Paleontological and Cultural Resources	5.7	Proposed Project would not incrementally contribute to a significant cumulative impact because there are no impacts to historic/cultural resources.
Biotic Communities/ Endangered & Threatened Species	5.8	Proposed Project would not incrementally contribute to a significant cumulative impact because they would not directly affect sensitive vegetation communities or valuable habitat and because other reasonably foreseeable projects would not affect least terns.
Wetlands	5.9	Proposed Project would not incrementally contribute to a significant cumulative impact because only 0.1 acre of isolated, disturbed (and non-jurisdictional) wetland habitat would be affected by the Proposed Project.
Coastal Resources	5.10	Proposed Project would not incrementally contribute to a significant cumulative impact to coastal resources because they would be consistent with the coastal resources management and planning policies of the California Coastal Act, and because other developments in the Coastal Zone also would be required to be consistent with these policies.
Utilities and Service Systems	5.11	Proposed Project would not incrementally contribute to a significant cumulative impact because service providers would be able to accommodate proposed SDIA improvements and other projected developments.
Light Emissions	5.12	Proposed Project would not incrementally contribute to a significant cumulative impact because

Table 5-20.6  
**Summary of Cumulative Impacts by Topic**

Topic	EIR Section	Incremental contribution to significant cumulative impact?
Aesthetics	5.13	Proposed Project would not incrementally contribute to a significant cumulative impact because mitigation measures would be undertaken
Geology and Soils	5.14	Proposed Project would not incrementally contribute to a significant cumulative impact because geology and soils impacts would be confined to the Airport study area and would not add to the geology and soils impacts of other area projects.
Hazards and Hazardous Materials	5.15	Proposed Project would not incrementally contribute to a significant cumulative impact because mitigation measures would be taken during construction to limit potential for impact and hazards associate with the NTC site would be mitigated separately.
Human Health Risk Assessment	5.16	As with the air quality analysis the HHRA included long range plans for increased traffic due to forecast demand. Although the Proposed Project contributes incrementally to human health risk effects, the non-cancer effects found for 2015 are attributable primarily to the pollutant acrolein and the impacts are likely overstated due to the aircraft engine speciation profiles used in the analysis.
Public Services	5.17	Proposed Project would not incrementally contribute to a significant cumulative impact because new developments can be accommodated and because new public services are added as required.
Recreation	5.18	Proposed Project would not incrementally contribute to a significant cumulative impact because they would have virtually no effect on recreational resources.



## 5.21 Effects Found Not to be Significant

In accordance with CEQA Public Resources Code, Division 13, Section 21100, this section provides brief statements detailing environmental categories that were found not to be significant during the NOP process and/or after analysis. These impact categories were found not to be significant based largely upon the outcome of the noise analysis indicating there was less than significant noise impact due to the Proposed Project (Preferred Alternative) and its alternatives and due to the fact that SDIA is constructed on fill materials and is largely developed (i.e., urban land that is mostly impervious).

### 5.21.1 Social Impacts

Pursuant to Section 15131 of the State CEQA Guidelines,

Economic or social effects of a project shall not be treated as significant effects on the environment. An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.

Based on these guidelines, an alternative would have a significant social impact if its social effects would lead to substantial, adverse physical changes in the environment.

The adoption of the Proposed Airport Land Use Plan and the development of the Proposed Implementation Plan (or Implementation Plan Alternative) projects would occur on existing SDIA property or on State Tideland leaseholds that contain vacant former aviation industrial facilities. As noted in Section 5.4, *Population and Housing*, there would be no displacement of homes or residents during construction. Also as discussed in Section 5.4, *Population and Housing*, the Proposed Project is not expected to induce population growth within the region that would lead to the demand for new public services or facilities.

Full build-out under the Proposed Airport Land Use Plan could result in lease changes to existing SDIA tenants (such as in the North Area), with a corresponding potential to affect individuals' employment opportunities. Similarly, the availability of improved parking on-Airport may reduce employment opportunities at off-Airport commercial parking facilities.<sup>259</sup> Overall, however, the Proposed Airport Land Use Plan and the Proposed Airport Implementation Plan (or Airport Implementation Plan Alternative) projects would result in both short- and long-term increases in employment (e.g., construction workers, airline personnel, on-Airport parking lot attendants). Within the context of the San Diego area's large labor pool, the number of new jobs would be nominal and would not cause a noticeable change in the regional jobs/housing balance or (un)employment figures.

As described in Section 5.1, *Noise*, the Proposed Project (Preferred Alternative) and its alternatives would not result in noticeable noise increases off-Airport. Similarly, off-Airport traffic impacts would be, as mitigated, less than significant. Accordingly, the Proposed Project (Preferred Alternative) and its alternatives are not expected to alter the quality of life at neighborhoods near SDIA and/or under its approach and departure flight paths; these communities would not incur a physical change as a result of the project's social effects.

For the above-described reasons, the Proposed Project (Preferred Alternative) or its alternatives would not have social effects that would lead to significant physical changes to the environment.

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<sup>259</sup> Currently, general aviation services are provided by a single fixed-base operator, Jimsair. Jimsair has been operating at SDIA for more than 50 years. Jimsair occupies about 11.4 acres under a number of leases and permits, all of which expire not later than December 2012. In early 2006, SDCRAA released a Request for Qualifications to determine if there were interested qualified parties interested in providing general aviation facilities and services at SDIA. Shortly thereafter, Jimsair filed a Part 16 complaint with the FAA, a lawsuit against SDCRAA in California state court, and a formal claim with SDCRAA under the California Government Code. Each alleges a variety of claims relating to the Jimsair operations at SDIA.

