Item No. 8 - Supporting Document 4b



# APPENDIX B

# TRAFFIC IMPACT ANALYSIS

**Page Intentionally Left Blank**

**DRAFT**

# TRAFFIC IMPACT ANALYSIS

## SHIPYARD SEDIMENT REMEDIATION PROJECT

## CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

## SAN DIEGO REGION

LSA

May 2011

**DRAFT**

# TRAFFIC IMPACT ANALYSIS

## SHIPYARD SEDIMENT REMEDIATION PROJECT

## CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

## SAN DIEGO REGION

Prepared for:

Craig L. Carlisle, PG, CEG
San Diego Water Board
9174 Sky Park Court, Suite 100
San Diego, California 92123-4353

Prepared by:

LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614
(949) 553-0666

LSA Project No. SWB1001

LSA

May 2011

# TABLE OF CONTENTS


INTRODUCTION ..... 1

PROJECT DESCRIPTION ..... 1

REGULATORY SETTING ..... 4
- Regional Transportation Plan ..... 4
- Bayshore Bikeway Plan ..... 4
- City General Plans ..... 5

METHODOLOGY ..... 6
- Project Study Area ..... 6

EXISTING CONDITIONS ..... 9
- Existing Circulation System ..... 9
- Existing Intersection LOS Analysis ..... 11

HAUL TRUCK, DELIVERY TRUCK, AND EMPLOYEE TRAFFIC ..... 11
- Project Trip Generation ..... 11
- Project Trip Distribution ..... 17

EXISTING CONDITIONS WITH PROJECT TRAFFIC ..... 17
- Staging Areas 1 and 2 ..... 17
- Staging Area 3 ..... 21
- Staging Area 4 ..... 29
- Staging Area 5 ..... 29
- Bayshore Bikeway ..... 36

MITIGATION APPROACH ..... 36

CONCLUSION ..... 39


## FIGURES


Figure 1: Project Location ..... 2
Figure 2: Existing A.M. and P.M. Peak-Hour Trips ..... 12
Figure 3: Existing Average Daily Trips at Study Area Roadway Segments ..... 15
Figure 4: Staging Areas 1 and 2 Existing Plus Project A.M. and P.M. Peak Hour Trips ..... 20
Figure 5: Staging Areas 1 and 2 Existing Plus Project Average Daily Trips ..... 23
Figure 6: Staging Area 3 Existing Plus Project A.M. and P.M. Peak Hour Trips ..... 25
Figure 7: Staging Area 3 Existing Plus Project Average Daily Trips ..... 27
Figure 8: Staging Area 4 Existing Plus Project A.M. and P.M. Peak Hour Trips ..... 30
Figure 9: Staging Area 4 Existing Plus Project Average Daily Trips ..... 32
Figure 10: Staging Area 5 Existing Plus Project A.M. and P.M. Peak Hour Trips ..... 34
Figure 11: Staging Area 5 Existing Plus Project Average Daily Trips ..... 37

## TABLES

Table A: Existing Peak Hour Intersection Level of Service Summary of Attachment C. ..... 14
Table B: Existing Roadway Segment Level of Service Summary ..... 16
Table C: Project Trip Generation Summary ..... 18
Table D: Project Trip Distribution Summary ..... 19
Table E: Staging Areas 1 and 2 Existing Plus Project Peak Hour Intersection Level of Service Summary ..... 22
Table F: Staging Areas 1 and 2 Existing Plus Project Roadway Segment Level of Service Summary 24
Table G: Staging Area 3 Existing Plus Project Peak Hour Intersection Level of Service Summary ... 26
Table H: Staging Area 3 Existing Plus Project Roadway Segment Level of Service Summary ..... 28
Table I: Staging Area 4 Existing Plus Project Peak Hour Intersection Level of Service Summary .... 31
Table J: Staging Area 4 Existing Plus Project Roadway Segment Level of Service Summary ..... 33
Table K: Staging Area 5 Existing Plus Project Peak Hour Intersection Level of Service Summary ... 35
Table L: Staging Area 5 Existing Plus Project Roadway Segment Level of Service Summary ..... 38

## ATTACHMENTS

Attachment A: Existing Traffic Counts
Attachment B: City of San Diego and City of National City Proposed LOS Standards
Attachment C: Existing LOS Worksheets
Attachment D: Existing with Project Traffic LOS Worksheets (Staging Areas 1 & 2)
Attachment E: Existing with Project Traffic LOS Worksheets (Staging Area 3)
Attachment F: Existing with Project Traffic LOS Worksheets (Staging Area 4)
Attachment G: Existing with Project Traffic LOS Worksheets (Staging Area 5)
Attachment H: Mitigation Approach Alternative

# INTRODUCTION

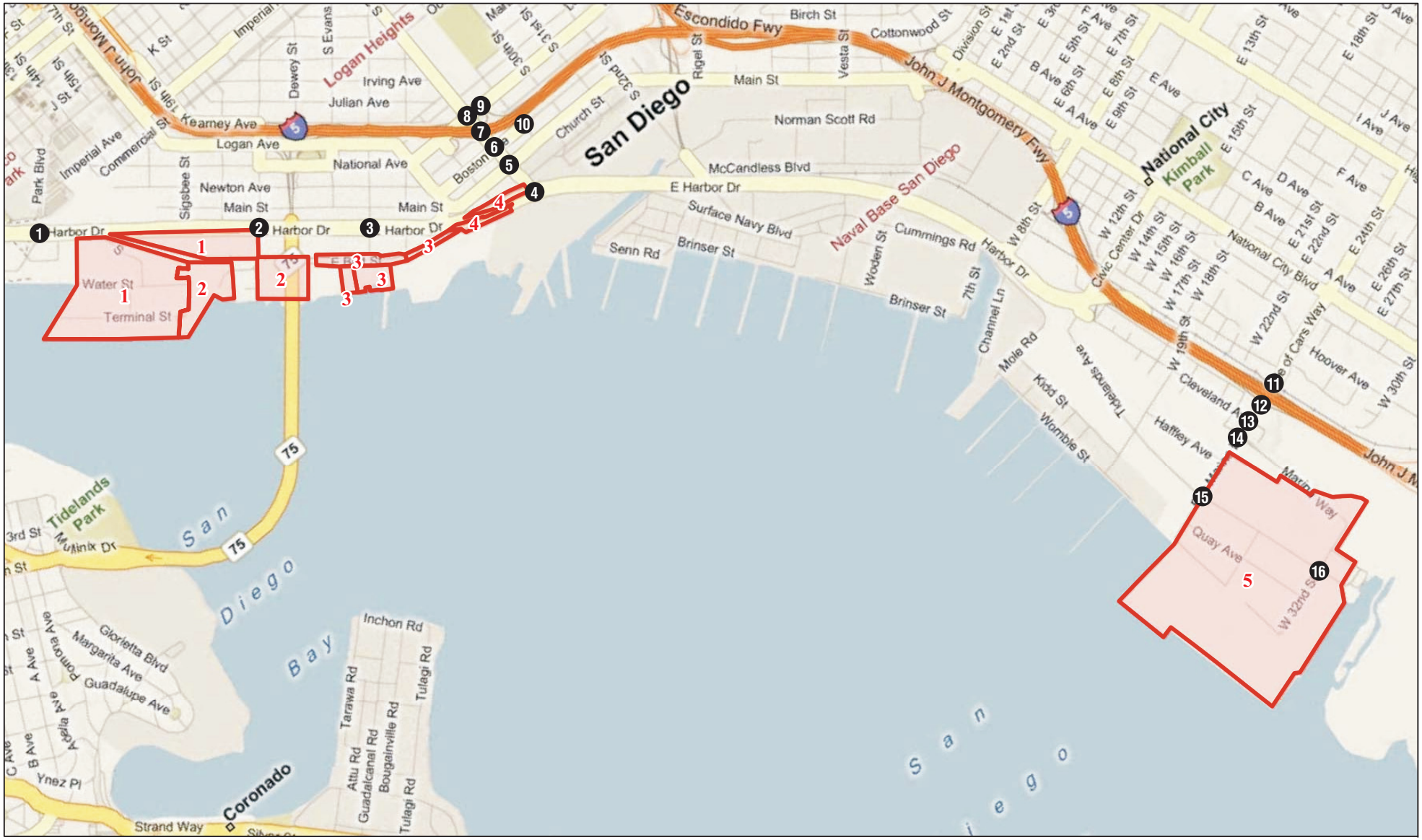
LSA Associates, Inc. (LSA) is pleased to provide this traffic analysis for the proposed Shipyard Sediment Remediation Project. The purpose of the following analysis is to identify the short-term and long-term traffic impacts associated with project build-out. This traffic study has been prepared in accordance with the methodologies and procedures outlined in the City of San Diego *Traffic Impact Study Guidelines*, San Diego Traffic Engineers' Council (SANTEC) *Traffic Impact Study Guidelines*, the Highway Capacity Manual 2000 (HCM) published by the Transportation Research Board, and applicable provisions from the California Environmental Quality Act (CEQA). It should be noted that the City of National City follows the SANTEC *Traffic Impact Study Guidelines.*

# PROJECT DESCRIPTION

The proposed project is the dredging of sediment adjacent to shipyards in the San Diego Bay, the dewatering, solidification and possible solidification of the dredged material on-shore, potential treatment of decanted water, and the transport of the removed material to an appropriate landfill for disposal. The proposed project includes the dredging and removal of approximately 143,400 cubic yards of contaminated sediment from the Shipyard Sediment Site. The project consists of marine sediments in the bottom bay waters that contain elevated levels of pollutants above San Diego Bay background conditions. The purpose of the project is to implement a Tentative Cleanup and Abatement Order issued by the California Regional Water Quality Control Board, San Diego Region (hereinafter the San Diego Water Board). The San Diego Water Board is the Lead Agency under California Environmental Quality Act (CEQA) for the proposed project.

The removal of the marine sediments will require upland areas for dewatering, solidification and stockpiling of the materials, and potential treatment of decant waters prior to off-site disposal. Therefore, in addition to the open waters of the Shipyard Sediment Site, five upland areas have been identified by the San Diego Water Board as potential sediment staging areas. Each of the potential staging areas has more defined usable areas, further described below. Figure 1 shows the potential sediment staging locations.

- **Staging Area 1:** 10th Avenue Marine Terminal and Adjacent Parking (approximately 49.66 potentially usable acres).
- **Staging Area 2:** Commercial Berthing Pier and Parking Lots Adjacent to Coronado Bridge (approximately 11.66 potentially usable acres).
- **Staging Area 3:** SDG&E/BAE/BAE and NASSCO Parking Lot (approximately 7.27 potentially usable acres).
- **Staging Area 4:** NASSCO/NASSCO Parking and Parking Lot North of Harbor Drive (approximately 3.85 potentially usable acres).




LSA

FIGURE 1

LEGEND

Potential Sediment Staging Areas

4 Study Area Intersection

0 1250 2500

FEET

SOURCE: Bing Maps (2008)

I:\SWB1001\G\Study Ints.cdr (3/31/2011)

*San Diego Sediment Project*

Potential Sediment Staging Locations Index and Study Area Intersections

- **Staging Area 5:** 24th Street Marine Terminal and Adjacent Parking Lots (approximately 145.31 potentially usable acres).

The five potential Staging Areas consist primarily of leasehold lands and associated parking areas in the immediate vicinity of the Shipyard Sediment Site. The potential usable areas within each potential Staging Area are comprised of open, paved portions that could be used for the dewatering, solidifying and drying of the dredged marine sediments. Staging Areas 1 through 4 are located within the City of San Diego and are designated in the City's General Plan as Industrial Employment. Staging Area 5 is located within the City of National City and is designated in the City's existing General Plan as Industrial–Tidelands Manufacturing and is under the jurisdiction of the San Diego Unified Port District. National City is currently updating its General Plan; the proposed Land Use designation for Staging Area 5 in the updated General Plan is San Diego Unified Port District (land uses governed by the Sand Diego Port Master Plan).

Once the dredge materials have been dried and tested, they will be loaded onto trucks for disposal at an approved landfill. For purposes of this project, it is assumed that 85 percent of the material will be transported from the staging area to Otay Landfill, approximately 15 miles southeast of the Shipyard Sediment Site. Although the sediment is not known to be classified as California hazardous material, it will be tested upon removal and prior to disposal. It is assumed for the purposes of this PEIR that up to 15 percent of the material will require transport to a hazardous waste facility (a Class III facility), most likely the Kettleman Hills Landfill in Kings County, California, near Bakersfield.

The number of truck trips necessary to remove the treated dredge material is based on several factors. The average truck weight during a recent dredging project at BAE Systems was 21 tons per truck. The industry standard metric is 1.6 tons per cubic yard of sediment. Geosyntec Inc. estimates that 50 truck trips per day is the feasible maximum number of trucks that can operate at the treatment site. The entreated dredge quantity is 143,400 cubic yards. As a result of the increase in bulk that would occur after treatment with binding agents, the total treated dredge quantity to be transported off site is approximately 164,910 cubic yards. With 21 tons (or 13.1 cubic yards) of material per truck, and 50 truck trips per day, the total duration of the dredge-and-haul activity is approximately 50 weeks. The duration of the dredge-and-haul activity is assumed to include several weeks of equipment set up and staging area preparation; therefore, a 54-week or 12.5-month schedule is anticipated.

Trucks departing from potential Staging Areas 1 through 4 would access the Interstate 5 (I-5) south via East Harbor Drive and 28th Street; trucks departing from Staging Area 5 would access the I-5 south either directly from Bay Marina Drive or from West 32nd Street to Marina Way to Bay Marina Drive. The preferred most direct route to Otay Landfill is via I-5 south to Highway State Route 54 (SR-54) east, to Interstate 805 (I-805) south. Although the sediment is not known to be classified as California hazardous material, it will be tested upon removal and prior to disposal. It is assumed for the purposes of this study that up to 15

percent of the material will require transport to a Class III facility, most likely the Kettleman Hills Landfill in Kings County, California, near Bakersfield. Based on the excavation quantity of 143,400 cubic yards, and accounting for an additional 15 percent of bulk material due to the dewatering and treatment process, it is estimated that up to 250 truck trips per week could be required over an approximately 12.5-month period to remove the material. These estimates are a worst-case scenario and will be finalized during the design phase.

# REGULATORY SETTING

## Regional Transportation Plan

The Regional Transportation Plan (RTP), prepared and adopted by the San Diego Association of Governments (SANDAG) is the region's long-range mobility plan. The RTP plans for and identifies projects for multiple modes of transportation in order to achieve a balanced regional system. It establishes the basis for state funding of local and regional transportation projects, and is a prerequisite for federal funding. SANDAG prioritizes and allocates the expenditure of regional, state, and federal transportation funds to implement RTP projects.

**Congestion Management Plan.** The region's Congestion Management Program (CMP), also prepared by SANDAG, serves as a short-term element of the RTP. It focuses on actions that can be implemented in advance of the longer-range transportation solutions contained within the RTP. The CMP establishes programs for mitigating the traffic impacts of new development and monitoring the performance of system roads relative to Level of Service (LOS) standards. It links land use, transportation, and air quality concerns.

## Bayshore Bikeway Plan

The Bayshore Bikeway is a designated 24-mile bikeway route around San Diego Bay. Planning for the Bikeway began in 1975 with a feasibility study prepared by Caltrans and funded by National City. The stated objective of the study was "to determine an acceptable route for bicyclists to traverse the southern regions of San Diego Bay." The final study, released in 1976, recommended 11 miles of bicycle paths and 14 miles of bike lanes and bike routes providing convenient and scenic bicycle transportation and recreation around the bay. Currently, the Bayshore Bikeway route consists of approximately 12 miles of offstreet bicycle paths, and about 12 miles of on-street sections designated as either bicycle lanes or bicycle routes. SANDAG is developing additional improvements to the bikeway based on the Bayshore Bikeway Plan, which was adopted by SANDAG in 2006, to identify opportunities to improve the bikeway along the east side of the Bay. More specifically, SANDAG is undertaking engineering and environmental studies for the next project, which would extend the bike path north along the east side of the San Diego Bay through Chula Vista and National City to 32nd Street in the City of San Diego. A new section of bike path from

Palomar Street to H Street in Chula Vista is scheduled for construction in the summer of 2011. SANDAG also is pursuing funding for improvements beginning at Marina Way in National City north to 32nd Street in San Diego. Construction is anticipated to begin in summer 2012.

## City General Plans

**City of San Diego Mobility Element.** The Mobility Element, the RTP and the CMP all highlight the importance of integrating transportation and land use planning decisions, and using multi-modal strategies to reduce congestion and increase travel choices. However, the Mobility Element more specifically plans for the City of San Diego's transportation goals and needs. An overall goal of the Mobility Element is to further the attainment of a balanced, multi-modal transportation network that also minimizes environmental and neighborhood impacts. A balanced network is one in which each mode, or type of transportation, is able to contribute to an efficient network of services meeting varied user needs.

**Barrio Logan Community Plan.** Community Plans in the City of San Diego establish individual communities' land use designations and policies guiding development. The Barrio Logan Community Plan ensures consistency with overall guiding principles, land use policies, and other goals found in the City's General Plan. The Barrio Logan/Harbor 101 Community Plan was adopted in 1978. Because of the community's geographical location on the San Diego waterfront, proximity to downtown San Diego, and its older urban and mixed-use characteristics that have been described at length, transportation plays a major role in the community's development. Practically all known forms of transportation have an important role in the community and its future development. Transportation modes for the Barrio Logan/Harbor 101 community fall into the following categories: Automobile Transportation (freeways, major streets, collector streets, and local streets), Public Transportation in the form of rail (MTDB) and Bus Transportation, Industry-related Transportation (rail, trucking, and shipping), and Pedestrian/Bicycle Open Space-Related Transportation (recreational transit, bicycle, and pedestrian). According to the Community Plan, because of the many existing transportation modes in the community, major circulation conflicts exist. The City is currently updating the Barrio Logan Community Plan. The preferred land use map and plan are anticipated to be ready for review in late fall 2011.

**National City General Plan.** The National City General Plan was approved in 1996. The General Plan contains land use and development policies that serve as the foundation for all planning decisions in the City. The combined General Plan/Zoning Map recognizes the rights-of-way of I-5, I-805, and the San Diego Trolley. National City is currently in the process of updating its General Plan. The update considers the interconnectedness of planning issues, responds to diverse community needs, identifies realistic implementing actions, and establishes a monitoring and evaluation process to track progress toward

reaching goals and objectives. Once approved, the updated Circulation Element will be a transportation plan for the movement of people and goods and it will identify the general location and extent of existing and proposed major roadways, transportation routes, terminals, air and water ports, and pedestrian and bikeway facilities.

# METHODOLOGY

The following traffic analysis was conducted according to the methodologies and procedures outlined in the City of San Diego *Traffic Impact Study Guidelines*, SANTEC *Traffic Impact Study Guidelines*, the HCM 2000 published by the Transportation Research Board, and applicable provisions from CEQA.

## Project Study Area

The study area analyzed in this report includes the following intersections and roadway segments. In addition to the potential sediment staging locations, previously referenced Figure 1 also shows the locations of the study area intersections and the roadway segments analyzed in this report.

*Intersections*

1. Park Boulevard/Harbor Drive;
2. Cesar Chavez Parkway/Harbor Drive;
3. Sampson Street/Harbor Drive;
4. 28th Street/Harbor Drive;
5. 28th Street/Main Street;
6. 28th Street/Boston Avenue;
7. I-5 Southbound Off-Ramp/28th Street;
8. 28th Street/National Avenue;
9. I-5 Northbound Ramps/National Avenue;
10. I-5 Southbound Ramps/Boston Avenue;
11. I-5 Northbound Ramps/Mile of Cars Way;
12. I-5 Southbound Ramps/Mile of Cars Way;
13. Cleveland Street/Bay Marina Drive;
14. 32nd Street/Bay Marina Drive;
15. Tidelands Avenue/Bay Marina Drive; and

16. Tidelands Avenue/W. 32nd Street.

*Roadway Segments*

1. Harbor Drive between Park Boulevard and Cesar Chavez Parkway;
2. Harbor Drive between Cesar Chavez Parkway and Sampson Street;
3. Harbor Drive between Sampson Street and 28th Street;
4. Harbor Drive between 28th Street and 32nd Street;
5. 28th Street between Harbor Drive and Main Street;
6. 28th Street between Main Street and Boston Avenue;
7. 28th Street between Boston Avenue and National Avenue;
8. National Avenue between 28th Street and I-5 Northbound Ramps;
9. Boston Avenue between 28th Street and I-5 Southbound Ramp;
10. 24th Street between I-5 Northbound Ramps and I-5 Southbound Ramps;
11. 24th Street between I-5 Southbound Ramps and Cleveland Street;
12. 24th Street between Cleveland Street and W. 32nd Street;
13. 24th Street between W. 32nd Street and Tidelands Avenue;
14. W. 32nd Street between 24th Street and Tideland Avenue; and
15. Tidelands Avenue between 24th Street and W. 32nd Street.

Daily, a.m., and p.m. peak-hour (7 a.m.–9 a.m. and 4 p.m.–6 p.m.) turn volumes for the study area intersections and roadway segments were collected by National Data and Surveying Services (NDS) in March 2011. The existing traffic counts are provided as Attachment A.

**Intersection Level of Service Methodology.** The HCM 2000 methodology has been used to determine the intersection level of service (LOS) at signalized intersections within the study area. The resulting delay is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. LOS is a qualitative assessment of the quantitative effects of such factors as traffic volume, roadway geometrics, speed, delay, and maneuverability on roadway and intersection operations.

The relationship between delay and LOS at signalized intersections is summarized below. Intersections with LOS D are considered the upper limit of satisfactory conditions.

| LOS | Unsignalized Intersection Delay per Vehicle (sec) | Signalized Intersection Delay per Vehicle (sec) |
|---|---|---|
| A | ≤10.0 | ≤10.0 |
| B | >10.0 and ≤15.0 | >10.0 and ≤20.0 |
| C | >15.0 and ≤25.0 | >20.0 and ≤35.0 |
| D | >25.0 and ≤35.0 | >35.0 and ≤55.0 |
| E | >35.0 and ≤50.0 | >55.0 and ≤80.0 |
| F | >50.0 | >80.0 |

Source: Highway Capacity Manual 2000

**Roadway Segment LOS Methodology.** Roadway segments were analyzed on a daily basis by comparing the Average Daily Traffic (ADT) volume to the City of San Diego Proposed Level of Service Standards – Street Segment Average Daily Trip Thresholds for Staging Areas 1 through 4. The City of National City has amended the SANTEC roadway capacities; these are analyzed separately for Staging Area Five. These tables are provided in Attachment B and provide LOS estimates based on traffic volumes and roadway characteristics. This analysis focuses on the performance of specific Major and Collector roadways; therefore, the daily volumes for Major and Collector roadways are summarized below.

| Street Classification | Lanes | Capacity (LOS A) | Capacity (LOS B) | Capacity (LOS C) | Capacity (LOS D) | Capacity (LOS E) |
|---|---|---|---|---|---|---|
| ***City of San Diego*** | | | | | | |
| Major Arterial | 4 | 15,000 | 21,000 | 30,000 | 35,000 | 40,000 |
| Collector (w/ TWLT) | 4 | 10,000 | 14,000 | 20,000 | 25,000 | 30,000 |
| Collector (w/ TWLT) | 3 | 7,500 | 10,500 | 15,000 | 18,750 | 22,500 |
| Collector (no TWLT) | 3 | 3,750 | 5,250 | 7,500 | 9,750 | 11,250 |
| Collector (no TWLT) | 2 | 2,500 | 3,500 | 5,000 | 6,500 | 8,000 |
| ***City of National City*** | | | | | | |
| Major Arterial | 4 | 0–15,000 | 15,001–21,000 | 21,001–30,000 | 30,001–35,000 | 35,001–40,000 |
| Collector | 4 | 0–7,000 | 7,001–10,000 | 10,001–14,000 | 14,001–17,000 | 17,001–20,000 |
| Collector | 2 | 0–4,000 | 4,001–5,500 | 5,501–7,500 | 7,501–9,000 | 9,000–10,000 |

Notes: TWLT = Two-way left-turn lane.
Sources: City of San Diego *Traffic Impact Study Guidelines*, San Diego Traffic Engineers' Council (SANTEC) *Traffic Impact Study Guidelines.*

The table below identifies threshold changes in delay or volume-to-capacity (v/c) ratios that define an impact for intersections and roadway segments. Changes in delay or v/c ratios are only considered significant if the existing LOS is E or F.

| LOS With Project | Intersection Delay (seconds) | Roadway Segments v/c Increase |
|---|---|---|
| ***City of San Diego*** | | |
| E | >2.0 | >0.02 |
| F | >1.0 | >0.01 |
| ***City of National City*** | | |
| E or F | >2.0 | >0.02 |

Sources: City of San Diego *Traffic Impact Study Guidelines*, San Diego Traffic Engineers' Council (SANTEC) *Traffic Impact Study Guidelines*

# EXISTING CONDITIONS

## Existing Circulation System

Key roadways in the vicinity of the proposed project area as follows:

- **Interstate 5.** I-5 is located to the east of the project site and is classified and functions as an 8-lane freeway with four main lanes of traffic in each direction. Direct access to the project site from I-5 is provided via northbound and southbound on-/off-ramps at 24th Street, northbound on-/off-ramps at National Avenue, and a southbound on-ramp at Boston Avenue.
- **Harbor Drive.** Harbor Drive functions as an east-west, 4-lane major arterial between Sigsbee Street and Vesta Street. The road has a raised or landscaped median along the entire length of the segment. Harbor Drive is a designated truck route and has a class II bikeway with bike lanes along both sides of the road. The street has intermittent curbs, sidewalks, and parallel parking along the northern side of the road. The southern side of Harbor Dive has limited curbs and sidewalks. Parallel parking is intermittently permitted between Schley Street and 32nd Street. The posted speed limit is 40 and 45 mph.
- **28th Street.** 28th Street is located southeast of the project site and functions as a north-south, 4-lane collector between Boston Avenue and Main Street and a 4-lane with raised median major arterial between Main Street and Harbor Drive. Between National Avenue and Boston Avenue, 28th Street functions as a three-lane collector with two northbound lanes and a southbound lane. This street is a designated truck route. Sidewalks and curbs line both sides of the street for the entire length of the segment. Parallel parking is available on both sides of the street between Main Street and Harbor Drive. The NASSCO shipyard is located at the southern end of 28th Street. South of Main Street, Naval Base San Diego fronts on the east side of 28th Street, including an access gate to the base. I-5 on- and off-ramps connect 28th Street to I-5 near the northern end of the

segment. The Traffic Study for the proposed Barrio Logan Community Plan update recommends that 28th Street between Harbor Drive and the I-5 ramps be classified as a 4-lane major arterial.