### **5.21.2 Agricultural Land**

SDIA is underlain by artificial fill and bay deposits, neither of which is identified in the Soil Candidate Listing for prime farmland and farmland of statewide importance by the United States Department of Agriculture.<sup>260</sup>

Further, SDIA is designated as 'Urban Land' and 'Made Land' by the United States Department of Agriculture. Urban Land is land that is primarily covered by buildings, streets, and sidewalks, and, hence, it is unavailable for agricultural activity. Made Land consists of smooth, level areas that have been filled with excavated and transported soil material, paving material, and soil material dredged from lagoons, bays, and harbors, which is also unavailable for agricultural activity.

Accordingly, the Proposed Project (Preferred Alternative) and its alternatives would not have a significant impact on agricultural lands (e.g., prime farmland, unique farmland, or farmland of state importance).

### **5.21.3 Minerals**

SDIA is underlain by artificial fill and bay deposits and is designated as 'Urban Land' and 'Made Land' by the United States Department of Agriculture and, therefore, would not result in the loss of a known mineral resource of value to the region or residents of the California. SDIA is not listed as a mineral resource recovery site and would, therefore, not result in the loss of availability of a locally-important mineral resource.

Accordingly, the Proposed Project (Preferred Alternative) and its alternatives would not have a significant impact on minerals.

### **5.21.4 Forest Land/Fire Hazard**

SDIA is underlain by artificial fill and bay deposits and is designated as 'Urban Land' and 'Made Land' by the United States Department of Agriculture. There is no designated forest land on the Airport property; specifically in 2005 the Airport property is 85-90% impervious area.<sup>261</sup>

Accordingly, the Proposed Project (Preferred Alternative) and its alternatives would not have a significant impact on forest land nor fire hazards on forest land.

### **5.21.5 Schools**

Guidelines from the City of San Diego on significance criteria for schools deal mainly with residential developments that could influence school enrollment. The Proposed Project and the alternatives to the Proposed Project do not include any residential development. Additionally, they would not directly impact any schools; that is, all improvements would be physically on existing Airport property. No significant noise changes were determined due to the Proposed Project or any of the alternatives to the Proposed Project. The Proposed Project is not growth inducing as detailed in Chapter Six, *Other Effects of the Proposed Project*, and therefore, would not impact school enrollment.

Accordingly, the Proposed Project (Preferred Alternative) and its alternatives would not have a significant impact on schools.

### **5.21.6 Libraries**

Guidelines from the City of San Diego on significance criteria for libraries deal mainly with residential developments that could influence library use and the Proposed Project (Preferred Alternative) does not include any residential development. The Proposed Project (Preferred Alternative) and the alternatives to the Proposed Project (Preferred Alternative) are physically on existing Airport property and would not include occupation or closure of any libraries. The Proposed Project (Preferred Alternative) is not growth

<sup>260</sup> United States Department of Agriculture (USDA). 1973. Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, San Diego County. Soil Survey of San Diego Area, California. U.S. Department of Agriculture, Natural Resources Conservation Service. December.

<sup>261</sup> Hydrology Report for Storm Drainage System BMP Program at San Diego International Airport. MACTEC, April 2005.

inducing as detailed in Chapter Six, *Other Effects of the Proposed Project*, and therefore, would not impact library use.

Accordingly, the Proposed Project (Preferred Alternative) and its alternatives would not have a significant impact on libraries.





# CHAPTER SIX: OTHER EFFECTS OF THE PROPOSED PROJECT

## 6.1 Significant Irreversible Environmental Changes

An evaluation of significant irreversible environmental changes that would be caused by implementation of the Proposed Project is required under CEQA Guidelines Section 15126.2(c). As indicated in Section 15126.2(c):

*Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generation to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

The environmental effects related to the implementation of the Proposed Project are discussed in Chapter Five of this EIR. Construction of the Proposed Project would require the long-term commitment of nonrenewable and renewable natural resources and land. These resources include, but are not limited to: petrochemical construction material; lumber; sand and gravel; asphalt; steel; copper; lead, and other metals and construction materials. Fossil fuels for construction equipment and vehicles would also be consumed.

Implementation of the Proposed Project would increase the need for resources used in construction; heating and cooling of commercial and office spaces; water; transportation of people and goods; lighting and other associated energy needs. However, SDIA is committed to construct the Proposed Project to meet high standards for efficiency and environmental design, consistent with Leadership in Energy and Environmental Design (LEED) standards. Implementation of LEED standards that emphasize strategies for sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality would reduce the use of renewable and nonrenewable resources that would continue over time through construction and long-term operation of the Proposed Project. For example, the SDCRAA is committed to use reuse asphalt and concrete in new airfield aprons and taxiways, and to use windows and window treatments in terminals to conserve energy. As such, the incremental increase in the demand for resources is expected to be less than significant. As discussed in Section 5.11, *Utilities and Service Systems*, there is sufficient capacity to serve the Proposed Project.

Implementation of the Proposed Project would result in the commitment of land resources for airfield, terminal, ground transportation, and airport support facilities. However, the area proposed for development is already committed to these types of uses as the California State Lands Commission has classified these lands to be used for the benefit of the people of California and in the movement and transport of people, goods and services. Thus, the Proposed Project would not result in a new commitment of and resources for this use.

The Proposed Project would accommodate demand for air travel anticipated by regional growth in the area. As indicated in Chapter Three, *Project Objectives*, the need for additional airport capacity in the San Diego region is widely acknowledged. The commitment of resources identified previously would provide an opportunity to remedy existing operation and environmental deficiencies associated with existing facilities, such as existing ground access and passenger security screening.

The existing project site is an already disturbed land form, having historically been tidelands that have been contoured using engineered fill.

## 6.2 Significant Unavoidable Effects

As described in Chapter Five, *Environmental Setting, Consequences, and Mitigation Measures*, the Proposed Project could potentially result in and/or contribute incrementally to air quality impacts.

As described in Section 5.5, *Air Quality*, the Proposed Project will have significant impact on CO and NO<sub>2</sub> when considered during an emissions inventory analysis for the year 2015 ~~2030~~. ~~When dispersion analysis was completed for 2015 operational levels CO and NO<sub>2</sub> levels are reduced to below CAAQS significance levels. Within this same analysis PM<sub>2.5/10</sub> concentration levels are shown to exceed CAAQS significance levels. However, as shown by monitoring data, levels of PM<sub>2.5/10</sub> already exceed CAAQS levels.~~ In 2010, 2015 and 2030, the Proposed Airport Implementation Plan, Airport Implementation Plan Alternative and the Airport Land Use Plan are expected to “contribute significantly” to projected violations of the 1 hour CAAQS for NO<sub>2</sub> which were also predicted under the No Project Alternative. Specifically, in 2010, the Airport Implementation Plan is predicted to cause a 70 µg/m<sup>3</sup> increase when compared to the No Project Alternative. This value represents 21% of the 1 hour NO<sub>2</sub> standard and, therefore, is considered a significant impact. In 2015, the Airport Implementation Plan and Airport Land Use Plan are expected to cause a 39 and 41 µg/m<sup>3</sup> increase over when compared to the No Project Alternative. These values represent approximately 12% of the 1 hour NO<sub>2</sub> standard and are also considered to be significant impacts. Finally, in 2030 under the Airport Implementation Plan, Airport Implementation Plan Alternative and the Airport Land Use Plan, 1 hour NO<sub>2</sub> levels are predicted to increase by 49 µg/m<sup>3</sup> when compared to the No Project Alternative. This represents 15% of the 1 hour NO<sub>2</sub> standard and is considered a significant impact. Lastly, construction emissions analyzed for the Proposed Project (Preferred Alternative) indicated that the total NO<sub>x</sub> emissions generated during the 2008-2009 construction year would exceed CEQA *de minimis* thresholds. Mitigation measures as described in Section 5.5.9, *Mitigation Measures*, will aid in reducing impact and however it is not feasible to reduce PM<sub>2.5/10</sub> concentrations below ambient conditions. Although NO<sub>x</sub> emissions may exceed CEQA *de minimis* thresholds during construction, impacts will be temporary in nature.

#### Human Health Risk Assessment

As described in Section 5.16, *Human Health Risk Assessment*, the Proposed Project (Preferred Alternative) increases the potential acute (short term) incremental health impacts (non-cancer) in residential, school, recreational areas, and off-site workers. This outcome is likely driven principally by acrolein with lesser contributions from formaldehyde.

#### Other Categories

No other significant ~~irreversible~~ and unavoidable changes would occur with implementation of the Proposed Project.

#### Preferred Alternative in Consideration of Unavoidable Potential Effects

The SDCRAA has determined that operational levels will increase at SDIA with or without the Proposed Project. The air quality analysis determined that the No Project Alternative when compared to the Proposed Project (Preferred Alternative or East Terminal Alternative) has slightly more impact on air quality. The SDCRAA has chosen to proceed with the Proposed Project (Preferred Alternative) to meet demand for air service in the San Diego region while providing an adequate level of service to SDIA users.

## 6.3 Growth-Inducing Impacts

As indicated in Chapter 3, *Project Objectives*, the need for additional airport capacity in the San Diego region is widely acknowledged. CEQA Guidelines, Section 15126.2(d) requires the *discussion of the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment*. Examples of growth-inducing actions include establishing a major new employment opportunity. Projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively, would also be considered growth inducing.

The potential for growth inducement from a project is evaluated in four ways according to CEQA Guidelines Section 15126.2(d) and the City of San Diego<sup>1</sup>:

1. Would the proposed project induce substantial population growth in the area?

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<sup>1</sup> Significance Determination Thresholds California Environmental Quality Act, City of San Diego, Development Services Department, Land Development Review Division, Environmental Analysis Section, May 1999 (Draft Revisions May 2004).

The Proposed Project accommodates forecast growth at the Airport through 2015. With or without the proposed improvements, operations will grow at SDIA and additional employees will be necessary to accommodate the additional operations. However, the additional employee levels needed to accommodate the forecast growth at SDIA are less than significant, see Section 5.4 *Population and Housing*.

2. Would the proposed project have an effect on undeveloped land that may not be designated on any general plan for urban development, but would nonetheless experience increased growth pressure due to the presence of the project?

The area surrounding SDIA is governed by the City of San Diego General Plan and Community Plans, and the Port Master Plan. An adopted ALUCP for SDIA guides off-airport land use to ensure that new development and redevelopment is implemented consistent with uses surrounding the Airport. All areas are designated with land uses, including open space and parklands that are offered additional protections in the General Plan. As depicted in Section 5.2, *Land Use Planning* the city is redeveloping the former naval training center that is not associated with or reliant upon the Proposed Project. The remainder of the City of San Diego is developed and there is limited undeveloped but developable land. The Proposed Project at SDIA is not expected to exert growth pressure on City of San Diego undeveloped land.

3. Would the proposed project substantially alter the planned location distribution, density, or growth rate of the population of an area?