- **Boston Avenue.** Boston Avenue functions as an east-west, 2-lane collector between 28th Street and 32nd Street. This road has sidewalks, curbs, and parallel parking spaces on both sides of the street. A southbound I-5 on-ramp is located at the intersection with 29th Street.
- **National Avenue.** National Avenue functions as an east-west, 2-lane collector between 16th Street and 27th Street and a 4-lane collector between Commercial Street and 16th Street. Trucks above five tons are prohibited by signage to travel along National Avenue. An eastbound State Route 75 (SR-75) off-ramp is located along National Avenue between Cesar Chavez Parkway and Evans Street. This segment of National Avenue has sidewalks, curbs, and parallel parking on both sides of the road. Diagonal parking is provided on National Avenue on the south side of the street for portions of the segment between Beardsley Street and Evans Street.
- **Cesar Chavez Parkway.** Cesar Chavez Parkway functions as a north-south, 4-lane collector between Logan Avenue and National Avenue and between Main Street and Harbor Drive. This road functions as a 3-lane collector between Logan Avenue and Kearny Avenue and between National Avenue and Main Street. Cesar Chavez Parkway is lined with sidewalks and curbs on both sides of the road, for the entire length of the street. Parallel parking is available on the west side of the street between National Avenue and Main Street. Signs prohibit trucks above five tons from traveling along Cesar Chavez Parkway. A northbound I-5 on-ramp is located at the intersection of Cesar Chavez Parkway and Kearny Avenue. A westbound SR-75 on-ramp is located at the intersection of Cesar Chavez Parkway and Logan Avenue.
- **Sampson Street.** Sampson Street functions as a north-south, 2-lane collector between I-5 and Harbor Drive. Sidewalks, curbs, and parallel parking spaces are located on both sides of the road. Trucks above five tons are prohibited by signage to travel along Sampson Street.
- **Main Street.** Main Street functions as an east-west, 2-lane collector between Beardsley Street and 26th Street and between Rigel Street and Yama Street. Main Street functions as a 3-lane collector between 26th Street and 27th Street and between 29th Street and 32nd Street, and a 4-lane collector between 27th Street and 29th Street and between 32nd Street and Rigel Street. Curbs and sidewalks are located on both sides of the road, along the entire length of the segment. Signs prohibit trucks over five tons from traveling on Main Street, west of 26th Street. A northbound Interstate 15 (I-15) on-ramp and a southbound I-15 off-ramp are located between 32nd Street and Rigel Street. Southbound I-5 on and off-ramps are also located near the intersection with Yama Street. Main Street is a designated class III bikeway. Parallel parking is intermittently permitted along both sides of the road.
- **24th Street.** 24th Street (also known as Bay Marina Drive) is a 4-lane east-west collector between Tidelands Avenue and Harrison Avenue and a 4-lane east-west arterial between

Harrison Avenue and Highland Avenue. At the intersection with Tidelands Avenue, 24th Street has sidewalks and curbs.

- **Tidelands Avenue.** Tidelands Avenue is a 2-lane north-south collector. At the intersection with 24th Street, Tidelands Avenue has sidewalks and curbs.

### Existing Intersection LOS Analysis

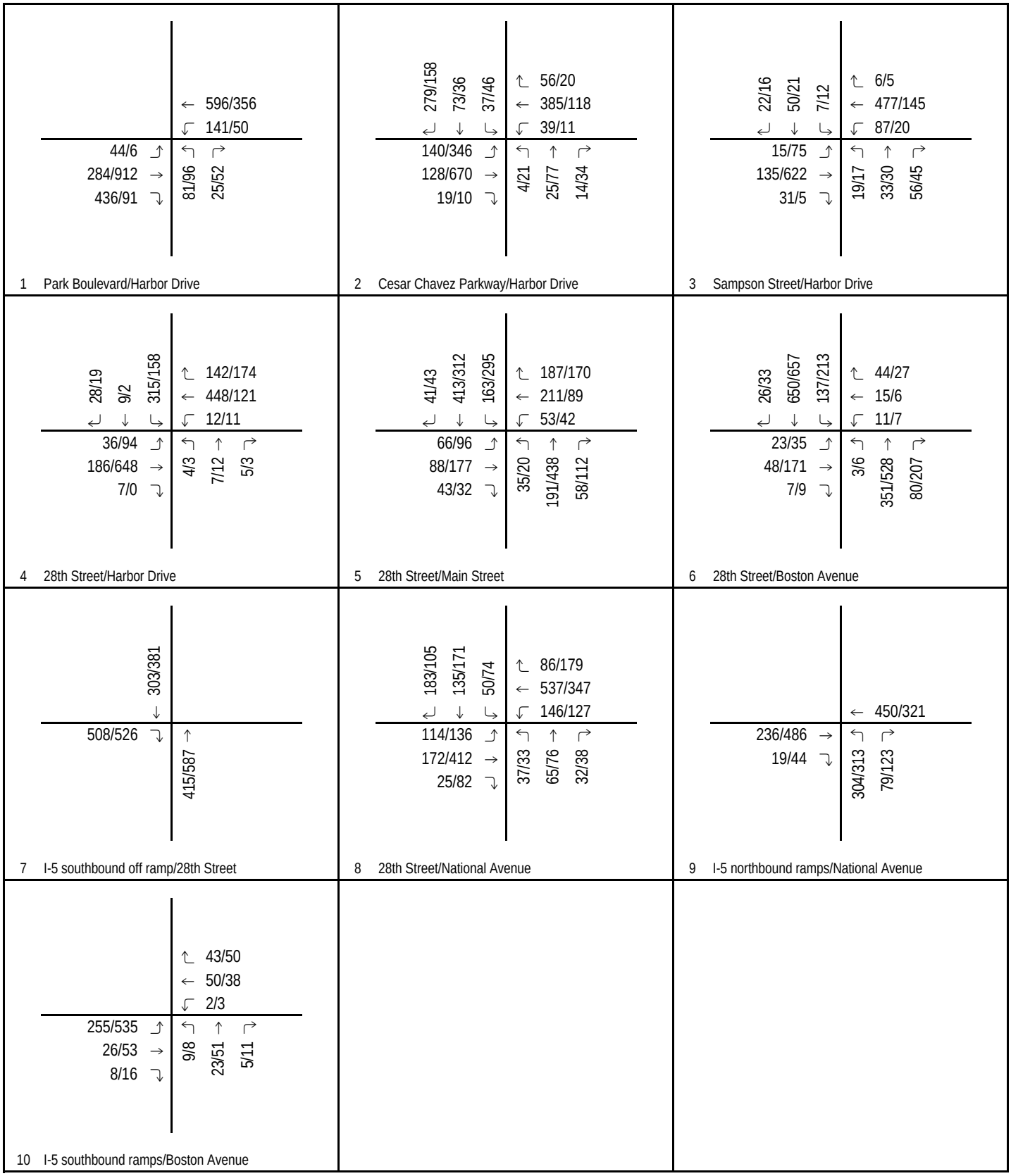
Figure 2 presents the existing a.m. and p.m. peak-hour trips from Attachment A. These peak-hour trips are used to calculate (or determine) the existing LOS. The existing LOS calculation worksheets are provided as Attachment C. Table A summarizes the results of the existing a.m. and p.m. peak-hour LOS analysis for the study area intersections. As Table A indicates, all study area intersections operate at an acceptable LOS (D or better) in the a.m. and p.m. peak hour, with the exception of I-5 Southbound Ramp/Boston Avenue (LOS E during p.m. peak hour).

Figure 3 presents the existing average daily trips at the study area roadway segments. Table B summarizes the daily traffic volumes and v/c ratios for the area roadway segments in the existing condition from Attachment A. As Table B illustrates, all study area roadway segments operate at an acceptable LOS (LOS D or better), with the exception of National Avenue between 28th Street and I-5 Northbound Ramps (LOS F), and Boston Avenue between 28th Street and I-5 Southbound Ramp (LOS F).

## HAUL TRUCK, DELIVERY TRUCK, AND EMPLOYEE TRAFFIC

### Project Trip Generation

To determine the project traffic destined to the Staging Area and landfills, the project applicant provided traffic data that included the number of delivery vehicles, haul vehicles, and employees. Based on these data, a total of approximately 50 haul trucks, 8 delivery trucks, and 29 employees will be destined to the project site on the busiest day. For a conservative approach, a 10-hour shift was used to capture both a.m. and p.m. peak hours. The 10-hour shift is scheduled to start at 7:00 a.m. and end at 5:30 p.m. To convert the daily truck traffic to peak hour truck traffic, LSA divided the daily trips by 10 hours and split the ingress and egress evenly since it is anticipated that haul trucks will travel back and forth throughout the day. Of the 50 haul trucks, 5 will access the site during the a.m. peak hour, and 5 will access the site during the p.m. peak hour. Of the 8 delivery trucks, 1 will access the site during the a.m. peak hour, and 1 will access the site during the p.m. peak hour. The remaining 40 haul trucks and 6 delivery trucks will access the site during the off-peak hours of 9:00 a.m. to 4:00 p.m. Employees are expected to arrive to the project site in the morning and leave at the end of the day. For purposes of this analysis, the haul and delivery truck trips were converted to passenger car equivalent (PCE) trips at a ratio of 2.5 passenger cars




LSA

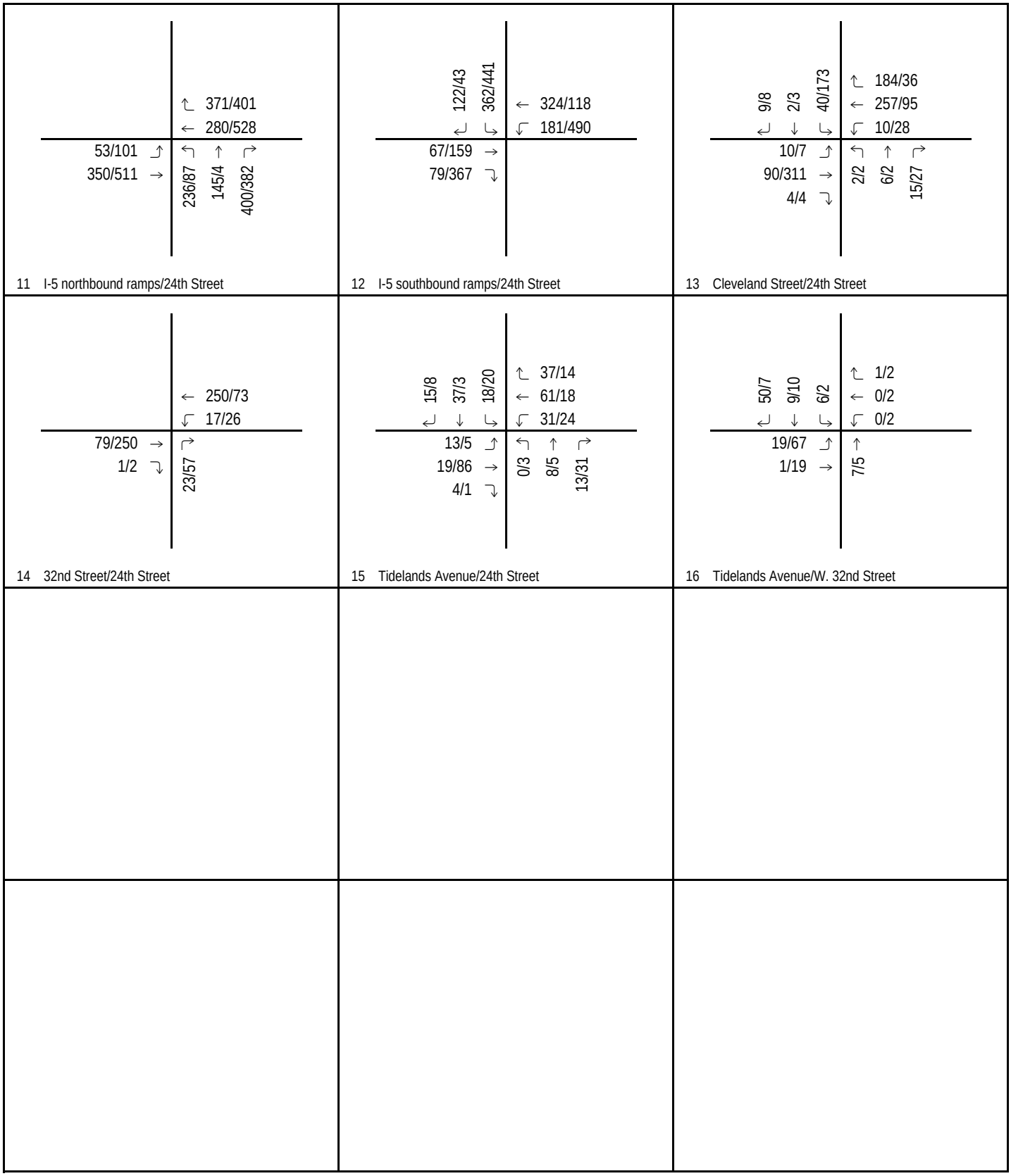
FIGURE 2A

123/456 AM/PM Volumes

*San Diego Sediment Project*

Existing Peak Hour Traffic Volumes (City of San Diego Locations)

U:\SWB1001\Traffic\Figures\Figure 2A.xls\Figure




LSA

FIGURE 2B

123/456 AM/PM Volumes

*San Diego Sediment Project*

Existing Peak Hour Traffic Volumes (City of National City Locations)

U:\SWB1001\Traffic\Figures\Figure 2B.xls\Figure

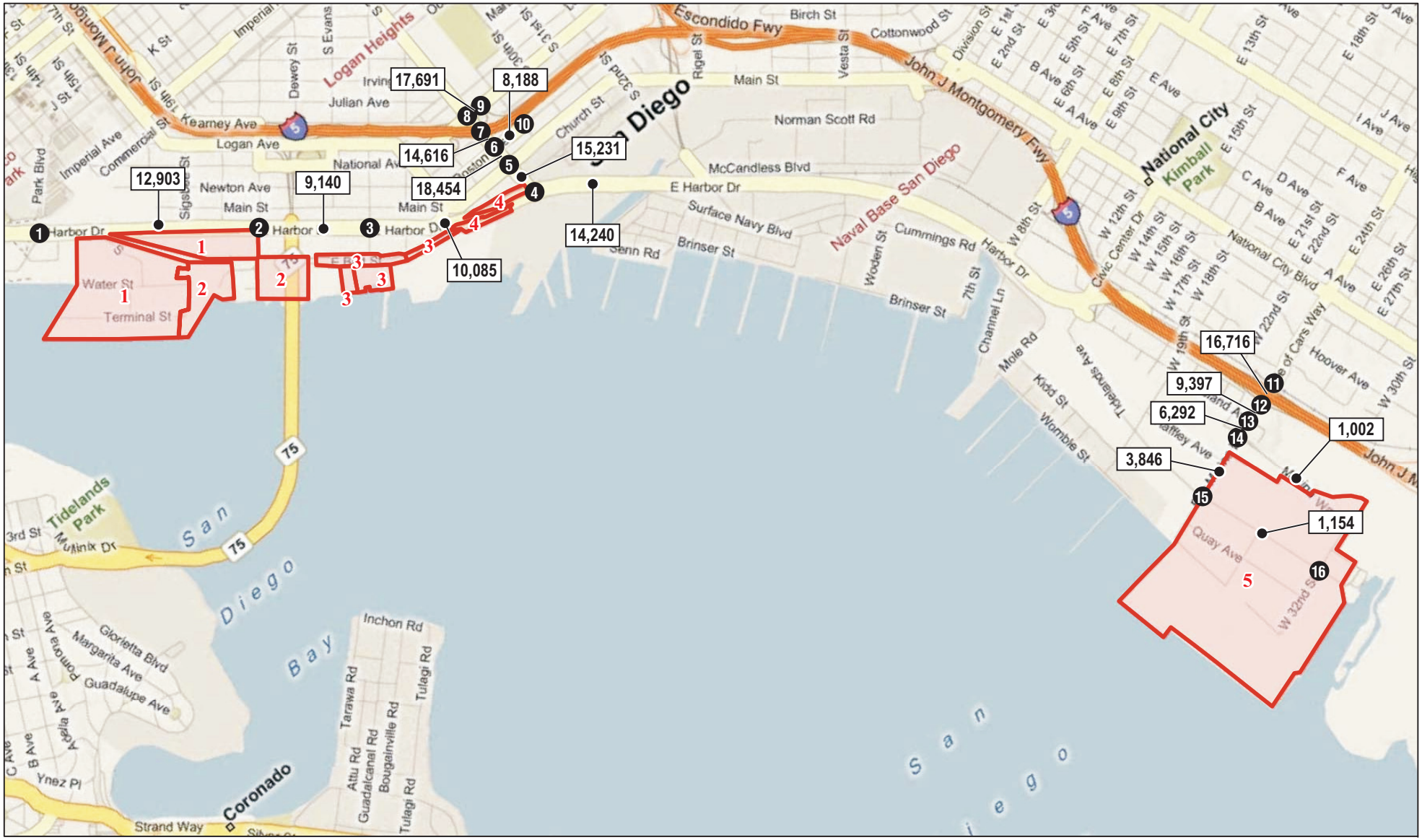
## Table A - Existing Peak Hour Intersection Level of Service Summary

| | Intersection | Control Type | Existing Condition | | | |
|---|---|---|---|---|---|---|
| | | | AM Peak Hour | | PM Peak Hour | |
| | | | Delay (sec) | LOS | Delay (sec) | LOS |
| 1 | Park Boulevard/Harbor Drive | Signalized | 15.0 | B | 13.9 | B |
| 2 | Cesar Chavez Parkway/Harbor Drive | Signalized | 31.4 | C | 25.8 | C |
| 3 | Sampson Street/Harbor Drive | Signalized | 20.4 | C | 17.3 | B |
| 4 | 28th Street/Harbor Drive | Signalized | 27.9 | C | 22.2 | C |
| 5 | 28th Street/Main Street | Signalized | 30.0 | C | 33.3 | C |
| 6 | 28th Street/Boston Avenue | Signalized | 18.4 | B | 26.0 | C |
| 7 | 28th Street/I-5 Southbound Off-Ramp | No Control | - | - | - | - |
| 8 | 28th Street/National Avenue | Signalized | 33.7 | C | 31.3 | C |
| 9 | I-5 Northbound Ramps/National Avenue | Signalized | 18.6 | B | 18.8 | B |
| 10 | I-5 Southbound On-Ramp/Boston Avenue | Unsignalized | 15.2 | C | 49.2 | E |
| 11 | I-5 Northbound Ramps/24th Street | Signalized | 25.3 | C | 22.3 | C |
| 12 | I-5 Southbound Ramps/24th Street | Signalized | 23.5 | C | 27.7 | C |
| 13 | Cleveland Street/24th Street | Unsignalized | 8.9 | A | 10.0 | B |
| 14 | W. 32nd Street/24th Street | Signalized | 11.3 | B | 19.2 | B |
| 15 | Tidelands Avenue/24th Street | Signalized | 26.4 | C | 29.9 | B |
| 16 | Tidelands Avenue/W. 32nd Street | Unsignalized | 7.3 | A | 8.0 | A |

Source: LSA Associates, March 2011

Notes:

☐ Exceeds level of service criteria




LSA

FIGURE 3

LEGEND

- Potential Sediment Staging Areas
- 4 Study Area Intersection
- X,XXX Average Daily Traffic Volume

0 1250 2500
FEET

SOURCE: Bing Maps (2008)

I:\SWB1001\G\Existing ADT.cdr (3/31/2011)

*San Diego Sediment Project*

Existing Daily Traffic Volumes

## Table B - Existing Roadway Segment Level of Service Summary

| Roadway | Segment | Roadway Classification | Capacity | Existing | | |
|---|---|---|---|---|---|---|
| | | | | Volume | LOS | V/C |
| Harbor Boulevard | Park Boulevard and Cesar Chavez Parkway | 4 Lane Major Arterial | 40,000 | 12,903 | A | 0.32 |
| | Cesar Chavez Parkway and Sampson Street | 4 Lane Major Arterial | 40,000 | 9,140 | A | 0.23 |
| | Sampson Street and 28th Street | 4 Lane Major Arterial | 40,000 | 10,085 | A | 0.25 |
| | 28th Street and 32nd Street | 4 Lane Major Arterial | 40,000 | 14,240 | B | 0.36 |
| 28th Street | Harbor Boulevard and Main Street | 4 Lane Major Arterial | 40,000 | 15,231 | B | 0.38 |
| | Main Street and Boston Avenue | 4 Lane Collector (with TWLT) | 30,000 | 18,454 | C | 0.62 |
| | Boston Avenue and National Avenue | 3 Lane Collector (with TWLT) | 22,500 | 14,616 | C | 0.65 |
| National Avenue | 28th Street and I-5 Northbound Ramps | 3 Lane Collector (no TWLT) | 11,250 | **17,691** | **F** | **1.57** |
| Boston Avenue | 28th Street and I-5 Southbound Ramps | 2 Lane Collector (no TWLT) | 8,000 | **8,188** | **F** | **1.02** |
| 24th Street | I-5 Northbound Ramps and I-5 Southbound I | 4 Lane Major Arterial | 40,000 | 16,716 | B | 0.42 |
| | I-5 Southbound Ramps and Cleveland Street | 4 Lane Major Arterial | 40,000 | 9,397 | A | 0.23 |
| | Cleveland Street and W. 32nd Street | 4 Lane Major Arterial | 40,000 | 6,292 | A | 0.16 |
| | W. 32nd Street and Tidelands Avenue | 4 Lane Collector (no TWLT) | 15,000 | 3,846 | A | 0.26 |
| W. 32nd Street | 24th Street and Tidelands Avenue | 2 Lane Collector | 8,000 | 1,002 | A | 0.13 |
| Tidelands Avenue | 24th Street and W. 32nd Street | 2 Lane Collector | 8,000 | 1,154 | A | 0.14 |

Source: LSA Associates, March 2011

☐ Exceeds level of service criteria

☐ Significant Impact

per truck, consistent with the guidance in the HCM. Table C provides the project trip generation to and from the project site.

### Project Trip Distribution

Once the dredge materials have been dried and tested at the Staging Area, they will be loaded onto trucks for disposal at an approved landfill. For purposes of this project, it is assumed that 85 percent of the material will be transported from the staging area to Otay Landfill, approximately 15 miles southeast of the Shipyard Sediment Site. Trucks departing from potential Staging Areas 1 through 4 would access the I-5 south via E. Harbor Drive and 28th Street; trucks departing from Staging Area 5 would access the I-5 south either directly from 24th Street-Bay Marina Drive or from W. 32nd Street to 24th Street-Marina Way to Bay Marina Drive. The preferred route to Otay Landfill is via I-5 south to Highway 54 east, to I-805 south. Although the sediment is not known to be classified as California hazardous material, it will be tested upon removal and prior to disposal.

It is assumed for the purposes of this study that up to 15 percent of the material will require transport to a Class III facility, most likely the Kettleman Hills Landfill in Kings County, California, near Bakersfield. Based on the excavation quantity of 143,400 cubic yards, and accounting for an additional 15 percent of bulk material due to the dewatering and treatment process, it is estimated that up to 250 truck trips per week could be required over an approximately 12.5-month period to remove the material. These estimates are a worst-case scenario and will be finalized during the design phase.

The trip distribution for employees was determined based on existing counts at the northbound and southbound I-5 Ramps. For Staging Areas 1 through 4, approximately 60 percent are destined toward the north and 40 percent are destined toward the south along I-5. For Staging Area 5, approximately 35 percent are destined toward the north and 65 percent are destined toward the south along I-5. Table D provides the trip distribution of the project traffic within the circulation system for each staging area.

## EXISTING CONDITIONS WITH PROJECT TRAFFIC

Traffic generated during the haul period was added to the existing traffic volumes at the study area intersections and roadway segments for each staging area.