The Proposed Project occurs within existing Airport property and consistent with the Proposed Airport Land Use Plan. Land uses surrounding the Airport are in conformance with the Airport Land Use Compatibility Plan (ALUCP). Impacts to population and housing are less than significant; see Section 5.4 *Population and Housing*.

4. Would the proposed project have an affect by removing constraints, thereby facilitating the construction of previously approved projects?

The Proposed Project would not eliminate a constraint for development of an approved project. There are no projects in San Diego or surrounding cities that have been approved but are conditioned or dependent on additional airport improvements at SDIA. The ALUCP for SDIA guides land uses surrounding the Airport to insure compatibility between SDIA operations and adjacent surrounding development. Additionally, the Proposed Project would not add capacity to urban services or infrastructure that would be utilized by other project proponents in the surrounding area.

5. Would the proposed project influence redevelopment of areas at a higher intensity than already exists?

The Proposed Project would not result in any significant pressure to redevelop the area around SDIA at a higher density. In the past, the former Teledyne Ryan and General Dynamics areas were major employment areas for the San Diego region. The loss of jobs and the closing of the former Teledyne Ryan and General Dynamics facilities, both land areas now a part of SDIA, has resulted in substantially lower employment than in the past. The designation and use of both sites for airport use would not result in redevelopment of these sites at a higher intensity.

6. Would the project foster growth at the Airport?

As discussed in Chapter 3, *Project Objectives*, the Proposed Project would not add passengers or flights at the Airport. However, the existing noise ordinance does allow the airlines to add additional flight operations as long as flight hour restrictions are not exceeded. Additional flights are allowed and would be accommodated regardless of whether the Proposed Project is approved or built. Additional flights could result from air carrier decisions regarding market forces and unmet demand, rather than the availability of specific SDIA facilities.

The potential for inducing flights can exist only when that capacity exceeds existing or future demand for air transportation. According to aviation demand models, SDIA has historically provided for only a portion of the air travel demand generated in San Diego County. The region's international and long-haul demand will continue to be accommodated and served by other regional airports such as Los Angeles and Ontario International Airports. These airports will continue to draw from additional traveling

populations in the greater Southern California area and offer competition for lower airfares to travelers and more efficient use of aircraft to allow airlines to profit. Given the increasing prices of fuel and the competitive downward pressures on the price of airfare, airlines that serve SDIA will not add additional flights unless they are assured that demand for air travel will allow for increased yield to cover airline costs and to produce profit.

Based on this evaluation, the Proposed Project is determined not to be growth-inducing.

## **6.4 Effects Not Found To Be Significant**

In accordance with Section 15128 of the State CEQA Guidelines, an EIR must contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR.

This EIR addresses a full range of environmental issues in detail. No topics or issues identified in the State CEQA Guidelines checklist or in the FAA Airport Environmental Handbook were eliminated from discussion.

# CHAPTER SEVEN: CLOSING SECTIONS

## 7.1 List of Preparers of EIR and Certification

Table 7.1

List of Preparers

Name	Education	Experience (Years)	Responsibility
<b>San Diego County Regional Airport Authority</b>			
Ted Anasis, AICP	B.S. Environmental Policy Analysis and Planning	13	Manager – Airport Planning
Paul Webb	B.A. Zoology; M.C.P, City and Regional Planning	29	Airport Planner II
Brett Caldwell, AICP	M.S. City & Regional Planning; B.S. Geography (City & Regional Planning)	20	Airport Planner II
Paul Manasjan, MS, REHS	B.A. Cultural Anthropology; B.A. Biology; M.S. Environmental and Occupational Health	21	Director – Environmental Affairs
Richard Gilb	B.S. Geology; M.P.H. Environmental Health	21	Environmental Affairs Manager
Lynda Tamura	B.A. Developmental Psychology	4	Administrative Assistant II
<b>HNTB Corporation</b>			
Kim Hughes, P.E.	B.S. Civil Engineering	22	EIR Project Manager. Responsible for overall EIR document
Evan Pfahler	B.S. Urban Planning and Design	10	Purpose and Need for the Proposed Project, Project Description, Airfield Planning, North Area Planning
Jose Mortero	M.S. Transportation Planning; B.S. Civil Engineering	16	Traffic Impact Study
Jessica Wyatt	M.S. Civil Engineering, Transportation; B.S. Civil Engineering	11	Traffic impact analysis, overall traffic documentation
Minh Tran	B.S. Computer Science	11	Traffic Impact Study
Sandhya Perumalla	M.S. Civil Engineering, Transportation B.S. Civil Engineering	4	Traffic Impact Study
Caroline Ellis	B.A. Historic Preservation M.A. City and Regional Planning	4	EIR-documentation support

Table 7.1  
List of Preparers

Name	Education	Experience (Years)	Responsibility
Laura Schaefer	B.A. Environmental Studies, Policy Concentration	1	EIR-documentation support
<b>Helix Environmental Planning, Inc.</b>			
Michael Schwerin	M.A. Geography; B.A. Engineering	17	EIR-preparation support
Teresa Weschler	M.P.P. Public Policy; B.A. Political Science	5	EIR-preparation support
Charles Terry	B.S., Mechanical Engineering	30	Surface Transportation Noise Impact Study
Stacy Gomez	M.M.A. Fisheries Economics & Marine Policy; BS Biology	26	Cumulative Projects
Mike Komula	M.Sc., Acoustics, Vibration and Noise Control B.A., Geography	21	Acoustician, for Pacific Noise Control
Stacy Nigro	B.S. Forest Resources & Conservation	13	Biological Resources
Doug Feremenga	PhD Urban Planning; M.P. Urban/Regional Planning; B.S. Rural/ Urban Planning	9	Utilities & Service Systems
Christiano Giovando	B.S. Geographic Information Systems	6	GIS Specialists
<b>Affinis</b>			
Mary Robbins-Wade	M.A. Anthropology; B.A. Anthropology	28	Historic/Cultural Resources Project Manager. Responsible for historic, archaeological, paleontological, and cultural resources technical reports and EIR analysis.
Stephen R. Van Wormer	M.A. History; B.A. Social Science (emphasis on history and anthropology)	31	Historian. Responsible for historic research and historic architectural evaluation.
<b>CityWorks</b>			
Laura Warner AIA	B.A. Architecture	22	Responsible for the preparation of the analysis for the Aesthetics and Land Use sections of the DEIR

<b>KBE Environmental Sciences, Inc.</b>			
Michael Kenney	B.A. Environmental Science; M.S. Environmental Engineering Sciences; Post-Graduate Studies; Industrial Hygiene and Environmental Health	26	Task Manager for Air Quality and Hazardous Materials. Involved in data collection, agency coordination, technical analyses and presentation of results.
L. Carrol Bryant	B.A. Geography	24	Involved in emissions inventory and dispersion modeling for air quality assessment. Also conducted QA/QC of technical analyses of air quality impacts.
Mike Ratte	B.S. Meteorology	15	Involved in emissions inventory and dispersion modeling for air quality assessment. Also conducted health risk assessment.
Wayne Arner	B.S. Environmental Engineering; Post Graduate Studies, Current, Environmental Engineering	6	Involved in data and information processing, development of emissions inventory and dispersion modeling for air quality analysis.
<b>Johnson Aviation</b>			
C. Nicholas Johnson	B.S. Aviation Management; M.P.A. Public Administration and Aviation Administration	19	CEQA Strategy.

## 7.2 List of Persons and Organizations Consulted

Table 7.2

**List of Persons and Organizations Consulted**

<b>Name</b>	<b>Agency/Organization</b>
Gary Honcoop	California Air Resources Board
Jim Lerner	California Air Resources Board
Marilyn Fluharty	California Department of Fish and Game
Diana Lilly	California Coastal Commission, San Diego Coast District Office
<u>Larry Simon</u>	<u>California Coastal Commission</u>
Brian McDaniel, P.G.	California Regional Water Quality Control Board
Brad Richter	Centre City Development Corporation, Planning Department
Fernando Lasaga	City of San Diego
Tait Gallaway	City of San Diego
Lydia Goularte	City of San Diego Community and Economic Development
Cory Wilkinson	City of San Diego Development Services Department
Rebecca Lafreniere	City of San Diego Local Enforcement Agency

Table 7.2

**List of Persons and Organizations Consulted**

<b>Name</b>	<b>Agency/Organization</b>
Kevin Sullivan	City of San Diego Long Range Planning
Keith Greer	City of San Diego Planning Department
Tony Kempton	City of San Diego Planning Department
Marlon Pangilinan	City of San Diego Planning Department
Eileen Lower	City of San Diego Planning Department, Environmental Analysis Section
David Byrnes	County of San Diego Air Pollution Control District
Robert Reider	County of San Diego Air Pollution Control District
Carl Selnick	County of San Diego Air Pollution Control District, Environmental Analysis Section
Archi dela Cruz	County of San Diego Air Pollution Control District, Toxics/Emissions Inventory Section
Donn A. LiPera	County of San Diego Department of Environmental Health Land and Water Quality Division
Greg Holmes	Department of Toxic Substances Control
<u>Mehdi Rastakhiz</u>	<u>Metropolitan Wastewater Department</u>
<u>Cary McGagin</u>	<u>Department of California Highway Patrol</u>
<u>Tom Smisek</u>	<u>Office of the Mayor, Coronado</u>
<u>Kurt Luhrsen</u>	<u>North County Transit District</u>
<u>William E. Prinz</u>	<u>Solid Waste Local Enforcement Agency, City of San Diego</u>
<u>Bob Leiter</u>	<u>SANDAG</u>
<u>Kelly Broughton</u>	<u>Development Services Department, City of San Diego</u>
<u>Darin Neufeld,</u>	<u>Resource Management Division, City of San Diego</u>
<u>D.W. Zautcke</u>	<u>United States Marine Corps</u>
<u>Jacob Armstrong</u>	<u>California Department of Transportation</u>
<u>Conan Cheung</u>	<u>Metropolitan Transit System</u>
<u>Kevin Faulconer</u>	<u>City of San Diego, Council</u>
Sandy Hesnard	Department of Transportation Division of Aeronautics
David Bonaparte	Five Star Parking
Stephen L. Marsh	Luce, Forward, Hamilton & Scripps LLP (representing Jimsair Aviation Services, Inc.)
Kathleen Riser	McMillin-NTC, LLC
<u>Andrew Berg</u>	<u>National Electrical Contractors Association</u>
Carol Gaubatz	Native American Heritage Commission
Libby Day	Redevelopment Agency of San Diego
<u>Shane Finneran</u>	<u>Ocean Beach Planning Board, Inc.</u>
Adrian Catacowski	Park and Ride Airport Parking
Keith Webb	Park and Ride Airport Parking
Thomas J. Traver	Park and Ride Airport Parking
Cynthia Conger	Peninsula Committee Planning Board
Jarvis Ross	Peninsula Committee Planning Board