### Staging Areas 1 and 2

It is anticipated that Staging Areas 1 and 2 will utilize the same driveway to access the project site (i.e., Cesar Chavez Parkway/Harbor Boulevard). Therefore, the level of service would be identical for both staging areas. Trucks departing from potential Staging Areas 1 and 2 would access I-5 north and south via Harbor Drive and 28th Street. Figure 4 presents

## Table C - Project Trip Generation Summary

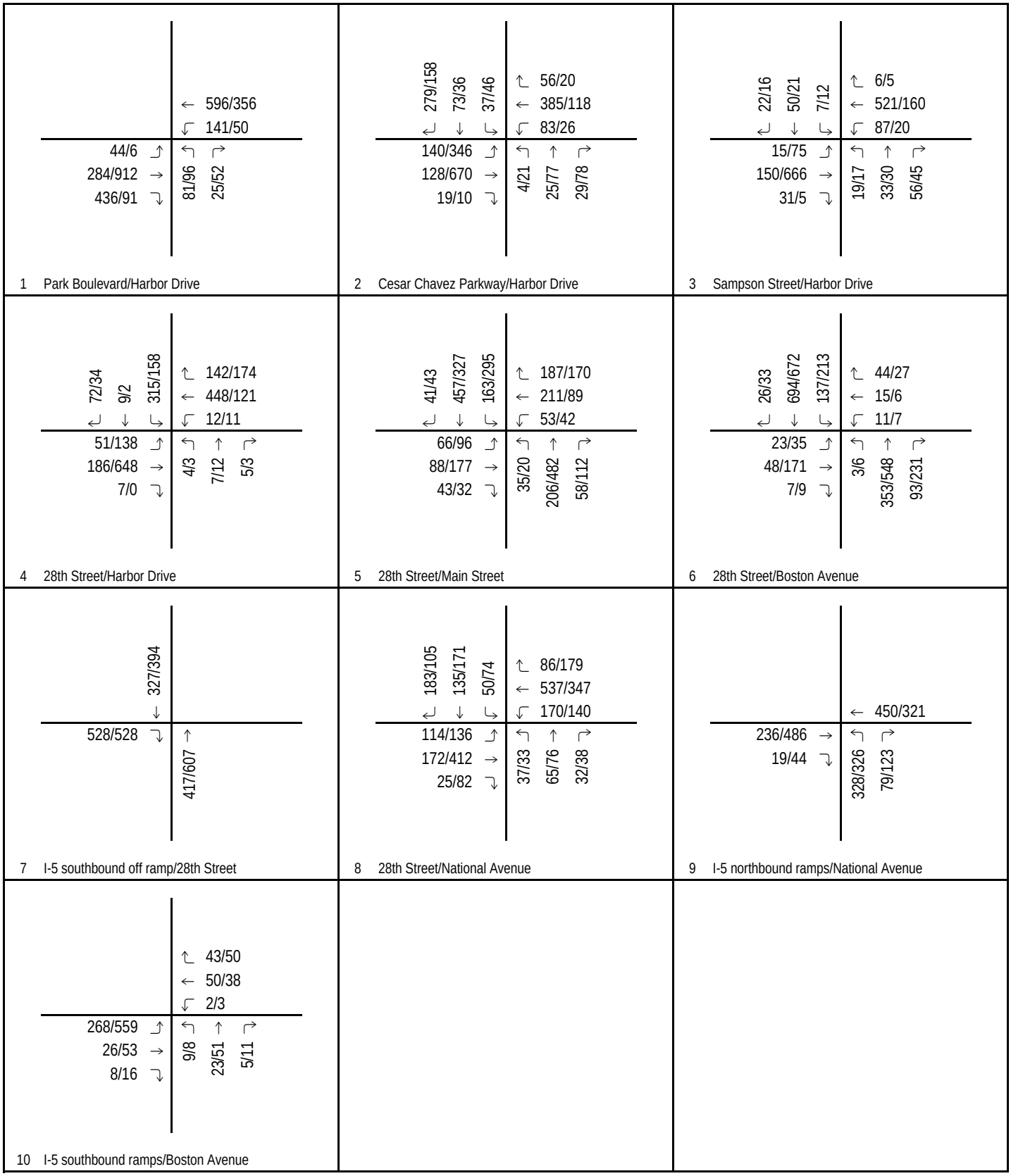
| TRIP GENERATION (PCE) | AM PEAK HOUR | | PM PEAK HOUR | | ADT |
|---|---|---|---|---|---|
| | IN | OUT | IN | OUT | |
| Staging Areas 1, 2, 3, & 5 | 44 | 15 | 15 | 44 | 348 |
| | | | | | |
| Staging Area 4A (75%) | 33 | 11 | 11 | 33 | 261 |
| Staging Area 4B (25%) | 11 | 4 | 4 | 11 | 87 |

Source: LSA Associates, March 2011

## Table D - Project Trip Distribution Summary

| Vehicle Type/Direction | Percentage |
|---|---|
| ***Deliver/Haul Trucks*** | |
| Northbound on the I-5 | 15% |
| Southbound on the I-5 | 85% |
| *TOTAL* | *100%* |
| ***Employee Trips (Staging Areas 1-4)*** | |
| Northbound on the I-5 | 60% |
| Southbound on the I-5 | 40% |
| *TOTAL* | *100%* |
| ***Employee Trips (Staging Area 5)*** | |
| Eastbound on the SR-78 | 35% |
| Westbound from W. Valley Parkway | 65% |
| *TOTAL* | *100%* |

Source: LSA Associates, March 2011




LSA

FIGURE 4

123/456 AM/PM Volumes

*San Diego Sediment Project*

Existing + Project Peak Hour Traffic Volumes (Staging Areas 1 & 2)

U:\SWB1001\Traffic\Figures\Figure 4.xls\Figure

the existing plus project a.m. and p.m. peak hour trips. Table E summarizes the results of the existing plus project a.m. and p.m. peak-hour LOS analysis for all study area intersections. The LOS worksheets are provided as Attachment D. As Table E indicates, all study area intersections will continue to operate at an acceptable LOS (D or better) in the a.m. and p.m. peak hour with implementation of the proposed project, with the exception of I-5 Southbound Ramp/Boston Avenue (LOS F during p.m. peak hour). The addition of project traffic will increase the vehicle delay greater than one second at this intersection. As such, the project traffic will create a significant impact at this intersection in the existing plus project condition, based on the City's significance criteria.

Figure 5 presents the existing plus project average daily trips. Table F summarizes the daily traffic volumes and v/c ratios for the study area roadway segments in the existing condition with the addition of project traffic. Based on this analysis, the roadway segments are forecast to operate at an acceptable LOS (LOS D or better) with the addition of project traffic, with the exception of National Avenue between 28th Street and I-5 Northbound Ramps (LOS F), and Boston Avenue between 28th Street and I-5 Southbound Ramp (LOS F). The addition of project traffic will not increase the v/c ratio greater than 0.01 along National Avenue between 28th Street and I-5 Northbound Ramps. However, implementation of the project would cause a significant impact along Boston Avenue between 28th Street and I-5 Southbound Ramp.

## Staging Area 3

It is anticipated that Staging Area 3 will utilize the intersection of Sampson Avenue to access the project site. Trucks departing from potential Staging Area 3 would access I-5 north and south via Harbor Drive and 28th Street. Figure 6 presents the existing plus project a.m. and p.m. peak hour trips. Table G summarizes the results of the existing plus project a.m. and p.m. peak-hour LOS analysis for all study area intersections. The LOS worksheets are provided as Attachment E. As Table G indicates, all study area intersections will continue to operate at an acceptable LOS (D or better) in the a.m. and p.m. peak hour with implementation of the proposed project, with the exception of I-5 Southbound Ramp/Boston Avenue (LOS F during p.m. peak hour). The addition of project traffic will increase the vehicle delay greater than one second at this intersection. As such, the project traffic will create a significant impact at this intersection in the existing plus project condition, based on the City's significance criteria.

Figure 7 presents the existing plus project average daily trips. Table H summarizes the daily traffic volumes and v/c ratios for the study area roadway segments in the existing condition with the addition of project traffic. Based on this analysis, the roadway segments are forecast to operate at an acceptable LOS (LOS D or better) with the addition of project traffic, with the exception of National Avenue between 28th Street and I-5 Northbound Ramps (LOS F), and Boston Avenue between 28th Street and I-5 Southbound Ramp (LOS F). The addition of project traffic will not increase the v/c ratio greater than 0.01 along National Avenue between

## Table E - Staging Areas 1 and 2 Existing Plus Project Peak Hour Intersection Level of Service Summary

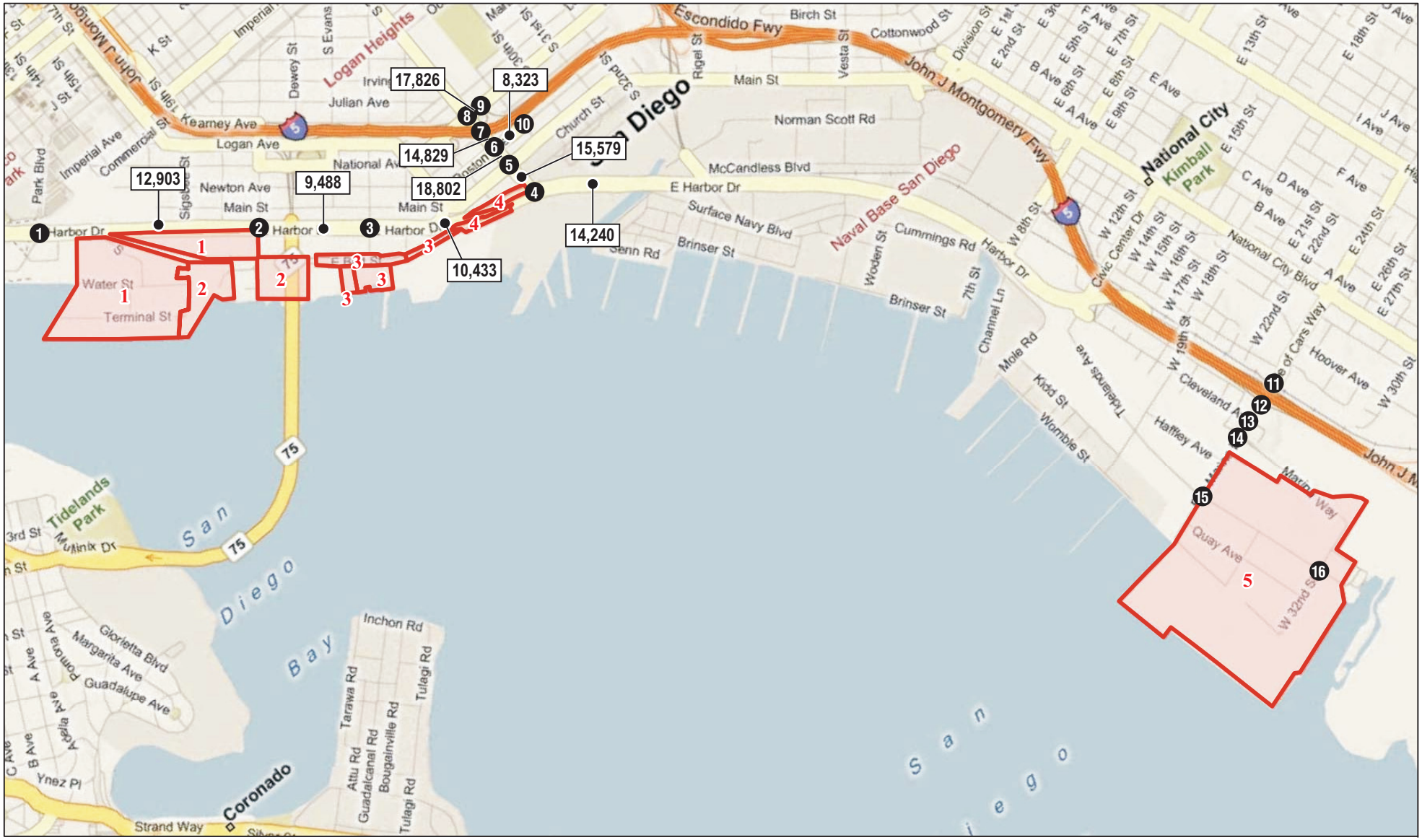
| | Intersection | Control Type | Existing Condition | | | | Existing Plus Project Condition | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | AM Peak Hour | | PM Peak Hour | | AM Peak Hour | | △ | PM Peak Hour | | △ |
| | | | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | | Delay (sec) | LOS | |
| 1 | Park Boulevard/Harbor Drive | Signalized | 15.0 | B | 13.9 | B | 15.0 | B | 0.0 | 13.9 | B | 0.0 |
| 2 | Cesar Chavez Parkway/Harbor Drive | Signalized | 31.4 | C | 25.8 | C | 31.5 | C | 0.1 | 26.4 | C | 0.6 |
| 3 | Sampson Street/Harbor Drive | Signalized | 20.4 | C | 17.3 | B | 19.9 | B | -0.5 | 17.0 | B | -0.3 |
| 4 | 28th Street/Harbor Drive | Signalized | 27.9 | C | 22.2 | C | 28.6 | C | 0.7 | 23.3 | C | 1.1 |
| 5 | 28th Street/Main Street | Signalized | 30.0 | C | 33.3 | C | 29.8 | C | -0.2 | 33.3 | C | 0.0 |
| 6 | 28th Street/Boston Avenue | Signalized | 18.4 | B | 26.0 | C | 18.0 | B | -0.4 | 25.9 | C | -0.1 |
| 7 | 28th Street/I-5 Southbound Off-Ramp | No Control | - | - | - | - | - | - | - | - | - | - |
| 8 | 28th Street/National Avenue | Signalized | 33.7 | C | 31.3 | C | 33.7 | C | 0.0 | 31.6 | C | 0.3 |
| 9 | I-5 Northbound Ramps/National Avenue | Signalized | 18.6 | B | 18.8 | B | 19.1 | B | 0.5 | 19.1 | B | 0.3 |
| 10 | I-5 Southbound On-Ramp/Boston Avenue | Unsignalized | 15.2 | C | 49.2 | E | 15.6 | C | 0.4 | 56.3 | F | 7.1 |

Source: LSA Associates, March 2011

Notes:

☐ Exceeds level of service criteria

▩ Significant Impact




LSA

LEGEND

Potential Sediment Staging Areas

4 Study Area Intersection

X,XXX Average Daily Traffic Volume

0 1250 2500
FEET

SOURCE: Bing Maps (2008)

I:\SWB1001\G\Existing+Proj ADT-Areas 1&2.cdr (3/31/2011)

FIGURE 5

*San Diego Sediment Project*

Existing Plus Project Daily Traffic Volumes
Staging Areas 1 and 2

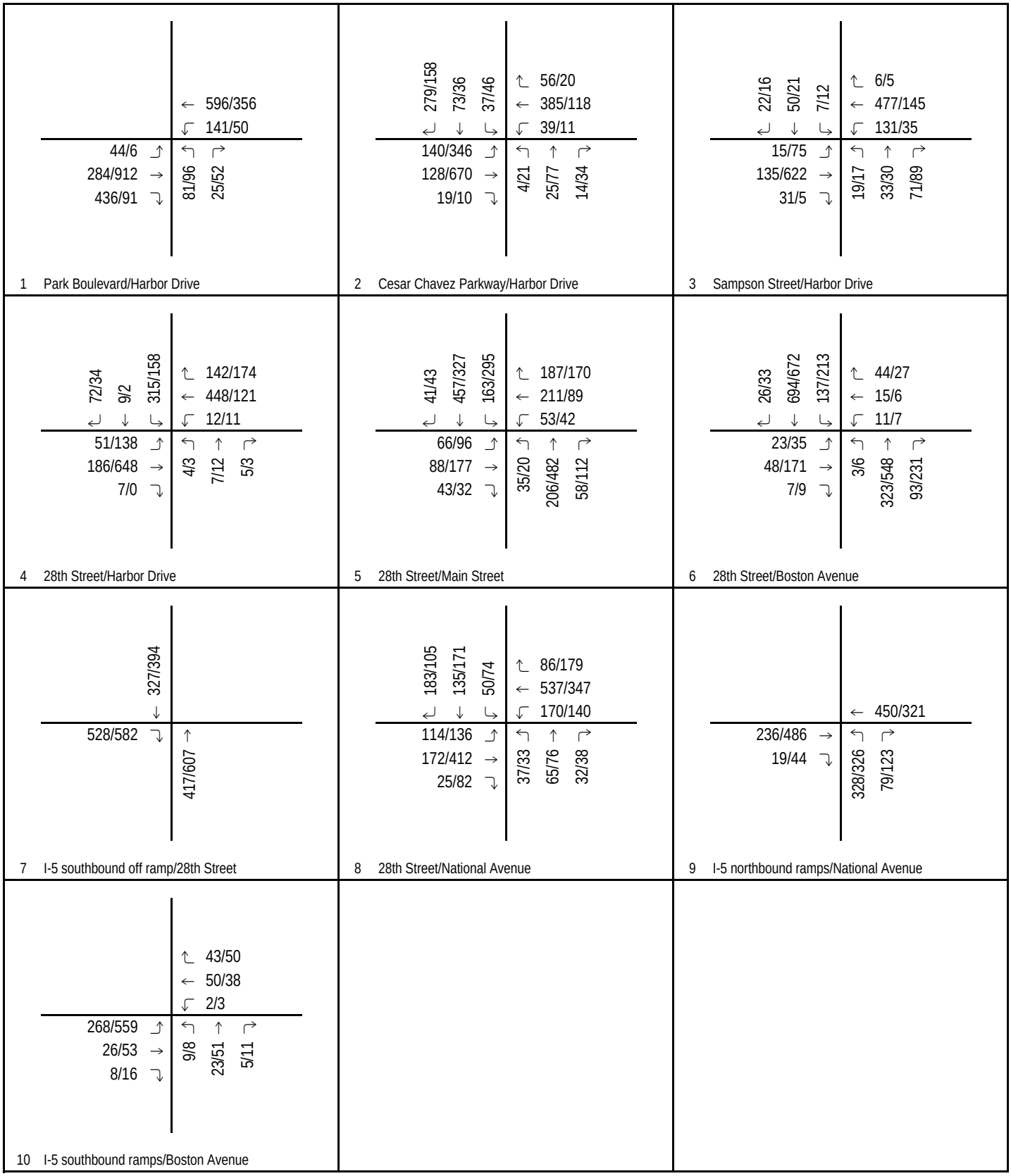
## Table F - Staging Areas 1 and 2 Existing Plus Project Roadway Segment Level of Service Summary

| Roadway | Segment | Roadway Classification | Capacity | Existing | | | Project ADT | Existing + Project | | | △ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Volume | LOS | V/C | | Volume | LOS | V/C | |
| Harbor Boulevard | Park Boulevard and Cesar Chavez Parkway | 4 Lane Major Arterial | 40,000 | 12,903 | A | 0.32 | 0 | 12,903 | A | 0.32 | 0.00 |
| | Cesar Chavez Parkway and Sampson Street | 4 Lane Major Arterial | 40,000 | 9,140 | A | 0.23 | 348 | 9,488 | A | 0.24 | 0.01 |
| | Sampson Street and 28th Street | 4 Lane Major Arterial | 40,000 | 10,085 | A | 0.25 | 348 | 10,433 | A | 0.26 | 0.01 |
| | 28th Street and 32nd Street | 4 Lane Major Arterial | 40,000 | 14,240 | B | 0.36 | 0 | 14,240 | B | 0.36 | 0.00 |
| 28th Street | Harbor Boulevard and Main Street | 4 Lane Major Arterial | 40,000 | 15,231 | B | 0.38 | 348 | 15,579 | B | 0.39 | 0.01 |
| | Main Street and Boston Avenue | 4 Lane Collector (with TWLT) | 30,000 | 18,454 | C | 0.62 | 348 | 18,802 | C | 0.63 | 0.01 |
| | Boston Avenue and National Avenue | 3 Lane Collector (with TWLT) | 22,500 | 14,616 | C | 0.65 | 213 | 14,829 | C | 0.66 | 0.01 |
| National Avenue | 28th Street and I-5 Northbound Ramps | 3 Lane Collector (no TWLT) | 11,250 | **17,691** | **F** | **1.57** | 135 | **17,826** | **F** | **1.58** | 0.01 |
| Boston Avenue | 28th Street and I-5 Southbound On-Ramp | 2 Lane Collector (no TWLT) | 8,000 | **8,188** | **F** | **1.02** | 135 | **8,323** | **F** | **1.04** | 0.02 |

Source: LSA Associates, March 2011

☐ Exceeds level of service criteria

▩ Significant Impact




LSA

FIGURE 6

123/456 AM/PM Volumes

*San Diego Sediment Project*

Existing + Project Peak Hour Traffic Volumes (Staging Area 3)

U:\SWB1001\Traffic\Figures\Figure 6.xls\Figure

## Table G - Staging Area 3 Existing Plus Project Peak Hour Intersection Level of Service Summary

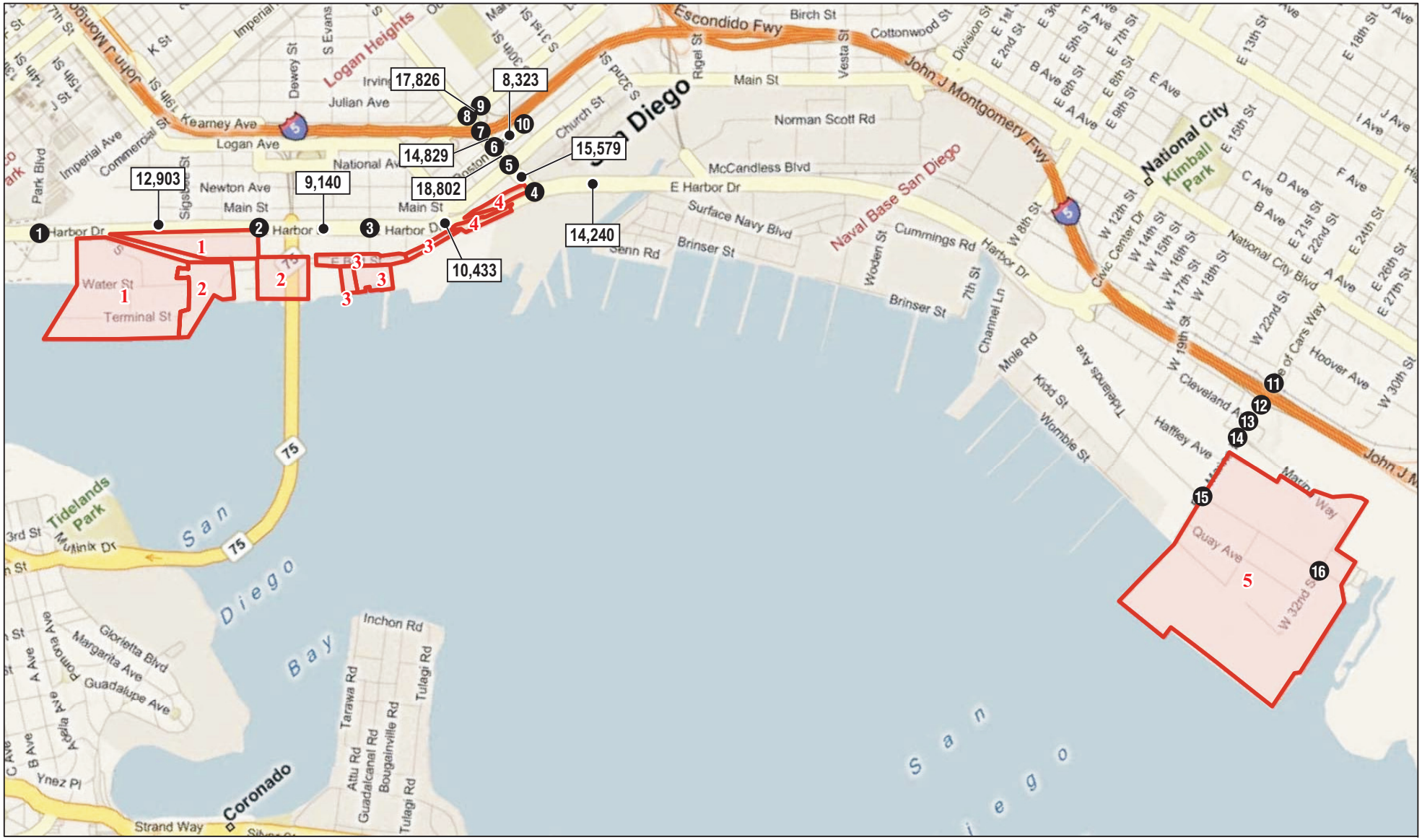
| Intersection | | Control Type | Existing Condition | | | | Existing Plus Project Condition | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | AM Peak Hour | | PM Peak Hour | | AM Peak Hour | | △ | PM Peak Hour | | △ |
| | | | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | | Delay (sec) | LOS | |
| 1 | Park Boulevard/Harbor Drive | Signalized | 15.0 | B | 13.9 | B | 15.0 | B | 0.0 | 13.9 | B | 0.0 |
| 2 | Cesar Chavez Parkway/Harbor Drive | Signalized | 31.4 | C | 25.8 | C | 31.4 | C | 0.0 | 25.8 | C | 0.0 |
| 3 | Sampson Street/Harbor Drive | Signalized | 20.4 | C | 17.3 | B | 21.7 | B | 1.3 | 20.4 | B | 3.1 |
| 4 | 28th Street/Harbor Drive | Signalized | 27.9 | C | 22.2 | C | 28.6 | C | 0.7 | 23.3 | C | 1.1 |
| 5 | 28th Street/Main Street | Signalized | 30.0 | C | 33.3 | C | 29.8 | C | -0.2 | 33.3 | C | 0.0 |
| 6 | 28th Street/Boston Avenue | Signalized | 18.4 | B | 26.0 | C | 18.0 | B | -0.4 | 25.9 | C | -0.1 |
| 7 | 28th Street/I-5 Southbound Off-Ramp | No Control | - | - | - | - | - | - | - | - | - | - |
| 8 | 28th Street/National Avenue | Signalized | 33.7 | C | 31.3 | C | 33.7 | C | 0.0 | 31.6 | C | 0.3 |
| 9 | I-5 Northbound Ramps/National Avenue | Signalized | 18.6 | B | 18.8 | B | 19.1 | B | 0.5 | 19.1 | B | 0.3 |
| 10 | I-5 Southbound On-Ramp/Boston Avenue | Unsignalized | 15.2 | C | 49.2 | E | 15.6 | C | 0.4 | 56.3 | F | 7.1 |

Source: LSA Associates, March 2011

Notes:

☐ Exceeds level of service criteria

☐ Significant Impact




LSA

FIGURE 7

LEGEND

- Potential Sediment Staging Areas
- 4 Study Area Intersection
- X,XXX Average Daily Traffic Volume

0 1250 2500
FEET

SOURCE: Bing Maps (2008)

I:\SWB1001\G\Existing+Proj ADT-Area 3.cdr (3/31/2011)

*San Diego Sediment Project*

Existing Plus Project Daily Traffic Volumes
Staging Area 3

## Table H - Staging Area 3 Existing Plus Project Roadway Segment Level of Service Summary

| Roadway | Segment | Roadway Classification | Capacity | Existing | | | Project ADT | Existing + Project | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Volume | LOS | V/C | | Volume | LOS | V/C | △ |
| Harbor Boulevard | Park Boulevard and Cesar Chavez Parkway | 4 Lane Major Arterial | 40,000 | 12,903 | A | 0.32 | 0 | 12,903 | A | 0.32 | 0.00 |
| | Cesar Chavez Parkway and Sampson Street | 4 Lane Major Arterial | 40,000 | 9,140 | A | 0.23 | 0 | 9,140 | A | 0.23 | 0.00 |
| | Sampson Street and 28th Street | 4 Lane Major Arterial | 40,000 | 10,085 | A | 0.25 | 348 | 10,433 | A | 0.26 | 0.01 |
| | 28th Street and 32nd Street | 4 Lane Major Arterial | 40,000 | 14,240 | B | 0.36 | 0 | 14,240 | B | 0.36 | 0.00 |
| 28th Street | Harbor Boulevard and Main Street | 4 Lane Major Arterial | 40,000 | 15,231 | B | 0.38 | 348 | 15,579 | B | 0.39 | 0.01 |
| | Main Street and Boston Avenue | 4 Lane Collector (with TWLT) | 30,000 | 18,454 | C | 0.62 | 348 | 18,802 | C | 0.63 | 0.01 |
| | Boston Avenue and National Avenue | 3 Lane Collector (with TWLT) | 22,500 | 14,616 | C | 0.65 | 213 | 14,829 | C | 0.66 | 0.01 |
| National Avenue | 28th Street and I-5 Northbound Ramps | 3 Lane Collector (no TWLT) | 11,250 | **17,691** | **F** | **1.57** | 135 | **17,826** | **F** | **1.58** | 0.01 |
| Boston Avenue | 28th Street and I-5 Southbound On-Ramp | 2 Lane Collector (no TWLT) | 8,000 | **8,188** | **F** | **1.02** | 135 | **8,323** | **F** | **1.04** | 0.02 |

Source: LSA Associates, March 2011

☐ Exceeds level of service criteria

▩ Significant Impact

28th Street and I-5 Northbound Ramps. However, implementation of the project would cause a significant impact along Boston Avenue between 28th Street and I-5 Southbound Ramp.