Table 7.2

**List of Persons and Organizations Consulted**

<b>Name</b>	<b>Agency/Organization</b>
<u>Geoff Page</u>	<u>Peninsula Community Planning Board</u>
Bill Howard	Resident
Carl Robinson	Resident
Charles Kinkade	Resident
Dashiell Botter	Resident
H.B. Williams	Resident
Herb Stern	Resident
Kathleen Bush	Resident
Linda Patterson	Resident
Marie Ambrose	Resident
Martha Hall	Resident
Otto Emme	Resident
Renee Stone	Resident
Richard S. Phillips	Resident
W.V. "Bill" Kelly	Resident
<u>Darrell Roberson</u>	<u>Resident</u>
<u>Wayne Smith</u>	<u>Resident</u>
<u>Chantal Saipe</u>	<u>Resident</u>
<u>Joe Varley</u>	<u>Resident</u>
<u>John Karpinski</u>	<u>Resident</u>
<u>Paul Zablony</u>	<u>Resident</u>
<u>Karen Voigt</u>	<u>Resident</u>
<u>David Elmore</u>	<u>Resident</u>
<u>James Gihooly</u>	<u>Resident</u>
<u>Catherine Kurland</u>	<u>Resident</u>
<u>Tom Stewart</u>	<u>Resident</u>
<u>Bill Ingram</u>	<u>Resident</u>
<u>Marylou LoPreste</u>	<u>Resident</u>
<u>James Whalen</u>	<u>Resident</u>
<u>John French</u>	<u>Resident</u>
<u>James Frost</u>	<u>Resident</u>
<u>James cash</u>	<u>Resident</u>
<u>Michael Huff</u>	<u>Resident</u>
<u>Suhail Khalil</u>	<u>Resident</u>
<u>Lynn Wade, Michael BuFalry &amp; Dustin</u>	<u>Resident</u>
<u>Jason Feldman</u>	<u>Resident</u>
<u>Gidon Singer</u>	<u>Resident</u>
<u>Ardetta Steiner</u>	<u>Resident</u>

Table 7.2

**List of Persons and Organizations Consulted**

<b>Name</b>	<b>Agency/Organization</b>
<u>L. Winslet</u>	<u>Resident</u>
<u>Harris Steiner</u>	<u>Resident</u>
<u>William Gibson</u>	<u>Resident</u>
<u>Margaret Valentine</u>	<u>Resident</u>
<u>Julia Quinn</u>	<u>Resident</u>
<u>Teresa Brownyard</u>	<u>Resident</u>
<u>Roger Britt</u>	<u>Resident</u>
<u>Miguel Romero (and family)</u>	<u>Resident</u>
<u>Matthew Naiman</u>	<u>Resident</u>
<u>Gregory Giselman</u>	<u>Resident</u>
<u>Paul Grimes</u>	<u>Resident</u>
Lance G. Murphy	Resident, SANNoise, <u>Peninsula Community Planning Board</u>
Greg Finley	San Diego
Gregory J. Smith	San Diego County Office of the County Clerk
Richard Shine, P.E.	San Diego County Regional Airport Authority
Rick Trummer, P.E.	San Diego County Regional Airport Authority
Steven Cornell	San Diego County Regional Airport Authority
Paul Chacon	San Diego Off-Airport Parking Association
John W. Helmer	San Diego Unified Port District
Ralph T. Hicks	San Diego Unified Port District
Tim Deuel	San Diego Unified Port District
Mike Calandra	SANDAG
Toni Bates	SANDAG
Andrey Komissarov	SDGA, Sempra Energy Utility
Karen F. Torn	Smith Consulting Architects
David Caterino	South Coastal Information Center
Ellison Alegre	State of California Department of Transportation District 11
Mario H. Orso	State of California Department of Transportation District 11
Pat Landrun	State of California Department of Transportation District 11
Scott Morgan	State of California Governor's Office of Planning and Research State Clearinghouse and Planning Unit
Rosa Munoz, P.E.	State of California Public Utilities Commission
Carolyn Lieberman	U.S. Fish and Wildlife Service

## 7.3 Glossary

**A-Weighted Sound Level** – A quantity, in decibels, read from a standard sound-level meter with A-weighting circuitry. The A-weighting scale discriminates against the lower frequencies below 1000 hertz according to a relationship approximating the auditory sensitivity of the human ear. The A-weighted sound level is approximately related to the relative “noisiness” or “annoyance” of many common sounds.

**Acoustics** – The science of sound, including the generation, transmission, and effects of sound waves, both audible and inaudible.

**Adverse Impact** - A term used to describe unfavorable, harmful, or detrimental environmental changes. Adverse impacts may be significant or not significant.

**Air Carrier** – An entity holding a Certificate of Public Convenience and Necessity issued by the Department of Transportation to conduct scheduled air services over specified routes and a limited amount of non-scheduled operations.

**Air Pollutant** – Any substance in air that could, in high enough concentration, harm man, other animals, vegetation, or material. Pollutants may include almost any natural or artificial composition of airborne matter capable of being airborne. They may be in gases, particulates, or in combinations thereof. Generally, they fall into two main groups: (1) those emitted directly from identifiable sources and (2) those produced in the air by interaction between two or more primary pollutants, or by reaction with normal atmospheric constituents, with or without photoactivation.

**Airside** - Facilities principally related to the airfield. Airside facilities often include the runway and taxiway system, runway safety areas, the runway approach area, and associated equipment such as airfield lighting and navigational aids.

**Airfield**– The area of an airport devoted to use by aircraft. This includes the runways, taxiways, gate area and aprons..

**Altitude** – Height above a reference point, usually expressed in feet. Reference points are typically sea level, the ground, or airfield elevation in which case MSL, AGL or AFE further describes the altitude, respectively.

**Ambient Noise Level** – The level of noise that is all-encompassing within a given environment for which a single source cannot be determined. It is usually a composite of sounds from many and varied sources near to and far from the receiver.

**Arithmetic Averaged Sound Pressure Level** – The arithmetic sum of a series of sound pressure levels divided by the number of levels included in the sum.

**Biological Opinion** – A report summarizing the opinion of the Fish and Wildlife Service regarding whether or not a given project is likely to endanger a threatened or endangered species or negatively impacting a species critical habitat.

**Biotic Community** – A naturally occurring assemblage of animals and plants that live in the same environment and are mutually sustaining and interdependent.<sup>1</sup>

**Built Conditions** – The existing human-made environment including such things as buildings, streets and open spaces.

**Bulk** – The height, mass, density, and location of buildings on a piece of land.

**Capital Improvement Program** – A major public infrastructure and planning tool for municipalities. The CIP is a statement of the City’s policies and financial abilities to manage the physical development of the community.

**Community Noise Equivalent Level (CNEL)** - A noise compatibility level established by California Administrative Code, Title 21, Section 5000. Represents a time-weighted 24-hour average noise level based on the A-weighted decibel. The CNEL includes an additional 5 dB adjustment to sounds occurring

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<sup>1</sup> [www.entrix.com/resources/glossary.aspx](http://www.entrix.com/resources/glossary.aspx)

in the evening (7 p.m. to 10 p.m.) and a 10dB adjustment to sound occurring in the late evening and early morning between (10 p.m. and 7 a.m.).

**Departure** – The act of an aircraft taking off from an airport.

**Day-Night Average Sound Level (DNL)** – A measure of the annual average noise environment over a 24-hour day. It is the 24-hour, logarithmic- (or energy-) average, A-weighted sound pressure level with a 10-decibel penalty applied to the nighttime event levels that occur between 10 p.m. and 7 a.m.

**Decibel (dB)** – Commonly used to define the level produced by a sound source. The decibel scale is logarithmic; e.g., when the scale goes up by ten, the perceived level is twice as loud.

**Environment** - The physical conditions which exist within an area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The “environment” includes both natural and man-made conditions.

**Environmental Assessment (EA)** – An EA is a concise document used to describe the environmental impacts of a proposed Federal action.

**Environmental Impact Report (EIR)** – A detailed statement prepared under the California Environmental Quality Act (CEQA) describing and analyzing the significant environmental effects of a project and discussing ways to mitigate or avoid the effects..

**Equivalent Sound Level ( $L_{eq}$ , LAEQ, LAEQD or LAEQN)** – The level of a constant sound which, in the given situation and time period, has the same average sound energy, as does a time-varying sound. Specifically, equivalent sound level is the energy-averaged sound pressure level of the individual A-weighted sound pressure levels occurring during the time interval. The time interval over which the measurement is taken (or for which the metric is computed) should always be specified. For example, if the time interval is the daytime period (7 a.m. to 10 p.m.) then the acronym LAEQD is used. Similarly, if the time interval is the nighttime period (10 p.m. to 7 a.m.) then the acronym LAEQN is used.

**Federal Aviation Administration (FAA)** – The Federal Aviation Administration (FAA) is the element of the United States government with primary responsibility for the safety of civil aviation. Among its major functions are the regulation of civil aviation to promote safety and fulfill the requirements of national defense and development and operation of a common system of air traffic control and navigation for both civil and military aircraft.

**Federal Emergency Management Agency (FEMA)** - The federal agency under which the National Flood Insurance Program is administered.

**Fixed Base Operator (FBO)** - An operator of an aviation facility at a fixed location with access to the airfield. An FBO can be a full service or limited use facility. A full service FBO sells fuel, provides hangar space, and offers a variety of services such as flight instruction, flight charters, and maintenance. A limited use FBO would not offer fuel, and would be limited to hangar space, maintenance, or other support uses such as instrumentation or engine repairs.

**Flora** – The plant life in a given area.

**Frequency (acoustic)** – The number of oscillations per second completed by a vibrating object.

**Fauna** – The animal life in a given area.

**General Aviation (GA)** – All civil aviation except scheduled passenger and cargo airlines.

**General Plan** - A compendium of city or county policies regarding long-term development, in the form of maps and accompanying text. A General Plan is a legal document required of each local agency by the State of California Government Code Section 65301 and adopted by a city council or board of supervisors.

**Habitat** – The natural home of a plant or animal.

**Hertz (Hz)** – The unit used to designate frequency; specifically, the number of cycles per second.

**Household** – A household includes all the persons who occupy a housing unit. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements.

**Hydrocarbons (HC)** – Chemical compounds that consist entirely of carbon and hydrogen.

**Impact** - The effect, influence, or imprint of an activity or the environment. Impacts include: direct or primary effects which are caused by the project and occur at the same time and place; indirect or secondary effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth-rate and related effects on air and water and other natural systems, including ecosystems.

**Impervious Surface** - Ground surface that cannot be penetrated by water. It includes paved and compacted surfaces, as well as those covered by buildings.

**Instrument Flight Rules (IFR)** – Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate type of flight plan.

**Instrument Meteorological Conditions (IMC)** – Weather conditions expressed in terms of visibility, distance from clouds, and cloud ceilings during which all aircraft are required to operate using Instrument Flight Rules (IFR).

**Intermodal Center** – a place where multiple modes of transportation connect including trains, airplanes, buses, bikes, pedestrian routes, and boats.

**Invasive Species** – Invasive species are organisms (usually transported by humans) which successfully establish themselves in, and then overcome, otherwise intact, pre-existing

**Landside** – The portion of an airport that is not designed for aircraft to operate on. This includes, but is not limited to, parking garages, roadways, landscaping, and passenger pick-up/drop-off areas.