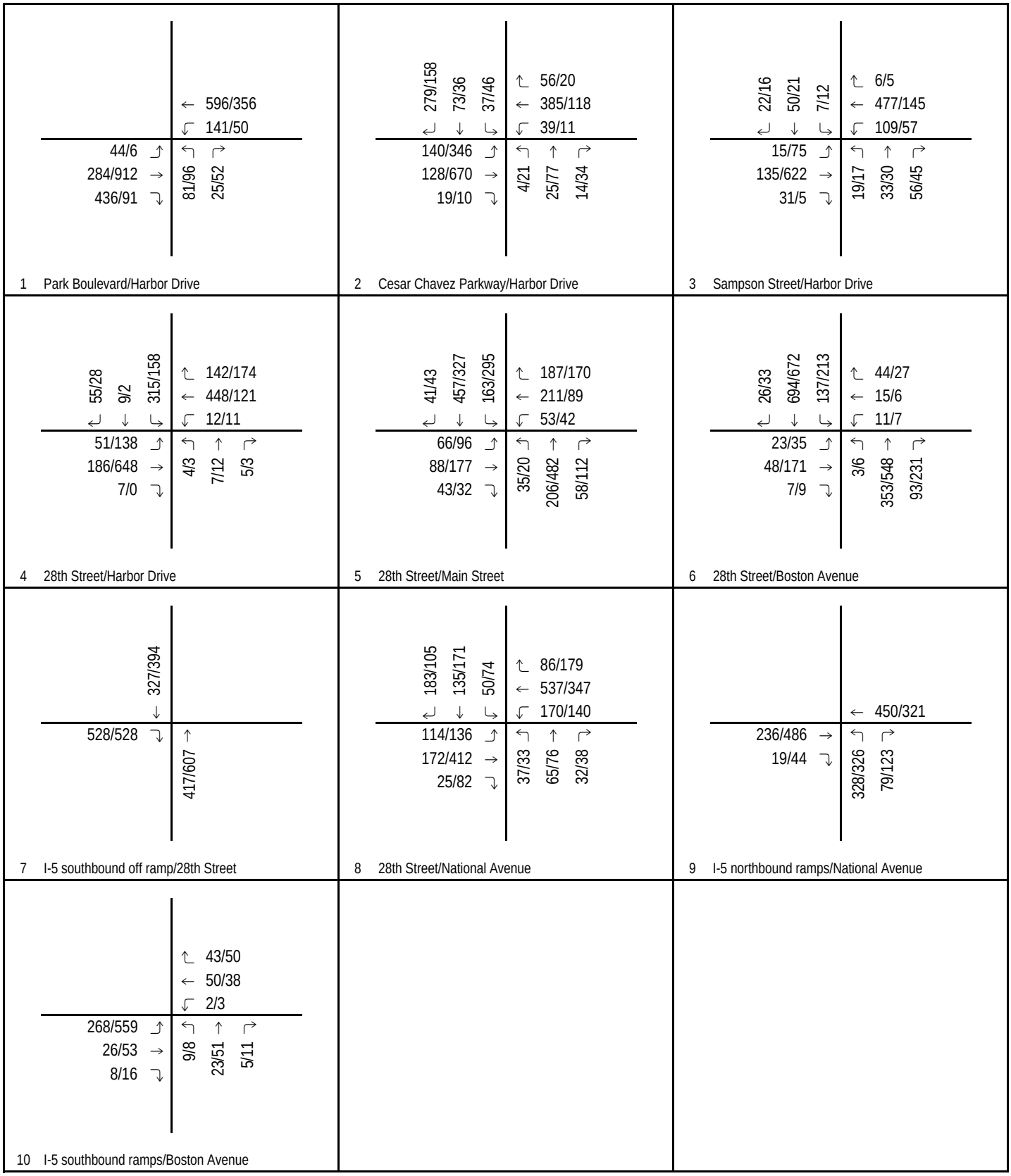
## Staging Area 4

Staging Area 4 consists of two existing NASSCO parking lots. The north parking lot is larger than the south lot. To determine the amount of traffic destined to the north and south lots, the project trips were split based on the size of each parking lot as 75 percent and 25 percent, respectively. The trips associated with the south lot would access I-5 north and south via Harbor Drive and 28th Street. Before the trips can reach the I-5 ramps, the trips associated with the north lot would have to travel west along Harbor Drive, make a U-turn at the intersection of Sampson Street, then continue east along Harbor Drive and north along 28th Street. Figure 8 presents the existing plus project a.m. and p.m. peak hour trips. Table I summarizes the results of the existing plus project a.m. and p.m. peak-hour LOS analysis for all study area intersections. The LOS worksheets are provided as Attachment F. As Table I indicates, all study area intersections will continue to operate at an acceptable LOS (D or better) in the a.m. and p.m. peak hour with implementation of the proposed project, with the exception of I-5 Southbound Ramp/Boston Avenue (LOS F during p.m. peak hour). The addition of project traffic will increase the vehicle delay greater than one second at this intersection. As such, the project traffic will create a significant impact at this intersection in the existing plus project condition, based on the City's significance criteria.

Figure 9 presents the existing plus project average daily trips. Table J summarizes the daily traffic volumes and v/c ratios for the study area roadway segments in the existing condition with the addition of project traffic. Based on this analysis, the roadway segments are forecast to operate at an acceptable LOS (LOS D or better) with the addition of project traffic, with the exception of National Avenue between 28th Street and I-5 Northbound Ramps (LOS F), and Boston Avenue between 28th Street and I-5 Southbound Ramp (LOS F). The addition of project traffic will not increase the v/c ratio greater than 0.01 along National Avenue between 28th Street and I-5 Northbound Ramps. However, implementation of the project would cause a significant impact along Boston Avenue between 28th Street and I-5 Southbound Ramp.

## Staging Area 5

It is anticipated that Staging Area 5 will utilize the intersections of Tidelands Avenue/ 24th Street and Tidelands Avenue/W.32nd Street to access the project site. Trucks departing from potential Staging Area 5 would access I-5 north and south either directly from 24th Street-Bay Marina Drive or from W. 32nd Street to 24th Street-Marina Way to Bay Marina Drive. Figure 10 presents the existing plus project a.m. and p.m. peak hour trips. Table K summarizes the results of the existing plus project a.m. and p.m. peak-hour LOS analysis for all study area intersections. The LOS worksheets are provided as Attachment G.




LSA

FIGURE 8

123/456 AM/PM Volumes

*San Diego Sediment Project*

Existing + Project Peak Hour Traffic Volumes (Staging Area 4)

U:\SWB1001\Traffic\Figures\Figure 8.xls\Figure

## Table I - Staging Area 4 Existing Plus Project Peak Hour Intersection Level of Service Summary

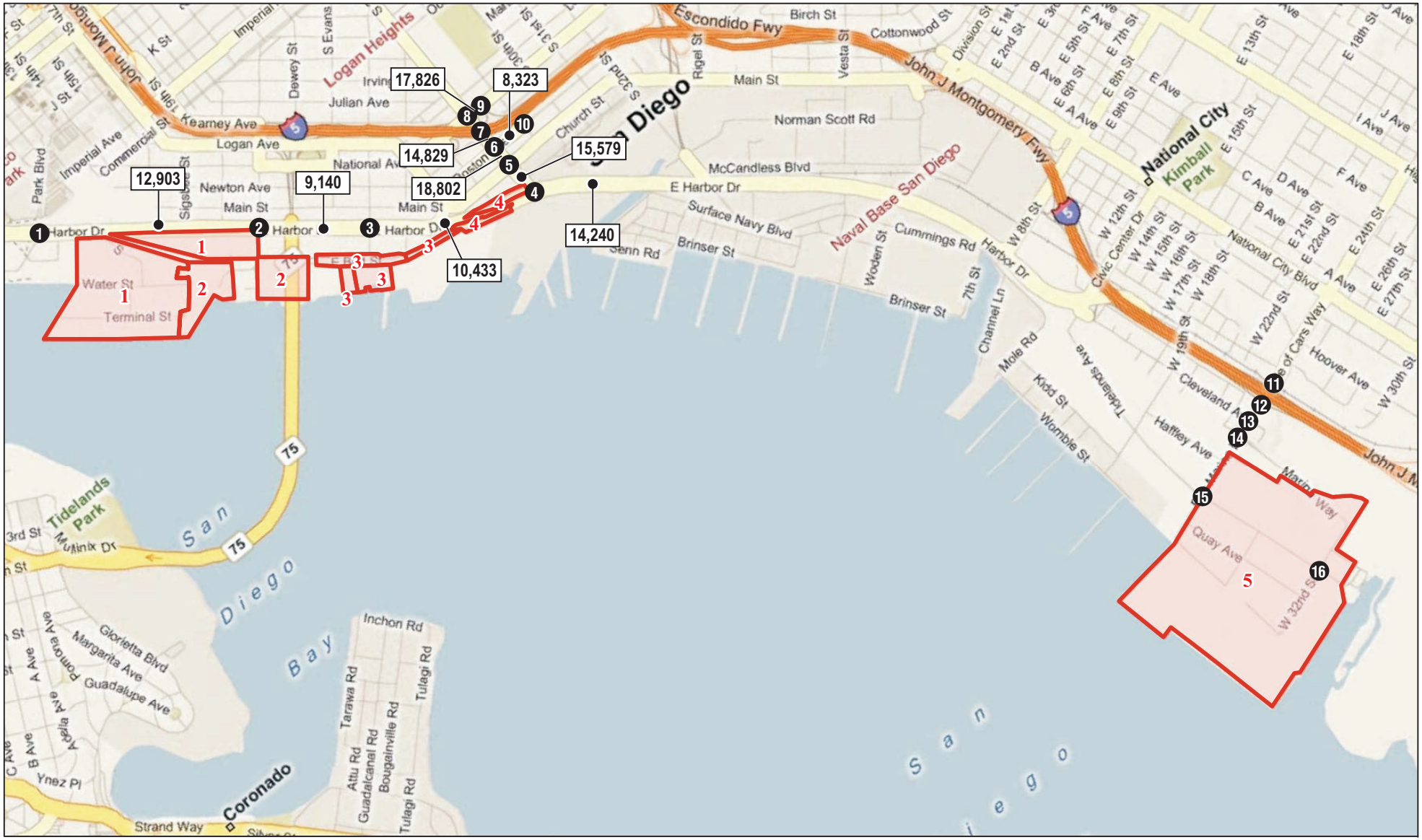
| Intersection | | Control Type | Existing Condition | | | | Existing Plus Project Condition | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | AM Peak Hour | | PM Peak Hour | | AM Peak Hour | | △ | PM Peak Hour | | △ |
| | | | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | | Delay (sec) | LOS | |
| 1 | Park Boulevard/Harbor Drive | Signalized | 15.0 | B | 13.9 | B | 15.0 | B | 0.0 | 13.9 | B | 0.0 |
| 2 | Cesar Chavez Parkway/Harbor Drive | Signalized | 31.4 | C | 25.8 | C | 31.4 | C | 0.0 | 25.8 | C | 0.0 |
| 3 | Sampson Street/Harbor Drive | Signalized | 20.4 | C | 17.3 | B | 20.8 | B | 0.4 | 19.5 | B | 2.2 |
| 4 | 28th Street/Harbor Drive | Signalized | 27.9 | C | 22.2 | C | 28.6 | C | 0.7 | 23.2 | C | 1.0 |
| 5 | 28th Street/Main Street | Signalized | 30.0 | C | 33.3 | C | 29.8 | C | -0.2 | 33.3 | C | 0.0 |
| 6 | 28th Street/Boston Avenue | Signalized | 18.4 | B | 26.0 | C | 18.0 | B | -0.4 | 25.9 | C | -0.1 |
| 7 | 28th Street/I-5 Southbound Off-Ramp | No Control | - | - | - | - | - | - | - | - | - | - |
| 8 | 28th Street/National Avenue | Signalized | 33.7 | C | 31.3 | C | 33.7 | C | 0.0 | 31.6 | C | 0.3 |
| 9 | I-5 Northbound Ramps/National Avenue | Signalized | 18.6 | B | 18.8 | B | 19.1 | B | 0.5 | 19.1 | B | 0.3 |
| 10 | I-5 Southbound On-Ramp/Boston Avenue | Unsignalized | 15.2 | C | 49.2 | E | 15.6 | C | 0.4 | 56.3 | F | 7.1 |

Source: LSA Associates, March 2011

Notes:

☐ Exceeds level of service criteria

▩ Significant Impact




LSA

FIGURE 9

LEGEND

Potential Sediment Staging Areas

4 Study Area Intersection

X,XXX Average Daily Traffic Volume

0 1250 2500
FEET

SOURCE: Bing Maps (2008)

I:\SWB1001\G\Existing+Proj ADT-Area 4.cdr (3/31/2011)

*San Diego Sediment Project*

Existing Plus Project Daily Traffic Volumes
Staging Area 4

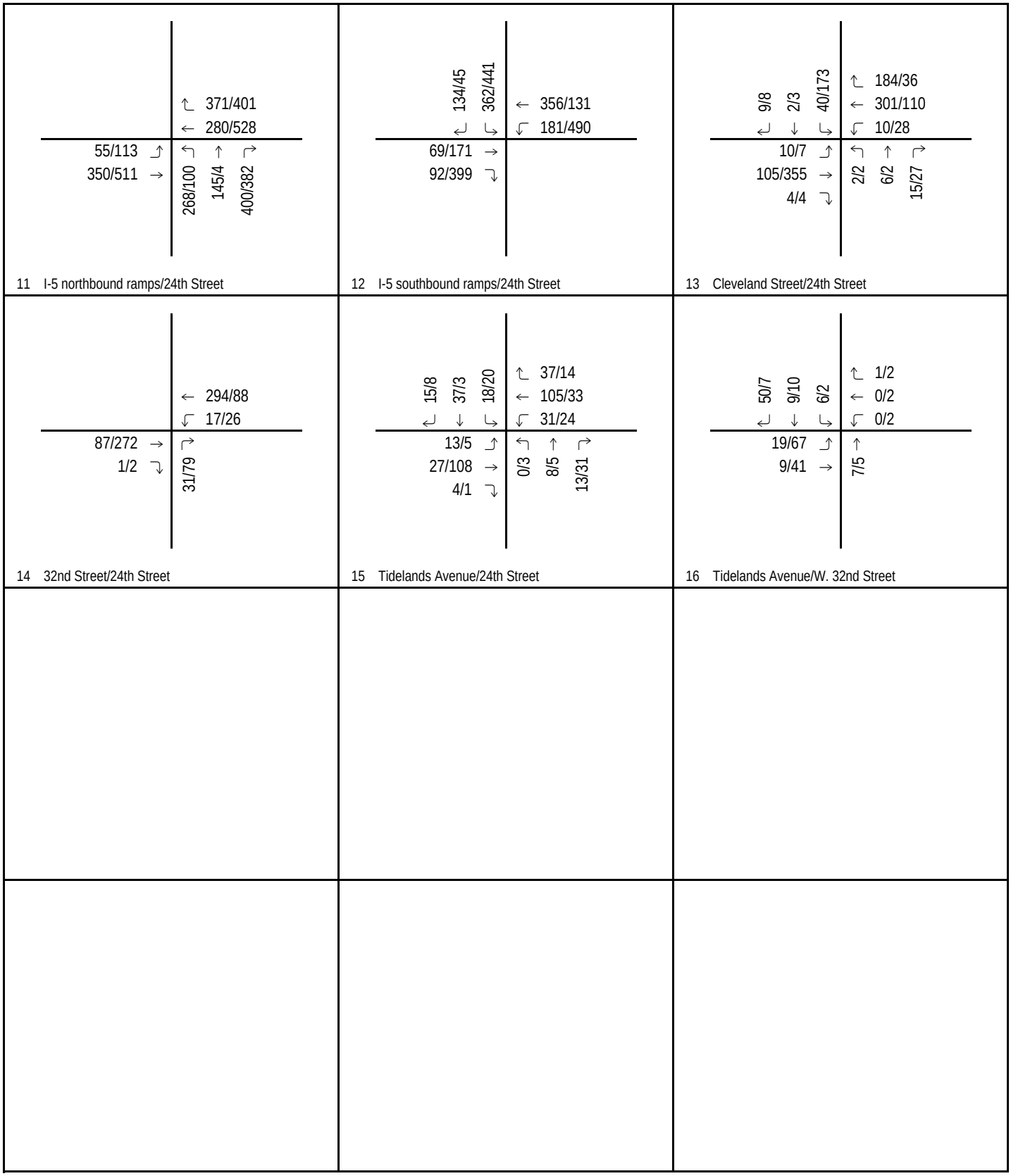
## Table J - Staging Area 4 Existing Plus Project Roadway Segment Level of Service Summary

| Roadway | Segment | Roadway Classification | Capacity | Existing | | | Project ADT | Existing + Project | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Volume | LOS | V/C | | Volume | LOS | V/C | △ |
| Harbor Boulevard | Park Boulevard and Cesar Chavez Parkway | 4 Lane Major Arterial | 40,000 | 12,903 | A | 0.32 | 0 | 12,903 | A | 0.32 | 0.00 |
| | Cesar Chavez Parkway and Sampson Street | 4 Lane Major Arterial | 40,000 | 9,140 | A | 0.23 | 0 | 9,140 | A | 0.23 | 0.00 |
| | Sampson Street and 28th Street | 4 Lane Major Arterial | 40,000 | 10,085 | A | 0.25 | 348 | 10,433 | A | 0.26 | 0.01 |
| | 28th Street and 32nd Street | 4 Lane Major Arterial | 40,000 | 14,240 | B | 0.36 | 0 | 14,240 | B | 0.36 | 0.00 |
| 28th Street | Harbor Boulevard and Main Street | 4 Lane Major Arterial | 40,000 | 15,231 | B | 0.38 | 348 | 15,579 | B | 0.39 | 0.01 |
| | Main Street and Boston Avenue | 4 Lane Collector (with TWLT) | 30,000 | 18,454 | C | 0.62 | 348 | 18,802 | C | 0.63 | 0.01 |
| | Boston Avenue and National Avenue | 3 Lane Collector (with TWLT) | 22,500 | 14,616 | C | 0.65 | 213 | 14,829 | C | 0.66 | 0.01 |
| National Avenue | 28th Street and I-5 Northbound Ramps | 3 Lane Collector (no TWLT) | 11,250 | **17,691** | **F** | **1.57** | 135 | **17,826** | **F** | **1.58** | 0.01 |
| Boston Avenue | 28th Street and I-5 Southbound On-Ramp | 2 Lane Collector (no TWLT) | 8,000 | **8,188** | **F** | **1.02** | 135 | **8,323** | **F** | **1.04** | 0.02 |

Source: LSA Associates, March 2011

☐ Exceeds level of service criteria

▩ Significant Impact




LSA

FIGURE 10

123/456 AM/PM Volumes

*San Diego Sediment Project*

Existing + Project Peak Hour Traffic Volumes (Staging Area 5)

U:\SWB1001\Traffic\Figures\Figure 10.xls\Figure

## Table K - Staging Area 5 Existing Plus Project Peak Hour Intersection Level of Service Summary

| Intersection | | Control Type | Existing Condition | | | | Existing Plus Project Condition | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | AM Peak Hour | | PM Peak Hour | | AM Peak Hour | | △ | PM Peak Hour | | △ |
| | | | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | | Delay (sec) | LOS | |
| 11 | I-5 Northbound Ramps/24th Street | Signalized | 25.3 | C | 22.3 | C | 25.5 | C | 0.2 | 22.9 | C | 0.6 |
| 12 | I-5 Southbound Ramps/24th Street | Signalized | 23.5 | C | 27.7 | C | 23.4 | C | -0.1 | 28.0 | C | 0.3 |
| 13 | Cleveland Street/24th Street | Unsignalized | 8.9 | A | 10.0 | B | 9.2 | A | 0.3 | 10.3 | B | 0.3 |
| 14 | W. 32nd Street/24th Street | Signalized | 11.3 | B | 19.2 | B | 11.9 | B | 0.6 | 20.7 | C | 1.5 |
| 15 | Tidelands Avenue/24th Street | Signalized | 26.4 | C | 29.9 | B | 24.5 | C | -1.9 | 28.7 | C | -1.2 |
| 16 | Tidelands Avenue/W. 32nd Street | Unsignalized | 7.3 | A | 8.0 | A | 7.3 | A | 0.0 | 7.9 | A | -0.1 |

Source: LSA Associates, March 2011

Notes:

☐ Exceeds level of service criteria

▩ Significant Impact

As this table indicates, all study area intersections will continue to operate at an acceptable LOS (D or better) in the a.m. and p.m. peak hour with implementation of the proposed project.

Figure 11 presents the existing plus project average daily trips. Table L summarizes the daily traffic volumes and v/c ratios for the study area roadway segments in the existing condition with the addition of project traffic. Based on this analysis, the roadway segments are forecast to operate at an acceptable LOS (LOS D or better) with the addition of project traffic.