**Landform** - A natural feature of a land surface.

**Land Use** - The purpose or activity for which a piece of land or its building is designed, arranged, or intended, or for which it is occupied or maintained.

**Land Use Plan** - An adopted map depicting the approximate location of residential, commercial, public, semi-public, and private-uses, open space, and road systems with a statistical summary of areas and densities for these land uses.

**Leasehold** – Property held by lease.

**Level of Service (LOS)** - A concept developed to quantify the degree of comfort afforded to drivers as they travel on a given roadway. The degree of comfort includes such elements as travel time, number of stops, total amount of stopped delay, etc. As defined in the Highway Capacity Manual, six grades are used to describe LOS, and are denoted A through F.

**Loudness** – The attribute of an auditory sensation, in terms of which sounds may be ordered on a scale extending from soft to loud. Loudness depends primarily upon the sound pressure of the source, but it also depends upon the frequency and waveform of the source.

**Mean Sea Level (MSL)** – The height of the surface of the sea for all stages of the tide, used as a reference for elevations. Also called sea level datum.

**Metropolitan Statistical Area (MSA)** – Metropolitan Statistical Areas is an area containing a recognized population center and nearby communities that interact highly with that center.

**National Ambient Air Quality Standards (NAAQS)** – Standards for criteria pollutants established by United States Environmental Protection Agency that apply to outdoor air.

**Natural Areas** – Undeveloped areas of land such as parks, wildlife refuges/management areas, and nature preserves.

**Nautical Mile (NM)** – A measure of distance equal to 1 minute of arc on the earth's surface (approximately 6,076 feet).

**Noise** – Any sound that is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying.

**Noise Exposure** – The cumulative acoustic stimulation reaching the ear of a person over a specified period of time (e.g., a work shift, a day, a working life, or a lifetime).

**Operation** – Landing or take-off of an aircraft.

**Overlay Zone** - A zone which is superimposed upon other zoning. Overlay zones are used in areas which need special protection (as in a historic preservation district) or have special problems (such as steep slopes or flooding). Development of land subject to an overlay must comply with the regulations of both zones.

**Peak Hour** – The hour-long period of time on any given day at a given airport where the number of flights is highest.

**Prime Farmland** – A special category of highly productive cropland that is recognized and described by the US Department of Agriculture’s Soil Conservation Service and receives special protection under the Surface Mining Law.

**Public Trust Doctrine** – Common law doctrine that holds that title to lands under navigable waters up to the high water mark is held by the State in trust for the people for their common heritage and common use. These lands are not alienable in that all of the public’s interest in them cannot be extinguished.

**Setback/Stepback** - The minimum distance required by zoning to be maintained between two structures or between a structure and a property line.

**Sound Exposure Level (SEL)** – A time-integrated metric (i.e., continuously summed over a time period) which quantifies the total energy in the A-weighted sound level measured during a transient noise event. The time period for this measurement is generally taken to be that between the moments when the A-weighted sound level is 10 dB below the maximum.

**Sound Pressure Level** – A measure, in decibels, of the magnitude of the sound. Specifically, the sound pressure level of a sound that, in decibels, is 10 times the logarithm to the base 10 of the ratio of the squared pressure of this sound to the squared reference pressure. The reference pressure is usually taken to be 20 micropascals. (See also Energy-Averaged Sound Pressure Level.)

**Source (acoustic)** – The object that generates the sound.

**Statute Mile (SM)** – A measure of distance equal to 5,280 feet.

**Sulfur Dioxide (SO<sub>2</sub>)** – Sulfur dioxide typically results from combustion processes, refining of petroleum, and other industrial processes.

**Turboprop Aircraft** – An aircraft whose main propulsive force is provided by a propeller driven by a gas turbine. Additional propulsive force may be provided by gas discharged from the turbine exhaust.

**Unique Farmland** – Land other than prime farmland that is used for production of specific high-value food and fiber crops, as determined by the Secretary of Agriculture. Unique farmland possesses a special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farm methods.

**View Corridor** - The line of sight - identified as to height, width, and distance - of an observer looking toward an object of significance to the community (e.g., ridgeline, river, historic building, etc.); the route that directs the viewers attention.

**Visual Meteorological Conditions (VMC)** – Weather conditions expressed in terms of visibility, distance from cloud, and ceiling equal to or better than specified minima.

**Visual Flight Rules (VFR)** – Rules that govern the procedures for conducting flight under visual conditions. The term ‘VFR’ is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate type of flight plan.

**Volatile Organic Compound (VOC)** – Any organic compound that participates in atmospheric photochemical reactions except those designated by EPA as having negligible photochemical reactivity.

**Volume to Capacity Ratio (V/C)** - The ratio of flow rate to capacity for a transportation facility.

**Wake Turbulence** – Phenomena resulting from the passage of an aircraft through the atmosphere. The term includes vortices, thrust stream turbulence, jet blast, jet wash, propeller wash, and rotor wash both on the ground and in the air.

**Wetland** – An area that is regularly saturated by surface water or groundwater and is characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions (eg, swamps, bogs, fens, marshes, and estuaries).<sup>2</sup>

**Zoning** – Local codes regulating the use and development of property. The zoning ordinance divides the city or county into land use districts or "zones", illustrated on zoning maps, and specifies the allowable uses within each such zone. It establishes development standards such as minimum lot size, maximum structure, height, building setbacks, and yard size.

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<sup>2</sup> [www.epa.gov/glnpo/rptcong/1994/glossary.htm](http://www.epa.gov/glnpo/rptcong/1994/glossary.htm)