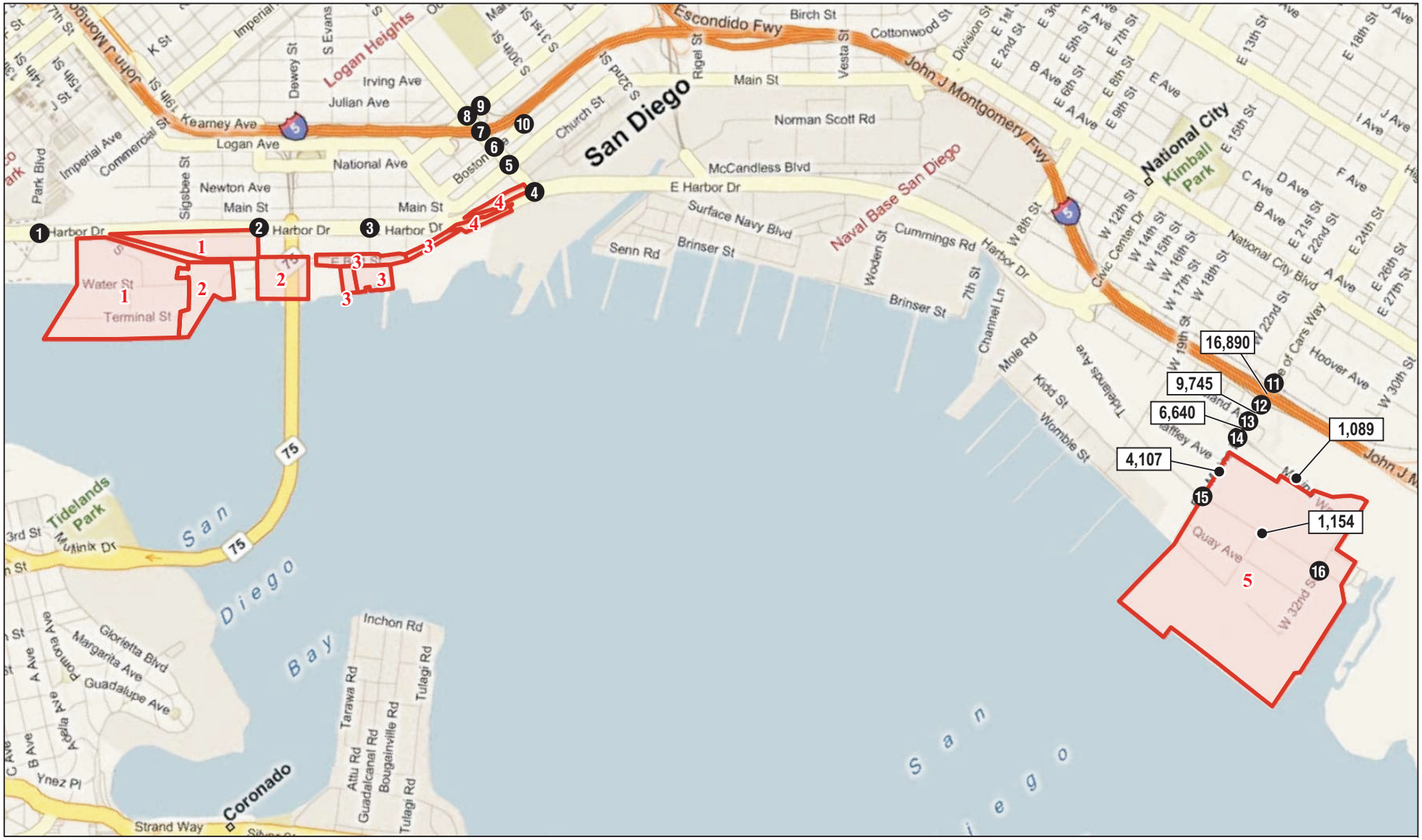
### Bayshore Bikeway

The Bayshore Bikeway consists of bike routes along Harbor Drive and Tidelands Avenue. Based on the results of the roadway segment analysis, Harbor Drive and Tidelands Avenue are forecast to operate at acceptable LOS (LOS A or B) with the implementation of the proposed project. Therefore, bike safety and bike routes would not be significantly affected with the addition of project traffic. No bike route detours are warranted with the project.

## MITIGATION APPROACH

With the implementation of project traffic, significant impacts are forecast at the intersection of I-5 Southbound Ramp/Boston Avenue and the roadway segment of Boston Avenue between 28$^{th}$ Street and I-5 Southbound Ramp for Staging Areas 1 through 4. The draft Barrio Logan Community Plan Update (CPU), March 2011, acknowledges that the intersection of I-5 Southbound Ramp/Boston Avenue currently operates at unacceptable LOS (LOS F during p.m. peak hour). The draft CPU recommends the signalization of this intersection. The draft CPU also acknowledges that the roadway segment of Boston Avenue between 28$^{th}$ Street and I-5 Southbound Ramp currently operates at LOS F. Boston Avenue is desired by the community of Barrio Logan to be a more pedestrian and bicycle-friendly corridor. The widening of this roadway to improve vehicular circulation was not desired by the community. The vehicular operations along this facility could be congested during peak periods and vehicular speeds would be low. The draft CPU states that additional widening is not recommended.

Instead of contributing to capital improvements to mitigate the affected locations (such as signalization of the intersection or temporary roadway widening), an alternative option would be to reroute project traffic away from Boston Avenue. The project traffic can be rerouted south of Staging Areas 1 through 4 along Harbor Drive to the I-5 Northbound and Southbound Ramps at Civic Center Drive.




LSA

FIGURE 11

LEGEND

Potential Sediment Staging Areas

4 Study Area Intersection

X,XXX Average Daily Traffic Volume

0 1250 2500
FEET

SOURCE: Bing Maps (2008)

I:\SWB1001\G\Existing+Proj ADT-Area 5.cdr (3/31/2011)

*San Diego Sediment Project*

Existing Plus Project Daily Traffic Volumes
Staging Area 5

## Table L - Staging Area 5 Existing Plus Project Roadway Segment Level of Service Summary

| Roadway | Segment | Roadway Classification | Capacity | Existing | | | Project ADT | Existing + Project | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Volume | LOS | V/C | | Volume | LOS | V/C | △ |
| 24th Street | I-5 Northbound Ramps and I-5 Southbound Ran | 4 Lane Major Arterial | 40,000 | 16,716 | B | 0.42 | 174 | 16,890 | B | 0.42 | 0.00 |
| | I-5 Southbound Ramps and Cleveland Street | 4 Lane Major Arterial | 40,000 | 9,397 | A | 0.23 | 348 | 9,745 | A | 0.24 | 0.01 |
| | Cleveland Street and W. 32nd Street | 4 Lane Major Arterial | 40,000 | 6,292 | A | 0.16 | 348 | 6,640 | A | 0.17 | 0.01 |
| | W. 32nd Street and Tidelands Avenue | 4 Lane Collector (no TWLT) | 20,000 | 3,846 | A | 0.19 | 261 | 4,107 | A | 0.21 | 0.01 |
| W. 32nd Street | 24th Street and Tidelands Avenue | 2 Lane Collector | 10,000 | 1,002 | A | 0.10 | 87 | 1,089 | A | 0.11 | 0.01 |
| Tidelands Avenue | 24th Street and W. 32nd Street | 2 Lane Collector | 10,000 | 1,154 | A | 0.12 | 0 | 1,154 | A | 0.12 | 0.00 |

Source: LSA Associates, March 2011

☐ Exceeds level of service criteria

■ Significant Impact

# CONCLUSION

Based on the results of this traffic analysis, significant impacts are forecast at the intersection of I-5 Southbound Ramp/Boston Avenue and the roadway segment of Boston Avenue between 28th Street and I-5 Southbound Ramp for Staging Areas 1 through 4. The draft CPU acknowledges that the intersection of I-5 Southbound Ramp/Boston Avenue currently operates at unacceptable LOS (LOS F during p.m. peak hour). The draft CPU recommends the signalization of this intersection. The draft CPU also acknowledges that the roadway segment of Boston Avenue between 28th Street and I-5 Southbound Ramp currently operates at unacceptable LOS (LOS F). Boston Avenue is desired by the community of Barrio Logan to be a more pedestrian and bicycle-friendly corridor. The widening of this roadway to improve vehicular circulation was not desired by the community. The vehicular operations along this facility could be congested during peak periods and vehicular speeds would be low. The draft CPU states that additional widening is not recommended.

The anticipated haul, delivery, and employee traffic to and from the project site can be accommodated without causing a significant impact for Staging Area 5, based on the existing traffic conditions in the study area. Evaluation of the intersection and roadway LOS shows that the addition of the project's traffic to the existing traffic volumes will not cause a significant increase in delay at the study area intersections or an increase in v/c ratio on the roadway segments, according to the City's performance criteria. As a result, no improvements would be warranted during the haul period for Staging Area 5.

# ATTACHMENT A

# EXISTING TRAFFIC COUNTS

# ITM Peak Hour Summary

Prepared by:

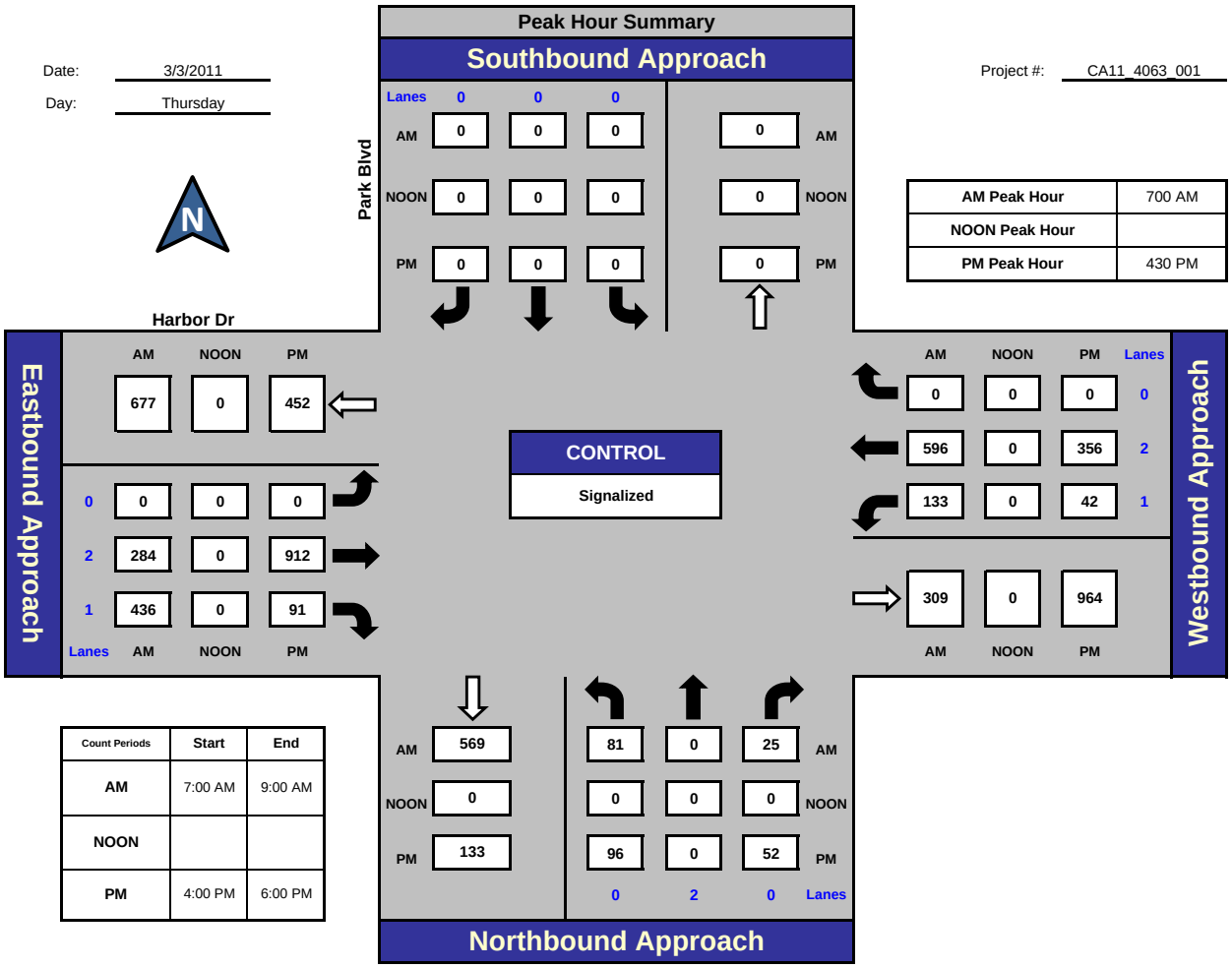
National Data & Surveying Services

***Park Blvd and Harbor Dr , City of San Diego***

Date: 3/3/2011

Day: Thursday

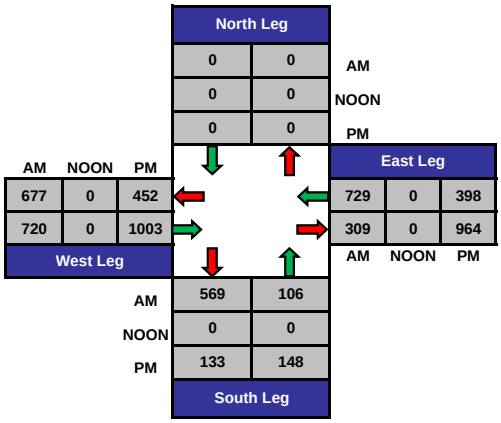
Project #: CA11_4063_001



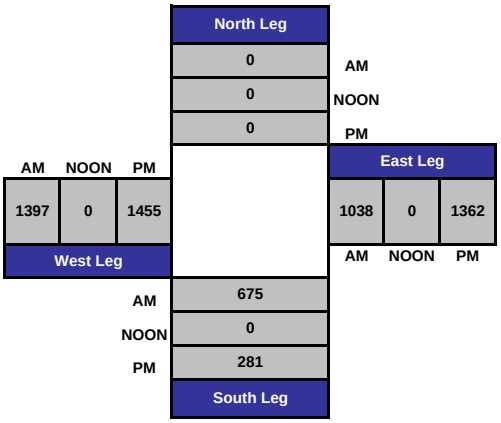

| AM Peak Hour | 700 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 430 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

## Total Ins & Outs




## Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

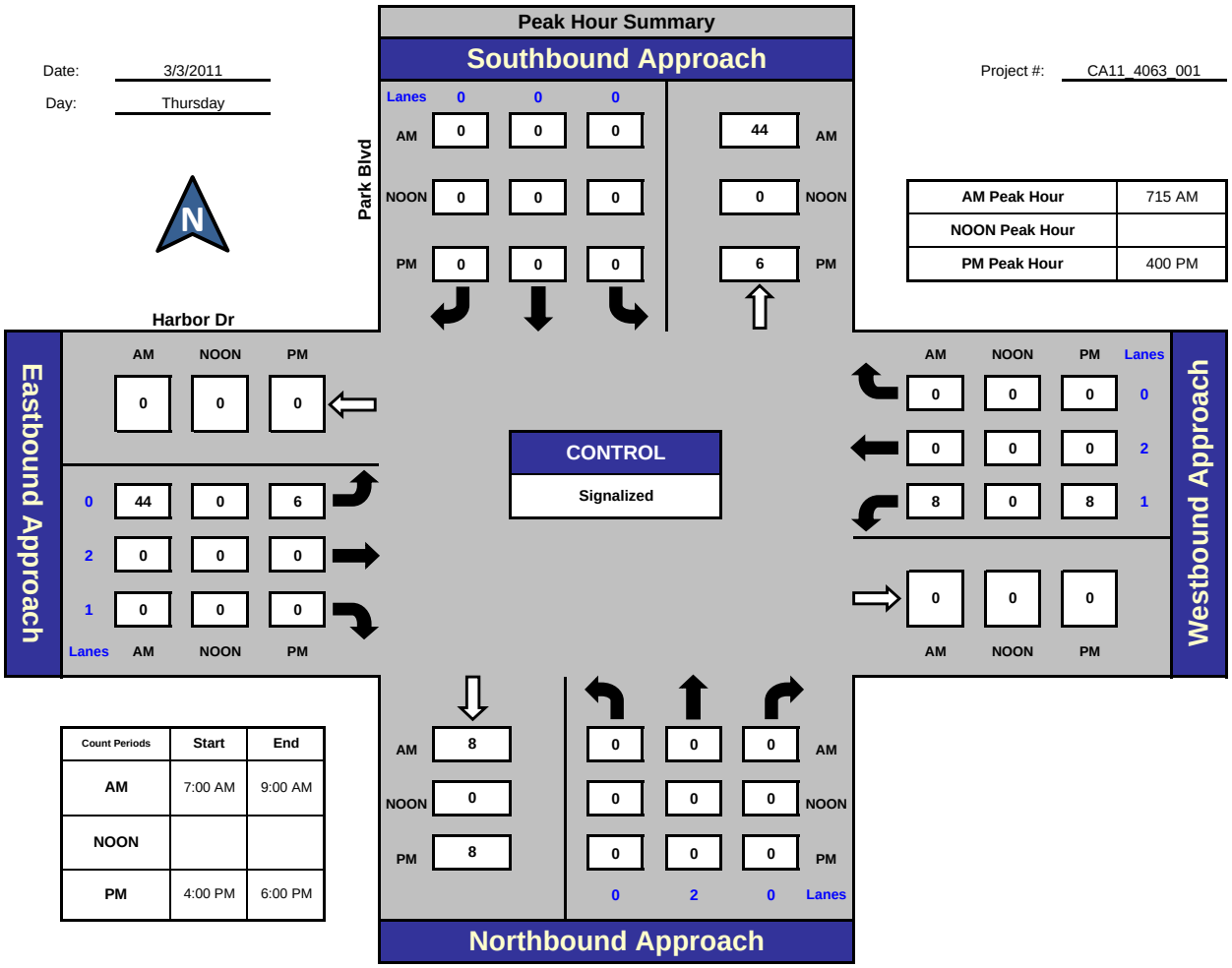
National Data & Surveying Services

***Park Blvd and Harbor Dr , City of San Diego***

Date: 3/3/2011

Day: Thursday

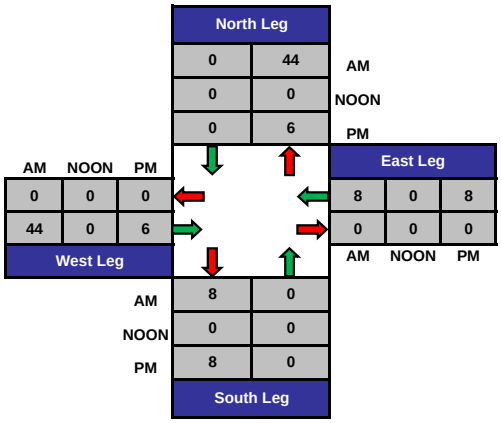
Project #: CA11_4063_001



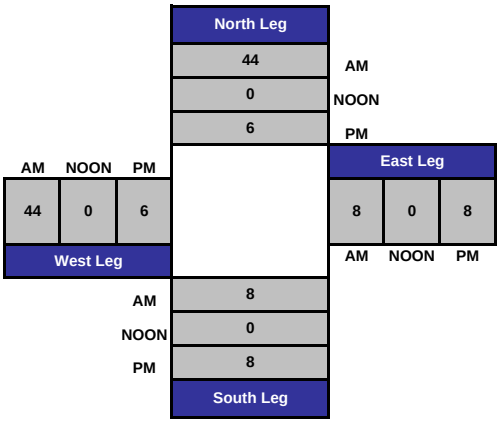

| AM Peak Hour | 715 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

## Total Ins & Outs




## Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

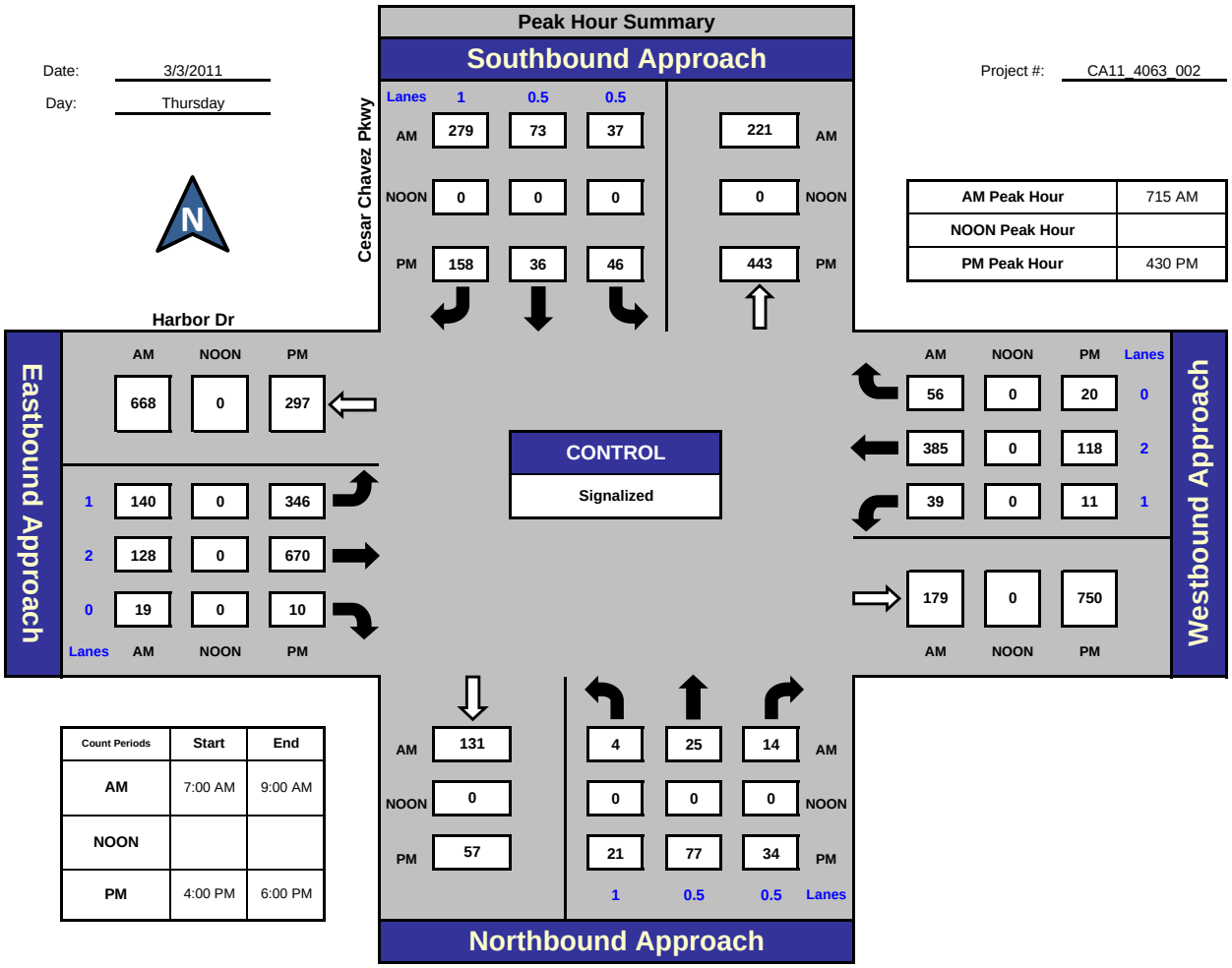
National Data & Surveying Services

## *Cesar Chavez Pkwy and Harbor Dr , City of San Diego*

Date: 3/3/2011

Day: Thursday

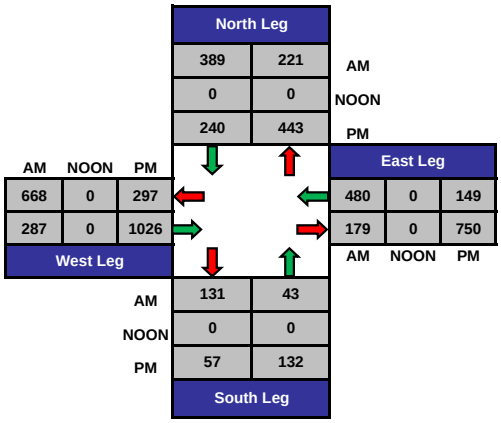
Project #: CA11_4063_002



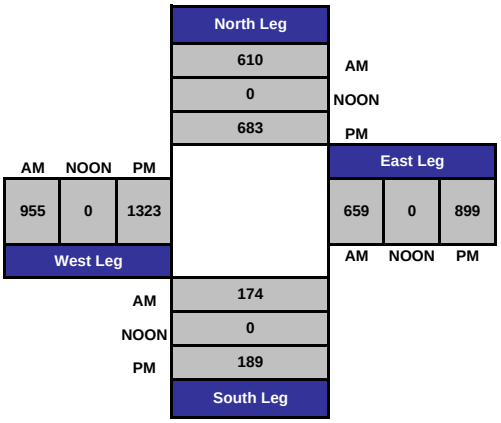

| AM Peak Hour | 715 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 430 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

## Total Ins & Outs




## Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

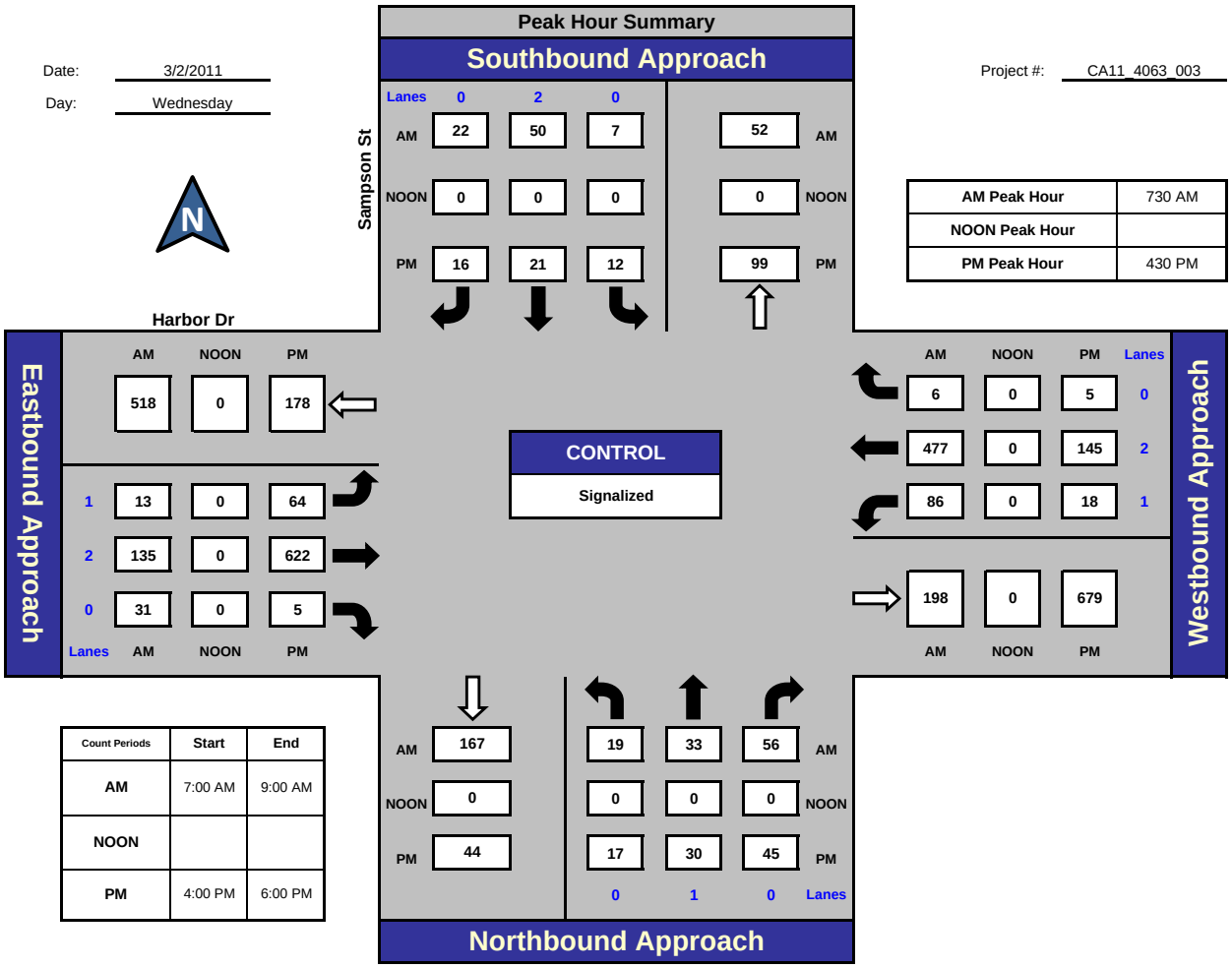
National Data & Surveying Services

## *Sampson St and Harbor Dr , City of San Diego*

Date: 3/2/2011

Day: Wednesday

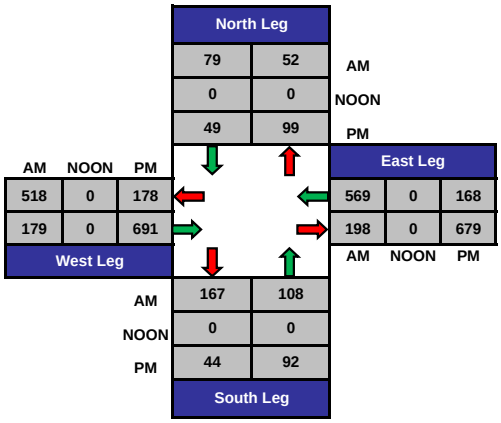
Project #: CA11_4063_003



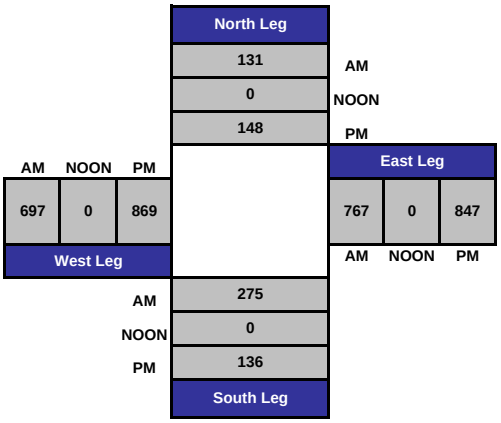

| AM Peak Hour | 730 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 430 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Total Ins & Outs




### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

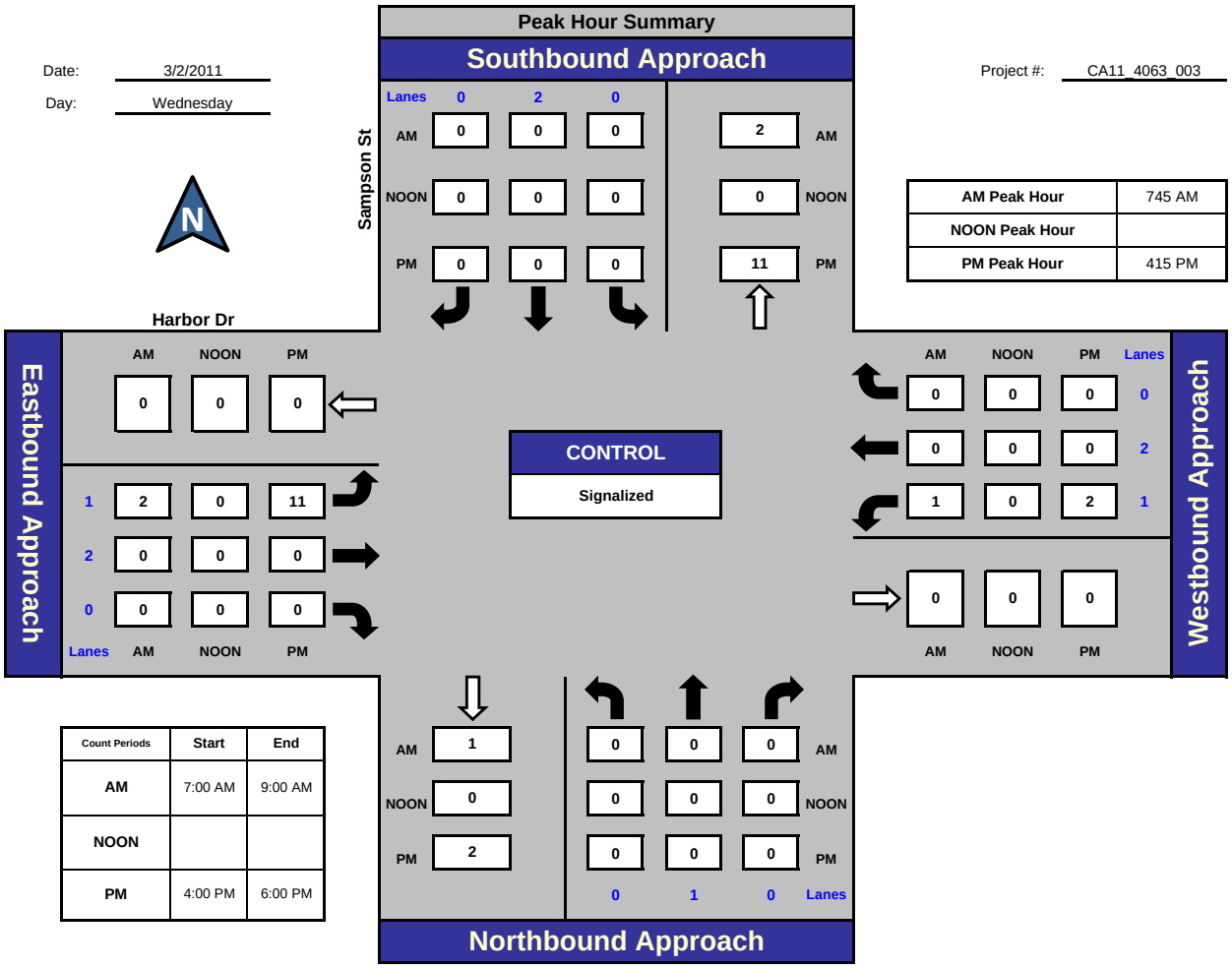
National Data & Surveying Services

## *Sampson St and Harbor Dr , City of San Diego*

Date: 3/2/2011

Day: Wednesday

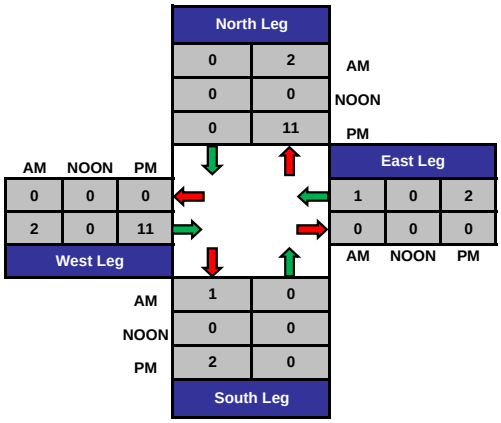
Project #: CA11_4063_003



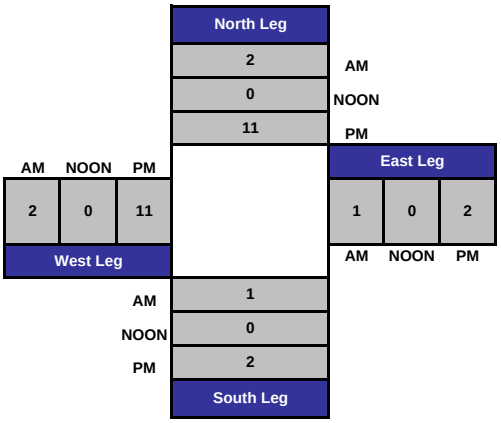

| AM Peak Hour | 745 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 415 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

## Total Ins & Outs




## Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

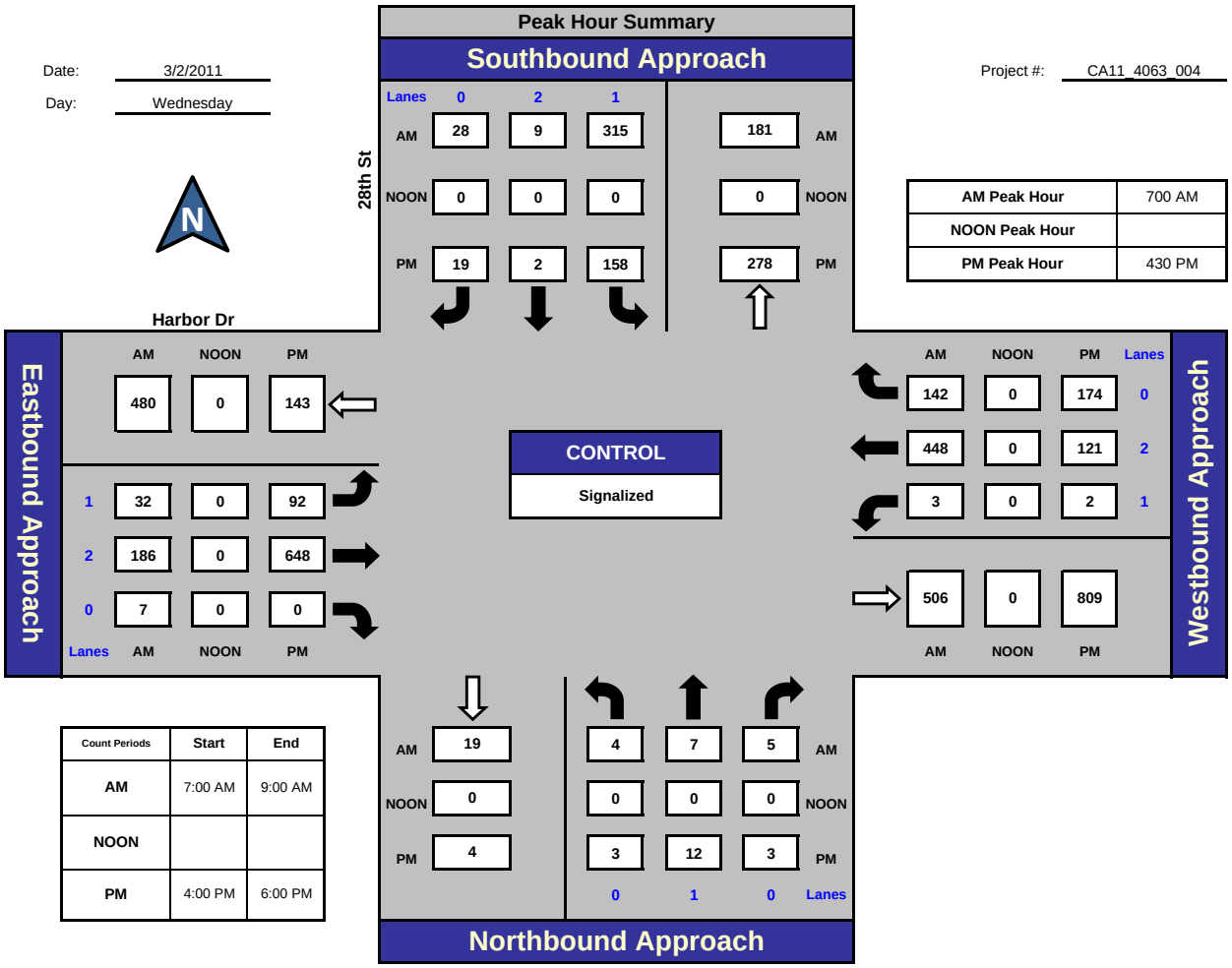
National Data & Surveying Services

## *28th St and Harbor Dr , City of San Diego*

Date: 3/2/2011

Day: Wednesday

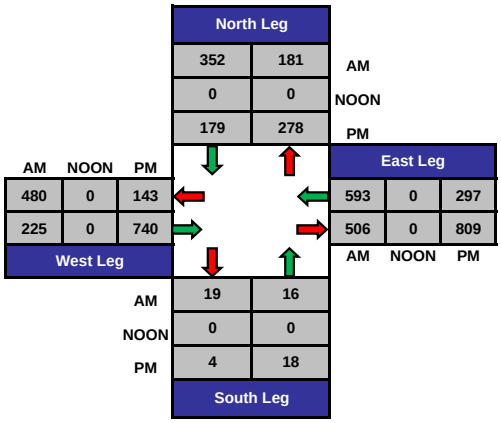
Project #: CA11_4063_004



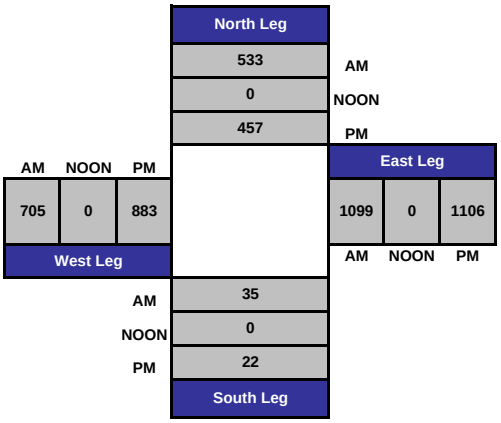

| AM Peak Hour | 700 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 430 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

## Total Ins & Outs




## Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

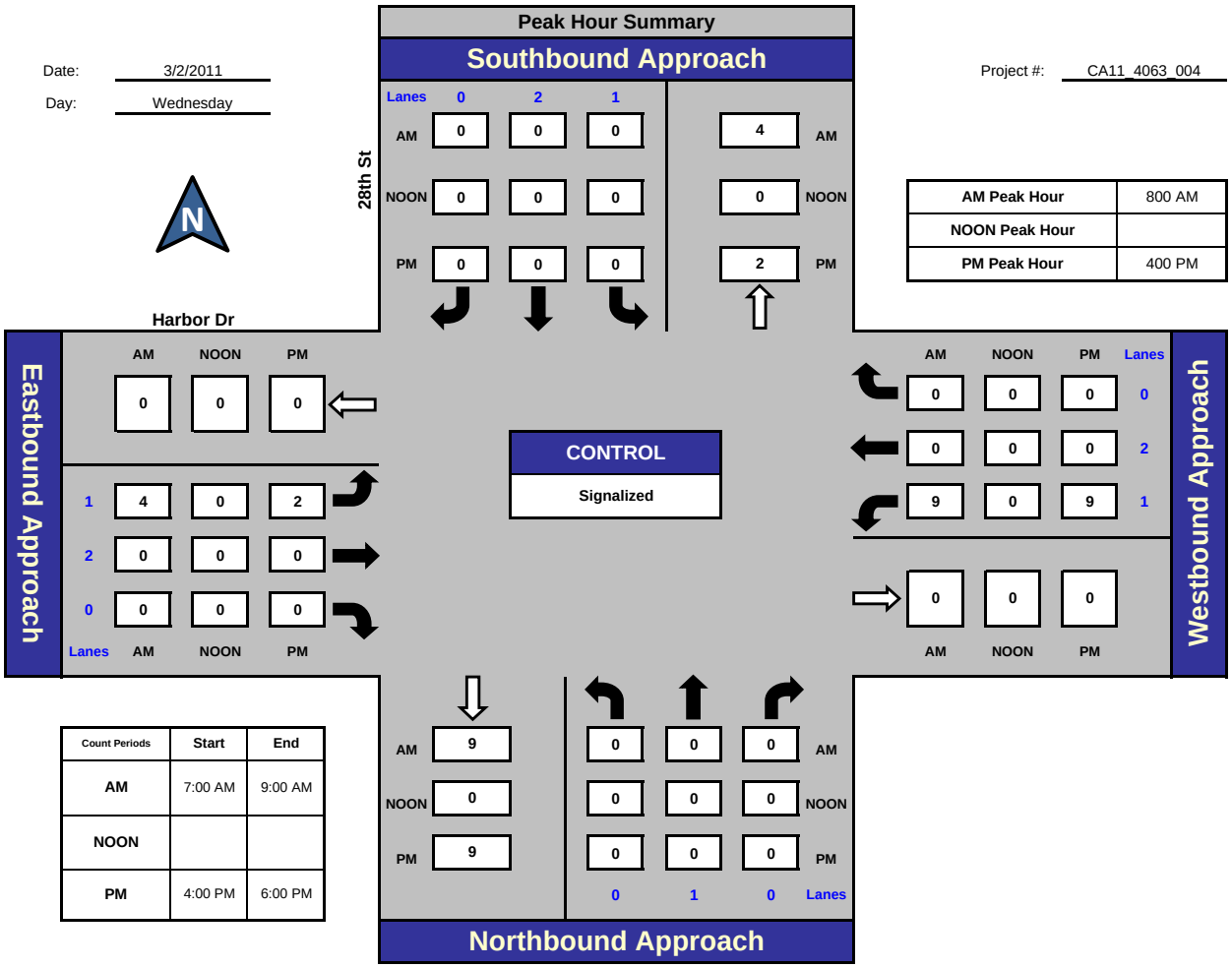
National Data & Surveying Services

## *28th St and Harbor Dr , City of San Diego*

Date: 3/2/2011

Day: Wednesday

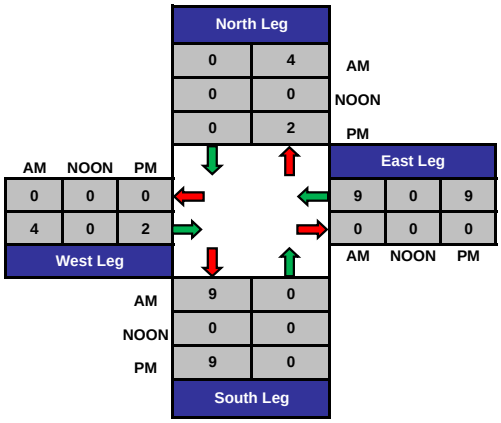
Project #: CA11_4063_004



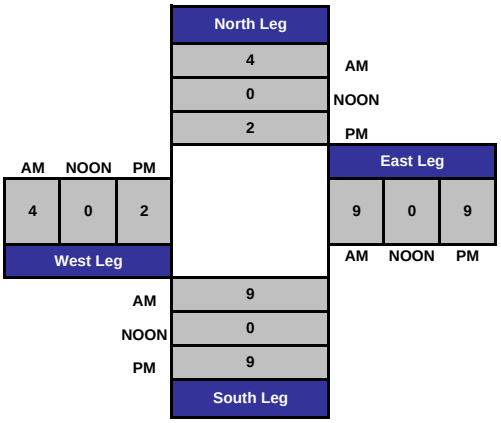

| AM Peak Hour | 800 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Total Ins & Outs




### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *28th St and Main St , City of San Diego*

Date: 3/2/2011

Day: Wednesday

Project #: CA11_4063_005

| | |
|---|---|
| AM Peak Hour | 700 AM |
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Peak Hour Summary

**Southbound Approach** (28th St)

| Lanes | 0 | 2 | 1 | | |
|---|---|---|---|---|---|
| AM | 41 | 413 | 155 | 444 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 43 | 312 | 284 | 704 | PM |

**Eastbound Approach** (Main St)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 286 | 0 | 145 |
| 1 | 66 | 0 | 96 |
| 2 | 88 | 0 | 177 |
| 0 | 43 | 0 | 32 |

**Westbound Approach**

| Lanes | AM | NOON | PM |
|---|---|---|---|
| 0 | 187 | 0 | 170 |
| 2 | 211 | 0 | 89 |
| 1 | 53 | 0 | 42 |
| | 301 | 0 | 573 |

**CONTROL**: Signalized

**Northbound Approach**

| Lanes | 1 | 2 | 0 | |
|---|---|---|---|---|
| AM | 34 | 191 | 58 | AM |
| NOON | 0 | 0 | 0 | NOON |
| PM | 13 | 438 | 112 | PM |
| | 509 | 0 | 386 | |

## Total Ins & Outs

| | AM | NOON | PM |
|---|---|---|---|
| North Leg | 609 | 0 | 639 |
| East Leg | 451 | 0 | 301 |
| South Leg | 509 | 0 | 386 |
| West Leg | 286 | 0 | 145 |
| | 197 | 0 | 305 |
| | 283 | 0 | 563 |

## Total Volume Per Leg

| | AM | NOON | PM |
|---|---|---|---|
| North Leg | 1053 | 0 | 1343 |
| East Leg | 752 | 0 | 874 |
| South Leg | 792 | 0 | 949 |
| West Leg | 483 | 0 | 450 |

# ITM Peak Hour Summary

Prepared by:

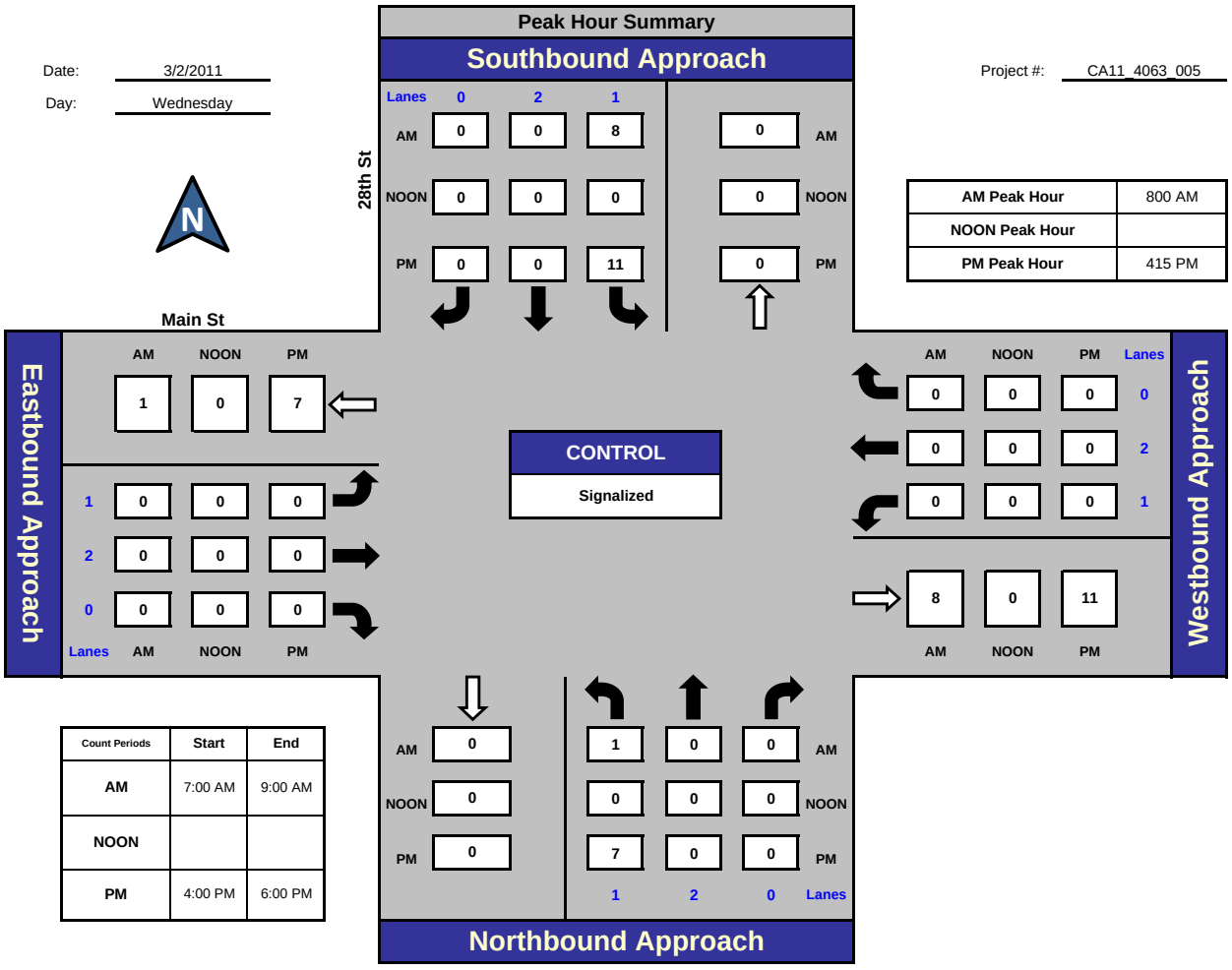
National Data & Surveying Services

## *28th St and Main St , City of San Diego*

Date: 3/2/2011

Day: Wednesday

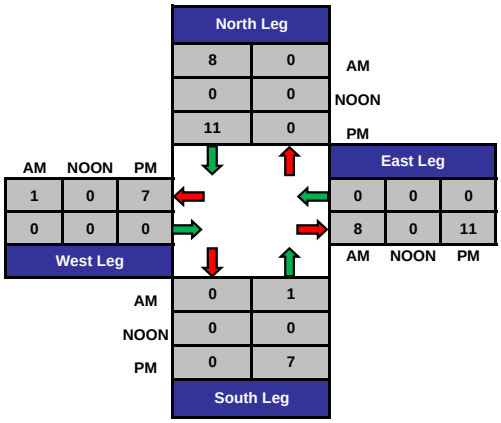
Project #: CA11_4063_005



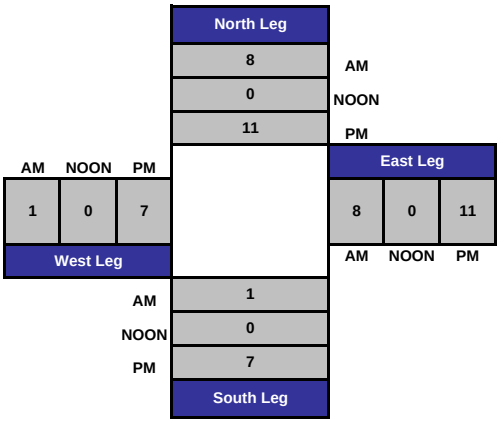

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

| | |
|---|---|
| AM Peak Hour | 800 AM |
| NOON Peak Hour | |
| PM Peak Hour | 415 PM |

## Total Ins & Outs




## Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

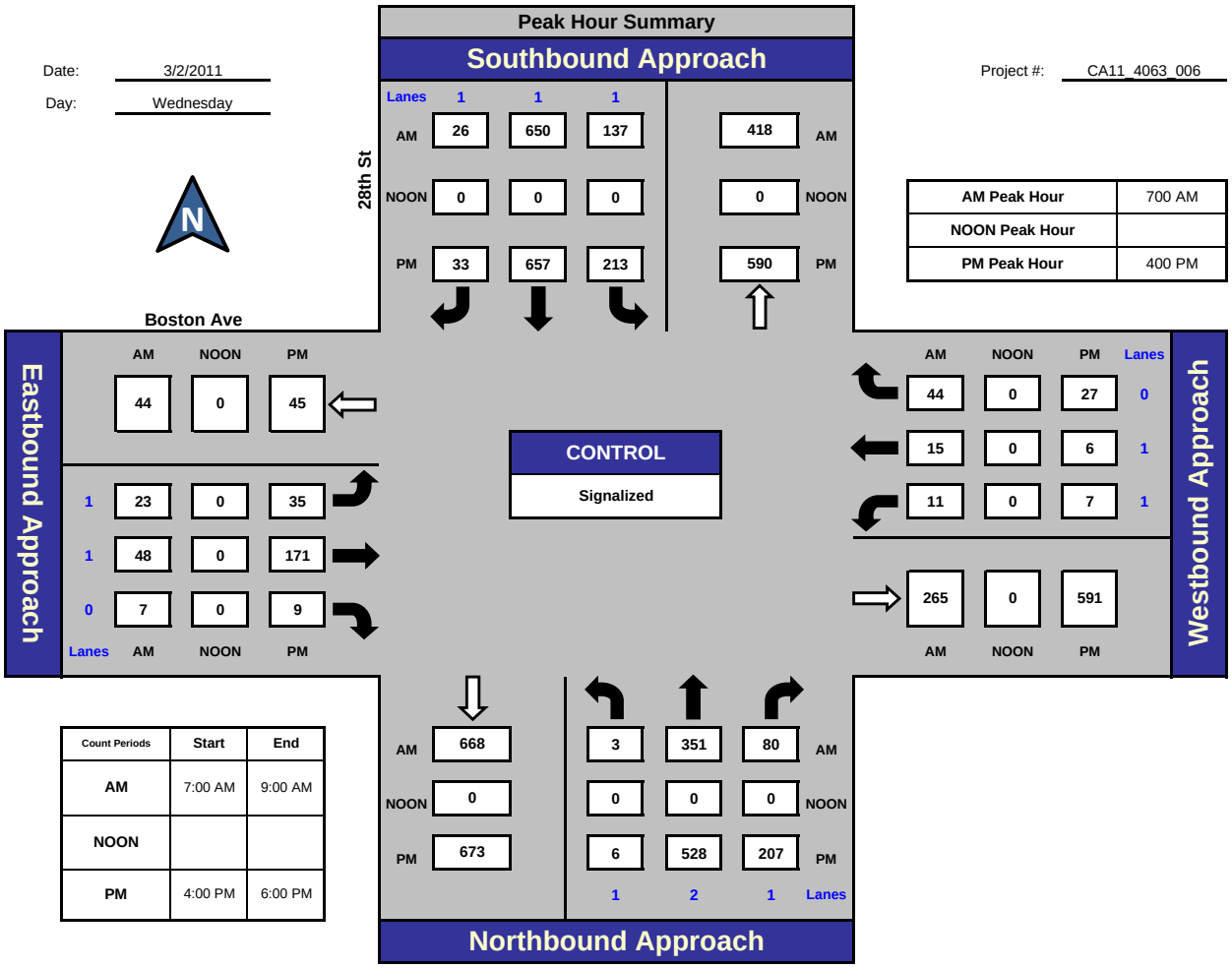
National Data & Surveying Services

## *28th St and Boston Ave , City of San Diego*

Date: 3/2/2011

Day: Wednesday

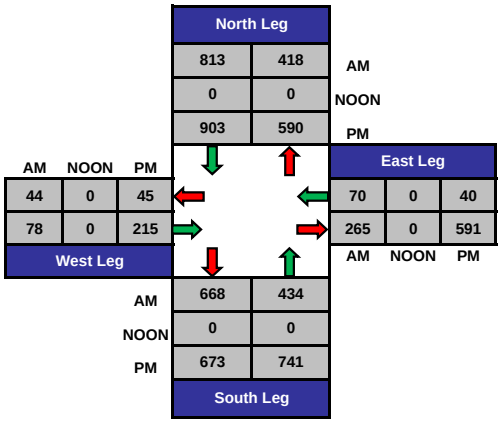
Project #: CA11_4063_006



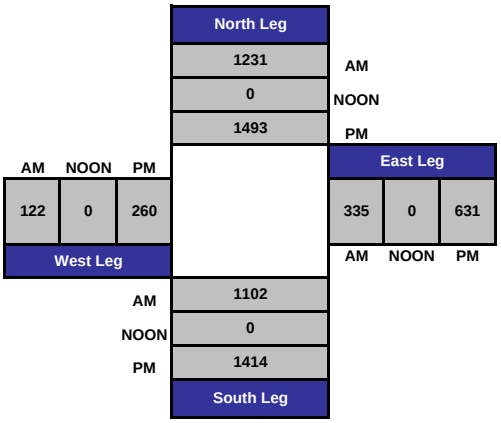

| AM Peak Hour | 700 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

## Total Ins & Outs




## Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *28th St and I-5 SB Off-Ramp , City of San Diego*

Date: 3/2/2011

Day: Wednesday

Project #: CA11_4063_007

| | |
|---|---|
| AM Peak Hour | 700 AM |
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| AM | 303 | 415 | AM |
| NOON | 0 | 0 | NOON |
| PM | 381 | 587 | PM |

| West Leg | | | | East Leg | | | |
|---|---|---|---|---|---|---|---|
| AM | NOON | PM | | AM | NOON | PM | |
| 0 | 0 | 0 | | 0 | 0 | 0 | |
| 508 | 0 | 526 | | 0 | 0 | 0 | |

| | South Leg | |
|---|---|---|
| AM | 811 | 415 |
| NOON | 0 | 0 |
| PM | 907 | 587 |

### Total Volume Per Leg

| | North Leg | |
|---|---|---|
| AM | 718 | AM |
| NOON | 0 | NOON |
| PM | 968 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | AM | NOON | PM |
| 508 | 0 | 526 | 0 | 0 | 0 |

| | South Leg |
|---|---|
| AM | 1226 |
| NOON | 0 |
| PM | 1494 |

# ITM Peak Hour Summary

Prepared by:

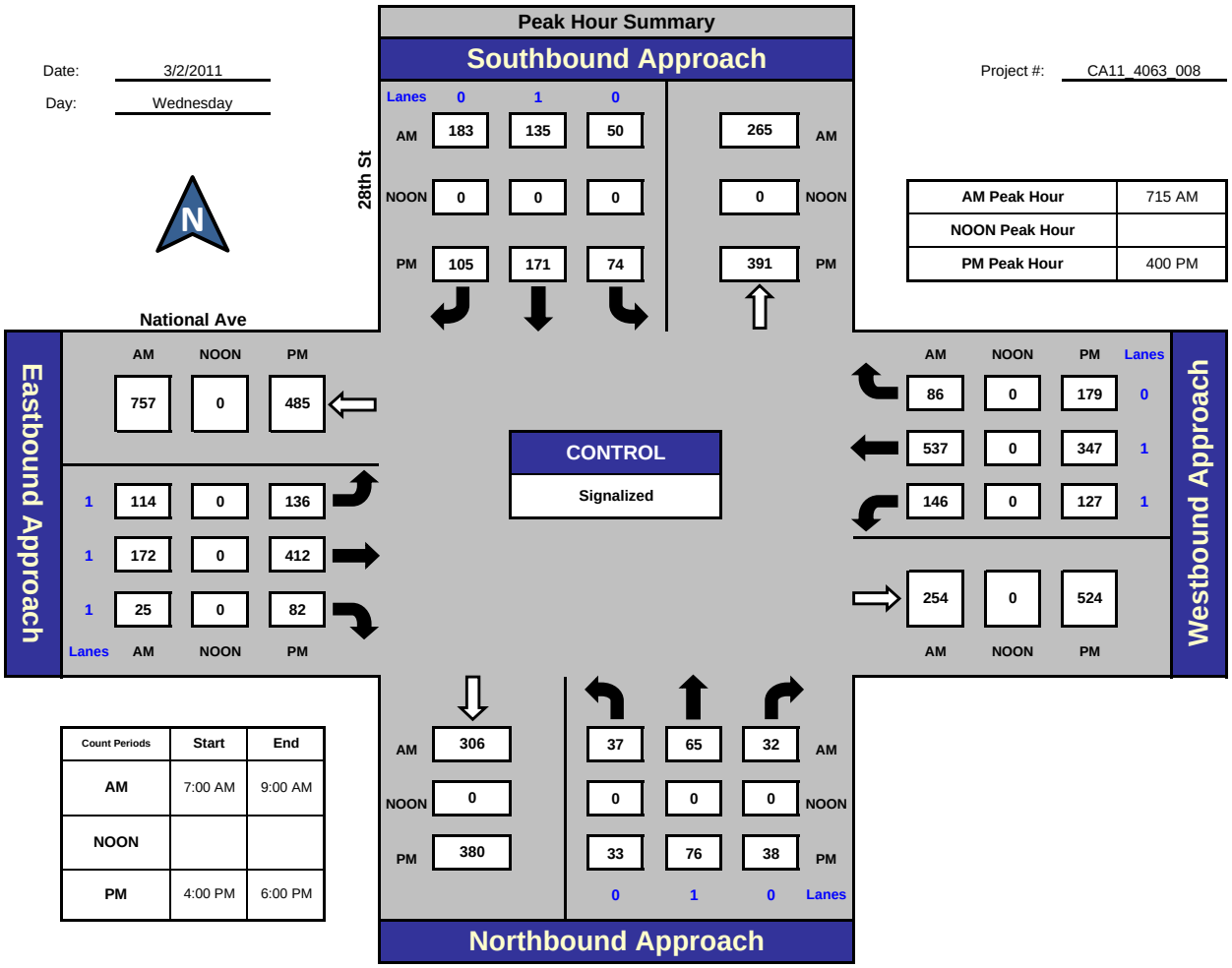
National Data & Surveying Services

## *28th St and National Ave , City of San Diego*

Date: 3/2/2011

Day: Wednesday

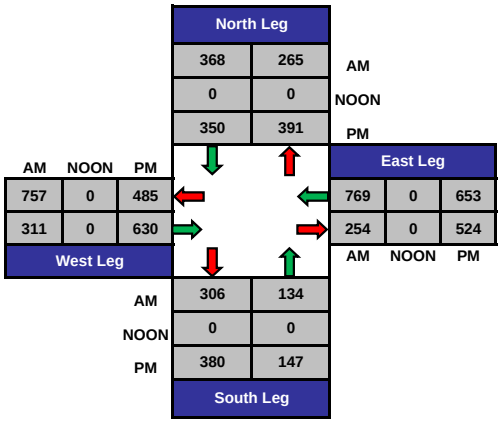
Project #: CA11_4063_008



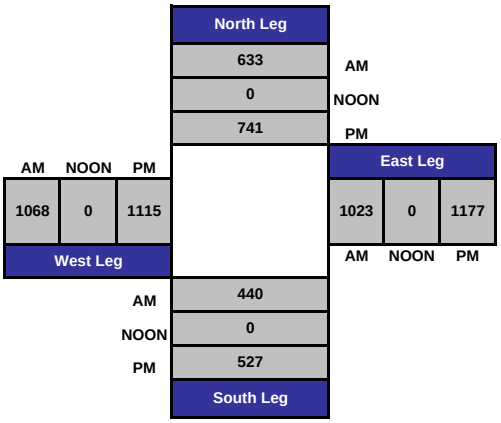

| AM Peak Hour | 715 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

## Total Ins & Outs




## Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

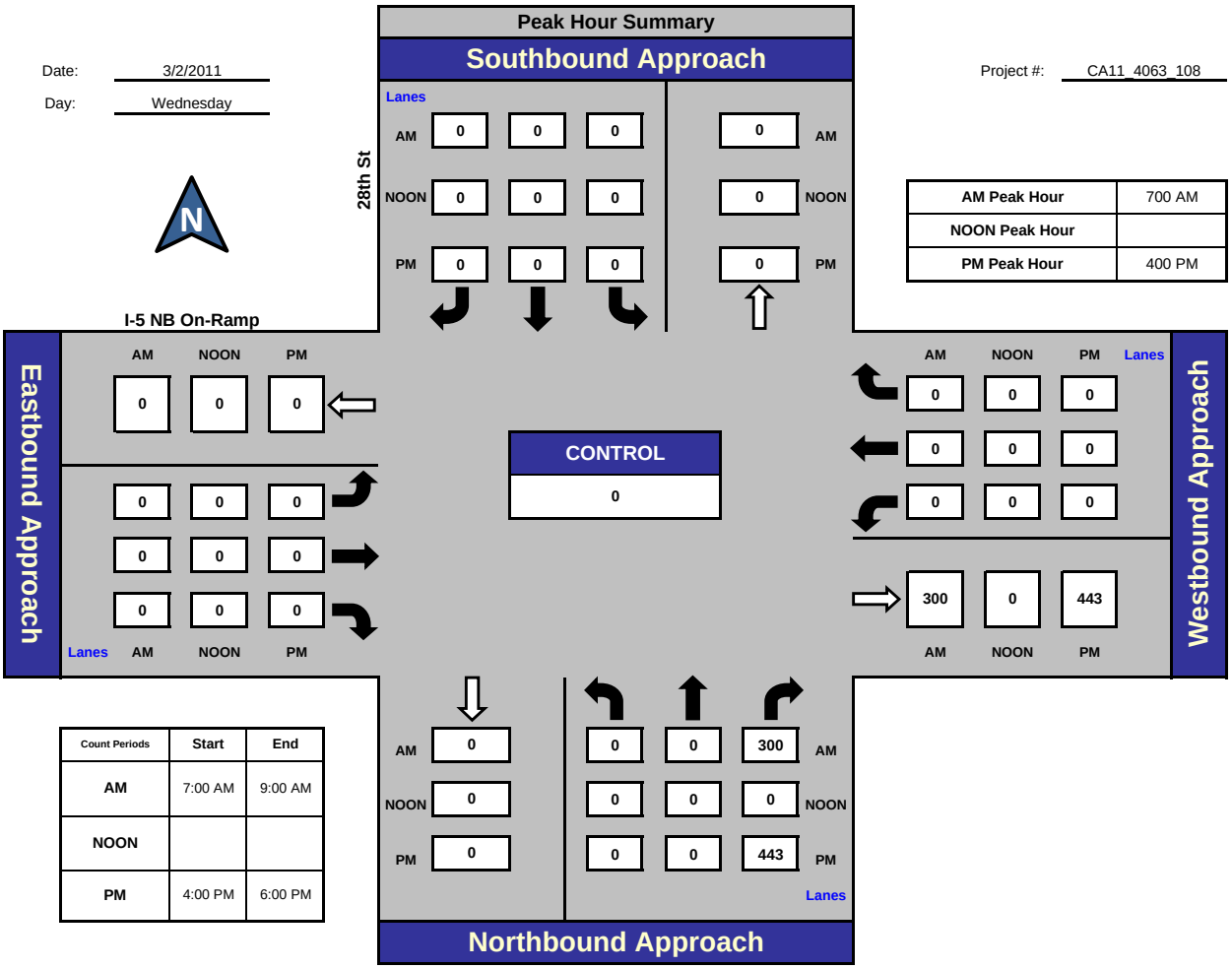
National Data & Surveying Services

## *28th St and I-5 NB On-Ramp , City of San Diego*

Date: 3/2/2011

Day: Wednesday

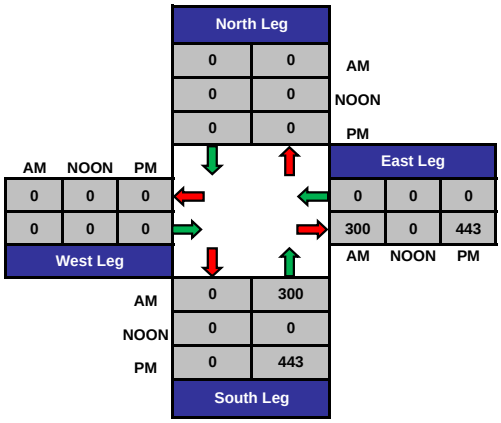
Project #: CA11_4063_108



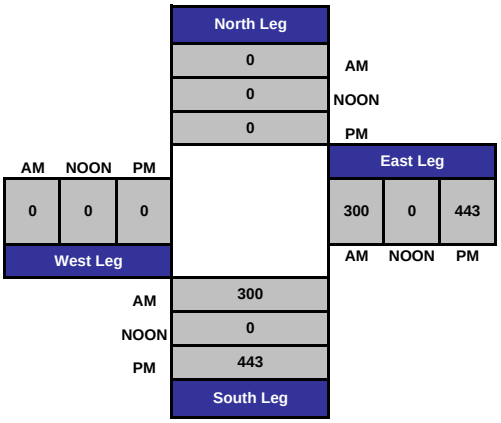

| AM Peak Hour | 700 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Total Ins & Outs




### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *I-5 NB Ramps and National Ave , City of San Diego*

Date: 3/2/2011

Day: Wednesday

Project #: CA11_4063_009

| | |
|---|---|
| AM Peak Hour | 715 AM |
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

### Peak Hour Summary

**Southbound Approach**

I-5 NB Ramps

| Lanes | 0 | 0 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

**Eastbound Approach**

National Ave

| | AM | NOON | PM |
|---|---|---|---|
| | 754 | 0 | 634 |
| 0 | 0 | 0 | 0 |
| 1 | 236 | 0 | 486 |
| 1 | 19 | 0 | 44 |
| Lanes | AM | NOON | PM |

**Westbound Approach**

| AM | NOON | PM | Lanes |
|---|---|---|---|
| 0 | 0 | 0 | 0 |
| 450 | 0 | 321 | 1 |
| 0 | 0 | 0 | 0 |
| 315 | 0 | 609 | |
| AM | NOON | PM | |

**CONTROL**

Signalized

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 19 | 304 | 0 | 79 |
| NOON | 0 | 0 | 0 | 0 |
| PM | 44 | 313 | 0 | 123 |
| | | 1 | 0 | 1 |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Total Ins & Outs

| North Leg | | |
|---|---|---|
| 0 | 0 | AM |
| 0 | 0 | NOON |
| 0 | 0 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 754 | 0 | 634 | 450 | 0 | 321 |
| 255 | 0 | 530 | 315 | 0 | 609 |
| | | | AM | NOON | PM |

| South Leg | | |
|---|---|---|
| AM | 19 | 383 |
| NOON | 0 | 0 |
| PM | 44 | 436 |

### Total Volume Per Leg

| North Leg | | |
|---|---|---|
| 0 | | AM |
| 0 | | NOON |
| 0 | | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | | | |
| 1009 | 0 | 1164 | 765 | 0 | 930 |
| | | | AM | NOON | PM |

| South Leg | |
|---|---|
| AM | 402 |
| NOON | 0 |
| PM | 480 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *I-5 SB Ramps and Boston Ave , City of San Diego*

Date: 3/2/2011

Day: Wednesday

Project #: CA11_4063_010

| | |
|---|---|
| AM Peak Hour | 730 AM |
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Peak Hour Summary

**Southbound Approach** (I-5 SB Ramps)

| Lanes | 0 | 0 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 321 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 636 | PM |

**Eastbound Approach** (Boston Ave)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 59 | 0 | 46 |
| 0 | 255 | 0 | 535 |
| 1 | 26 | 0 | 53 |
| 0 | 8 | 0 | 16 |

**Westbound Approach**

| Lanes | AM | NOON | PM |
|---|---|---|---|
| 0 | 43 | 0 | 50 |
| 1 | 50 | 0 | 38 |
| 0 | 2 | 0 | 3 |
| | 31 | 0 | 64 |

**CONTROL**: 1-Way Stop (NB)

**Northbound Approach**

| Lanes | 0 | 1 | 0 | |
|---|---|---|---|---|
| AM | 10 | 9 | 23 | 5 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 19 | 8 | 51 | 11 | PM |

## Total Ins & Outs

| | AM | NOON | PM |
|---|---|---|---|
| North Leg | 0 | 0 | 0 |
| | 321 | 0 | 636 |
| West Leg | 289 | 0 | 604 |
| | 59 | 0 | 46 |
| East Leg | 95 | 0 | 91 |
| | 31 | 0 | 64 |
| South Leg | 10 | 0 | 19 |
| | 37 | 0 | 70 |

## Total Volume Per Leg

| | AM | NOON | PM |
|---|---|---|---|
| North Leg | 321 | 0 | 636 |
| West Leg | 348 | 0 | 650 |
| East Leg | 126 | 0 | 155 |
| South Leg | 47 | 0 | 89 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *I-5 NB Ramps and 24th St , City of San Diego*

Date: 3/3/2011

Day: Thursday

Project #: CA11_4063_011

| | |
|---|---|
| AM Peak Hour | 715 AM |
| NOON Peak Hour | |
| PM Peak Hour | 430 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Peak Hour Summary

**Southbound Approach**

| Lanes | 0 | 0 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 569 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 506 | PM |

I-5 NB Ramps

24th St

**Eastbound Approach**

| | AM | NOON | PM | |
|---|---|---|---|---|
| | 516 | 0 | 615 | |
| 1 | 53 | 0 | 101 | |
| 2 | 350 | 0 | 511 | |
| 0 | 0 | 0 | 0 | |
| Lanes | AM | NOON | PM | |

**CONTROL**

Signalized

**Westbound Approach**

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 371 | 0 | 401 | 0 |
| | 280 | 0 | 528 | 2 |
| | 0 | 0 | 0 | 1 |
| | 750 | 0 | 893 | |
| | AM | NOON | PM | |

**Northbound Approach**

| | | | | | |
|---|---|---|---|---|---|
| AM | 0 | 236 | 145 | 400 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 87 | 4 | 382 | PM |
| | | 1 | 1 | 1 | Lanes |

## Total Ins & Outs

| North Leg | | |
|---|---|---|
| 0 | 569 | AM |
| 0 | 0 | NOON |
| 0 | 506 | PM |

| West Leg | | | AM | NOON | PM |
|---|---|---|---|---|---|
| 516 | 0 | 615 | 651 | 0 | 929 |
| 403 | 0 | 612 | 750 | 0 | 893 |

East Leg

| South Leg | |
|---|---|
| 0 | 781 |
| 0 | 0 |
| 0 | 473 |

AM NOON PM

## Total Volume Per Leg

| North Leg | |
|---|---|
| 569 | AM |
| 0 | NOON |
| 506 | PM |

| West Leg | | | AM | NOON | PM |
|---|---|---|---|---|---|
| 919 | 0 | 1227 | 1401 | 0 | 1822 |

East Leg

| South Leg | |
|---|---|
| 781 | AM |
| 0 | NOON |
| 473 | PM |

AM NOON PM

# ITM Peak Hour Summary

Prepared by:

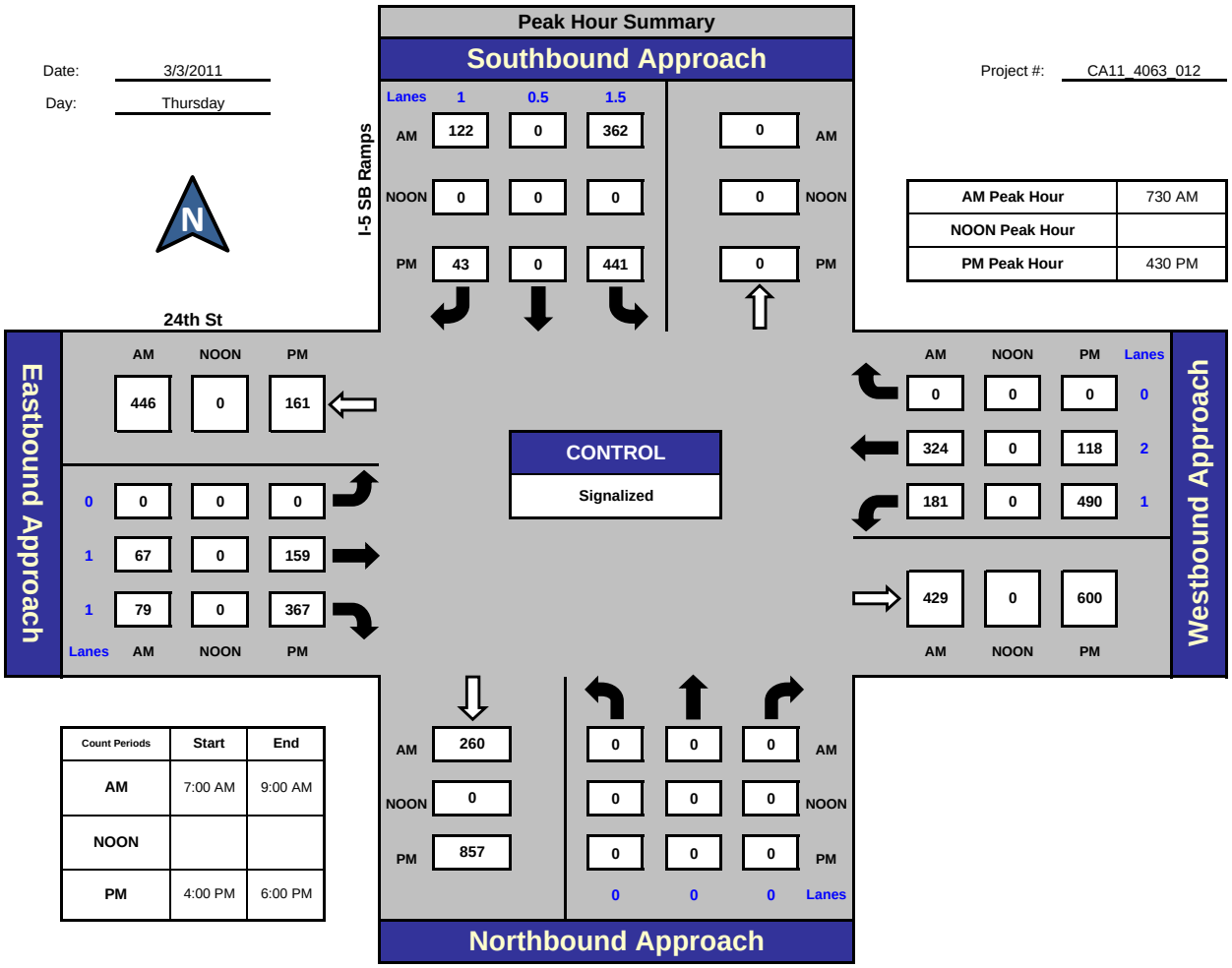
National Data & Surveying Services

## *I-5 SB Ramps and 24th St , City of San Diego*

Date: 3/3/2011

Day: Thursday

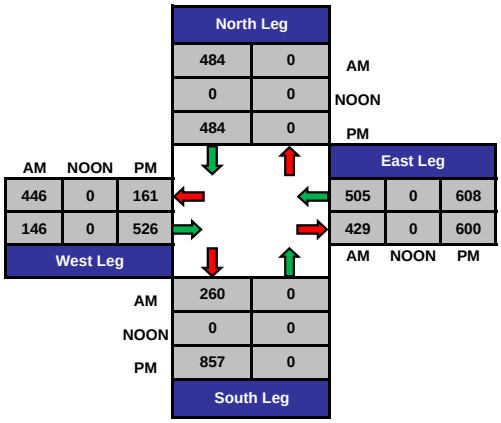
Project #: CA11_4063_012



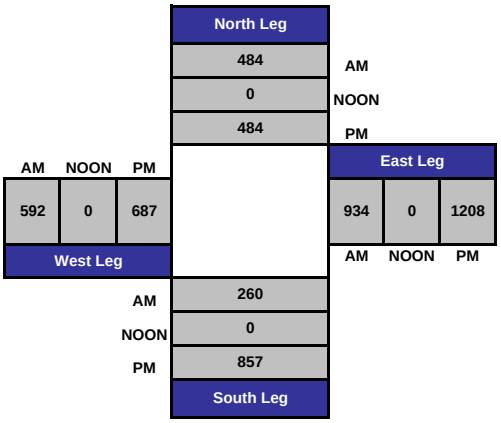

| AM Peak Hour | 730 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 430 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Total Ins & Outs




### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Cleveland St and 24th St , City of San Diego*

Date: 3/3/2011

Day: Thursday

Project #: CA11_4063_013

| | |
|---|---|
| AM Peak Hour | 715 AM |
| NOON Peak Hour | |
| PM Peak Hour | 430 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Peak Hour Summary

**Southbound Approach** (Cleveland St)

| Lanes | 0 | 1 | 1 | | |
|---|---|---|---|---|---|
| AM | 9 | 2 | 40 | 200 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 8 | 3 | 173 | 45 | PM |

**Eastbound Approach** (24th St)

| Lanes | AM | NOON | PM |
|---|---|---|---|
| | 268 | 0 | 105 |
| 0 | 10 | 0 | 7 |
| 2 | 90 | 0 | 311 |
| 0 | 4 | 0 | 4 |
| Lanes | AM | NOON | PM |

**Westbound Approach**

| Lanes | AM | NOON | PM |
|---|---|---|---|
| 0 | 184 | 0 | 36 |
| 2 | 257 | 0 | 95 |
| 0 | 10 | 0 | 28 |
| | 145 | 0 | 511 |
| | AM | NOON | PM |

**CONTROL**: 4-Way Stop

**Northbound Approach**

| | | | | | |
|---|---|---|---|---|---|
| AM | 16 | 2 | 6 | 15 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 35 | 2 | 2 | 27 | PM |
| | | 1 | 0.5 | 0.5 | Lanes |

## Total Ins & Outs

| | AM | NOON | PM |
|---|---|---|---|
| North Leg | 51 | 0 | 184 |
| | 200 | 0 | 45 |
| West Leg | 268 | 0 | 105 |
| | 104 | 0 | 322 |
| East Leg | 451 | 0 | 159 |
| | 145 | 0 | 511 |
| South Leg | 16 | 0 | 35 |
| | 23 | 0 | 31 |

## Total Volume Per Leg

| | AM | NOON | PM |
|---|---|---|---|
| North Leg | 251 | 0 | 229 |
| West Leg | 372 | 0 | 427 |
| East Leg | 596 | 0 | 670 |
| South Leg | 39 | 0 | 66 |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *W 32nd St and 24th St , City of San Diego*

Date: 3/3/2011

Day: Thursday

Project #: CA11_4063_014

| | |
|---|---|
| AM Peak Hour | 730 AM |
| NOON Peak Hour | |
| PM Peak Hour | 430 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Peak Hour Summary

**Southbound Approach**

| Lanes | 0 | 0 | 0 | | |
|---|---|---|---|---|---|
| AM | 0 | 0 | 0 | 0 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 0 | 0 | 0 | 0 | PM |

W 32nd St

24th St

**Eastbound Approach**

| | AM | NOON | PM | |
|---|---|---|---|---|
| | 250 | 0 | 73 | |
| 0 | 0 | 0 | 0 | |
| 2 | 79 | 0 | 250 | |
| 0 | 1 | 0 | 2 | |
| Lanes | AM | NOON | PM | |

**CONTROL**

Signalized

**Westbound Approach**

| | AM | NOON | PM | Lanes |
|---|---|---|---|---|
| | 0 | 0 | 0 | 0 |
| | 250 | 0 | 73 | 2 |
| | 17 | 0 | 26 | 1 |
| | 102 | 0 | 307 | |
| | AM | NOON | PM | |

**Northbound Approach**

| | | | | |
|---|---|---|---|---|
| AM | 18 | 0 | 0 | 23 | AM |
| NOON | 0 | 0 | 0 | 0 | NOON |
| PM | 28 | 0 | 0 | 57 | PM |
| | | 1 | 0 | 1 | Lanes |

## Total Ins & Outs

| | North Leg | | |
|---|---|---|---|
| AM | 0 | 0 | AM |
| NOON | 0 | 0 | NOON |
| PM | 0 | 0 | PM |

| West Leg | | | | East Leg | | | |
|---|---|---|---|---|---|---|---|
| AM | NOON | PM | | AM | NOON | PM | |
| 250 | 0 | 73 | | 267 | 0 | 99 | |
| 80 | 0 | 252 | | 102 | 0 | 307 | |

| | South Leg | | |
|---|---|---|---|
| AM | 18 | 23 | AM |
| NOON | 0 | 0 | NOON |
| PM | 28 | 57 | PM |

## Total Volume Per Leg

| | North Leg | |
|---|---|---|
| AM | 0 | AM |
| NOON | 0 | NOON |
| PM | 0 | PM |

| West Leg | | | East Leg | | |
|---|---|---|---|---|---|
| AM | NOON | PM | AM | NOON | PM |
| 330 | 0 | 325 | 369 | 0 | 406 |

| | South Leg | |
|---|---|---|
| AM | 41 | AM |
| NOON | 0 | NOON |
| PM | 85 | PM |

# ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

## *Tidelands Ave and 24th St-Bay Marina Dr , City of San Diego*

Date: 3/3/2011

Day: Thursday

Project #: CA11_4063_015

| | |
|---|---|
| AM Peak Hour | 730 AM |
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Total Ins & Outs

| | North Leg | | | East Leg | | | South Leg | | | West Leg | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| AM | 70 | 58 | AM | 129 | 0 | 56 | 72 | 21 | AM | 76 | 0 | 29 |
| NOON | 0 | 0 | NOON | 50 | 0 | 137 | 0 | 0 | NOON | 36 | 0 | 92 |
| PM | 31 | 24 | PM | AM | NOON | PM | 28 | 39 | PM | AM | NOON | PM |

### Total Volume Per Leg

| | North Leg | | | East Leg | | | South Leg | | | West Leg | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| AM | 128 | AM | | 179 | 0 | 193 | 93 | AM | | 112 | 0 | 121 |
| NOON | 0 | NOON | | AM | NOON | PM | 0 | NOON | | AM | NOON | PM |
| PM | 55 | PM | | | | | 67 | PM | | | | |

# ITM Peak Hour Summary

Prepared by:

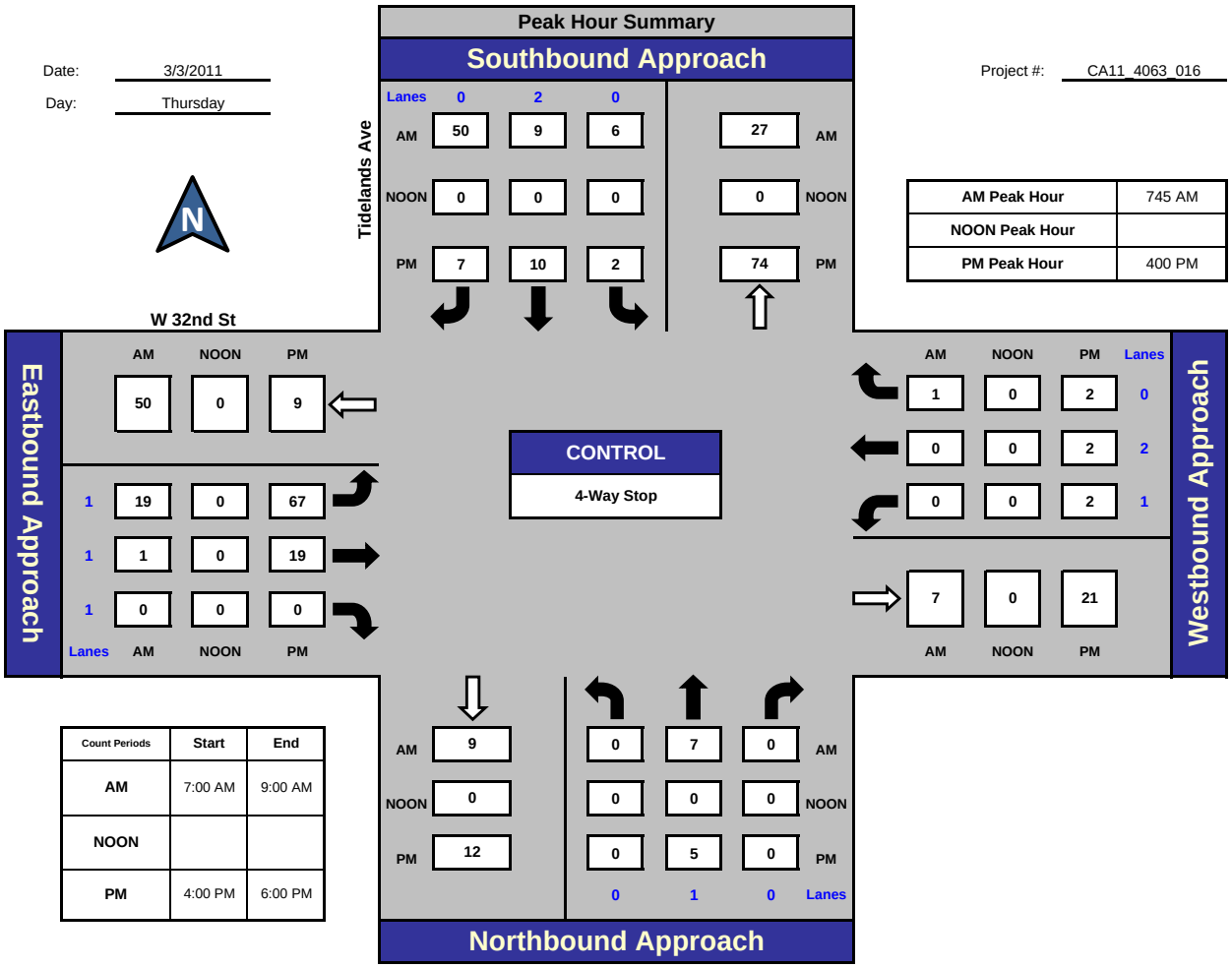
National Data & Surveying Services

## *Tidelands Ave and W 32nd St , City of San Diego*

Date: 3/3/2011

Day: Thursday

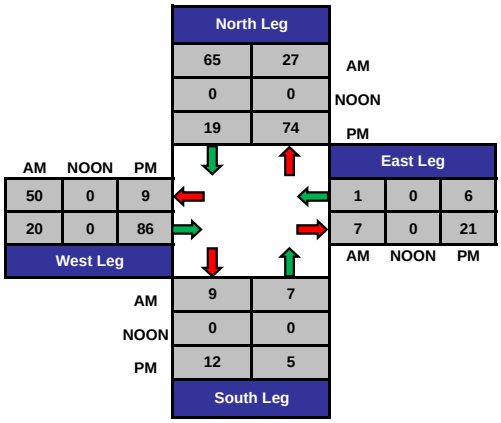
Project #: CA11_4063_016



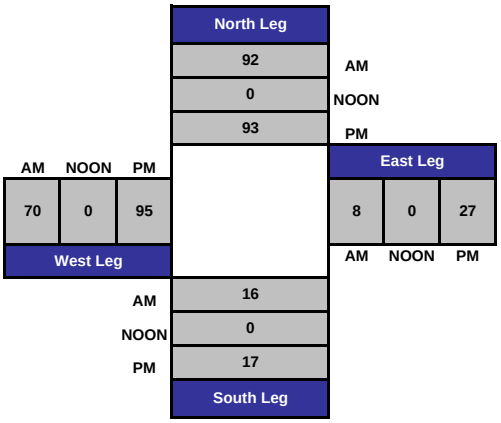

| AM Peak Hour | 745 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Total Ins & Outs




### Total Volume Per Leg



Prepared by NDS/ATD

# VOLUME

Harbor Dr between Park Blvd & Cesar Chavez Pkwy

**Day:** Thursday
**Date:** 3/3/2011

**City:** San Diego
**Project #:** CA11_4064_001

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 7,099 | 5,804 | 12,903 |

| AM Period | NB | SB | EB | | WB | | TOTAL | | PM Period | NB | SB | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | | | 36 | | 9 | | 45 | | 12:00 | | | 99 | | 67 | | 166 | |
| 00:15 | | | 24 | | 12 | | 36 | | 12:15 | | | 140 | | 86 | | 226 | |
| 00:30 | | | 14 | | 7 | | 21 | | 12:30 | | | 98 | | 82 | | 180 | |
| 00:45 | | | 14 | 88 | 4 | 32 | 18 | 120 | 12:45 | | | 109 | 446 | 70 | 305 | 179 | 751 |
| 01:00 | | | 13 | | 6 | | 19 | | 13:00 | | | 78 | | 70 | | 148 | |
| 01:15 | | | 11 | | 6 | | 17 | | 13:15 | | | 99 | | 76 | | 175 | |
| 01:30 | | | 5 | | 5 | | 10 | | 13:30 | | | 115 | | 76 | | 191 | |
| 01:45 | | | 8 | 37 | 7 | 24 | 15 | 61 | 13:45 | | | 120 | 412 | 69 | 291 | 189 | 703 |
| 02:00 | | | 7 | | 4 | | 11 | | 14:00 | | | 115 | | 73 | | 188 | |
| 02:15 | | | 7 | | 4 | | 11 | | 14:15 | | | 102 | | 91 | | 193 | |
| 02:30 | | | 1 | | 3 | | 4 | | 14:30 | | | 152 | | 94 | | 246 | |
| 02:45 | | | 2 | 17 | 6 | 17 | 8 | 34 | 14:45 | | | 133 | 502 | 117 | 375 | 250 | 877 |
| 03:00 | | | 1 | | 6 | | 7 | | 15:00 | | | 107 | | 95 | | 202 | |
| 03:15 | | | 5 | | 9 | | 14 | | 15:15 | | | 124 | | 89 | | 213 | |
| 03:30 | | | 2 | | 6 | | 8 | | 15:30 | | | 156 | | 94 | | 250 | |
| 03:45 | | | 1 | 9 | 17 | 38 | 18 | 47 | 15:45 | | | 147 | 534 | 113 | 391 | 260 | 925 |
| 04:00 | | | 9 | | 15 | | 24 | | 16:00 | | | 184 | | 93 | | 277 | |
| 04:15 | | | 9 | | 19 | | 28 | | 16:15 | | | 181 | | 91 | | 272 | |
| 04:30 | | | 12 | | 40 | | 52 | | 16:30 | | | 278 | | 108 | | 386 | |
| 04:45 | | | 18 | 48 | 43 | 117 | 61 | 165 | 16:45 | | | 258 | 901 | 74 | 366 | 332 | 1267 |
| 05:00 | | | 14 | | 35 | | 49 | | 17:00 | | | 240 | | 96 | | 336 | |
| 05:15 | | | 32 | | 50 | | 82 | | 17:15 | | | 252 | | 89 | | 341 | |
| 05:30 | | | 39 | | 62 | | 101 | | 17:30 | | | 208 | | 78 | | 286 | |
| 05:45 | | | 55 | 140 | 74 | 221 | 129 | 361 | 17:45 | | | 153 | 853 | 81 | 344 | 234 | 1197 |
| 06:00 | | | 65 | | 56 | | 121 | | 18:00 | | | 116 | | 70 | | 186 | |
| 06:15 | | | 64 | | 97 | | 161 | | 18:15 | | | 83 | | 66 | | 149 | |
| 06:30 | | | 63 | | 130 | | 193 | | 18:30 | | | 72 | | 51 | | 123 | |
| 06:45 | | | 50 | 242 | 134 | 417 | 184 | 659 | 18:45 | | | 64 | 335 | 52 | 239 | 116 | 574 |
| 07:00 | | | 76 | | 134 | | 210 | | 19:00 | | | 71 | | 37 | | 108 | |
| 07:15 | | | 55 | | 183 | | 238 | | 19:15 | | | 54 | | 36 | | 90 | |
| 07:30 | | | 92 | | 206 | | 298 | | 19:30 | | | 57 | | 35 | | 92 | |
| 07:45 | | | 74 | 297 | 199 | 722 | 273 | 1019 | 19:45 | | | 47 | 229 | 31 | 139 | 78 | 368 |
| 08:00 | | | 51 | | 160 | | 211 | | 20:00 | | | 49 | | 30 | | 79 | |
| 08:15 | | | 65 | | 121 | | 186 | | 20:15 | | | 32 | | 36 | | 68 | |
| 08:30 | | | 61 | | 92 | | 153 | | 20:30 | | | 38 | | 28 | | 66 | |
| 08:45 | | | 67 | 244 | 102 | 475 | 169 | 719 | 20:45 | | | 45 | 164 | 23 | 117 | 68 | 281 |
| 09:00 | | | 85 | | 79 | | 164 | | 21:00 | | | 42 | | 31 | | 73 | |
| 09:15 | | | 66 | | 74 | | 140 | | 21:15 | | | 60 | | 27 | | 87 | |
| 09:30 | | | 76 | | 75 | | 151 | | 21:30 | | | 36 | | 23 | | 59 | |
| 09:45 | | | 77 | 304 | 92 | 320 | 169 | 624 | 21:45 | | | 40 | 178 | 29 | 110 | 69 | 288 |
| 10:00 | | | 84 | | 68 | | 152 | | 22:00 | | | 52 | | 20 | | 72 | |
| 10:15 | | | 89 | | 54 | | 143 | | 22:15 | | | 44 | | 23 | | 67 | |
| 10:30 | | | 74 | | 73 | | 147 | | 22:30 | | | 46 | | 31 | | 77 | |
| 10:45 | | | 95 | 342 | 66 | 261 | 161 | 603 | 22:45 | | | 39 | 181 | 26 | 100 | 65 | 281 |
| 11:00 | | | 76 | | 79 | | 155 | | 23:00 | | | 53 | | 16 | | 69 | |
| 11:15 | | | 80 | | 84 | | 164 | | 23:15 | | | 36 | | 13 | | 49 | |
| 11:30 | | | 130 | | 81 | | 211 | | 23:30 | | | 75 | | 17 | | 92 | |
| 11:45 | | | 105 | 391 | 81 | 325 | 186 | 716 | 23:45 | | | 41 | 205 | 12 | 58 | 53 | 263 |
| **TOTALS** | | | | 2159 | | 2969 | | **5128** | **TOTALS** | | | | 4940 | | 2835 | | **7775** |
| **SPLIT %** | | | | 42.1% | | 57.9% | | **39.7%** | **SPLIT %** | | | | 63.5% | | 36.5% | | **60.3%** |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 7,099 | 5,804 | 12,903 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM Peak Hour** | | | 11:30 | 07:15 | **07:15** | **PM Peak Hour** | | | 16:30 | 15:45 | **16:30** |
| **AM Pk Volume** | | | 474 | 748 | **1020** | **PM Pk Volume** | | | 1028 | 405 | **1395** |
| **Pk Hr Factor** | | | 0.846 | 0.908 | **0.856** | **Pk Hr Factor** | | | 0.924 | 0.896 | **0.903** |
| **7 - 9 Volume** | 0 | 0 | 541 | 1197 | **1738** | **4 - 6 Volume** | 0 | 0 | 1754 | 710 | **2464** |
| **7 - 9 Peak Hour** | | | 07:00 | 07:15 | **07:15** | **4 - 6 Peak Hour** | | | 16:30 | 16:15 | **16:30** |
| **7 - 9 Pk Volume** | 0 | 0 | 297 | 748 | **1020** | **4 - 6 Pk Volume** | 0 | 0 | 1028 | 369 | **1395** |
| **Pk Hr Factor** | 0.000 | 0.000 | 0.807 | 0.908 | **0.856** | **Pk Hr Factor** | 0.000 | 0.000 | 0.924 | 0.854 | **0.903** |

Prepared by NDS/ATD

# VOLUME

Harbor Dr between Cesar Chavez Pkwy & Sampson St

**Day:** Tuesday
**Date:** 3/8/2011

**City:** San Diego
**Project #:** CA11_4064_002

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 5,401 | 3,739 | 9,140 |

| AM Period | NB | SB | EB | | WB | | TOTAL | | PM Period | NB | SB | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | | | 19 | | 14 | | 33 | | 12:00 | | | 88 | | 50 | | 138 | |
| 00:15 | | | 22 | | 12 | | 34 | | 12:15 | | | 63 | | 53 | | 116 | |
| 00:30 | | | 20 | | 12 | | 32 | | 12:30 | | | 77 | | 53 | | 130 | |
| 00:45 | | | 17 | 78 | 9 | 47 | 26 | 125 | 12:45 | | | 67 | 295 | 38 | 194 | 105 | 489 |
| 01:00 | | | 21 | | 10 | | 31 | | 13:00 | | | 60 | | 47 | | 107 | |
| 01:15 | | | 19 | | 12 | | 31 | | 13:15 | | | 67 | | 54 | | 121 | |
| 01:30 | | | 18 | | 12 | | 30 | | 13:30 | | | 57 | | 62 | | 119 | |
| 01:45 | | | 12 | 70 | 10 | 44 | 22 | 114 | 13:45 | | | 65 | 249 | 46 | 209 | 111 | 458 |
| 02:00 | | | 14 | | 9 | | 23 | | 14:00 | | | 73 | | 40 | | 113 | |
| 02:15 | | | 12 | | 6 | | 18 | | 14:15 | | | 95 | | 53 | | 148 | |
| 02:30 | | | 11 | | 7 | | 18 | | 14:30 | | | 75 | | 66 | | 141 | |
| 02:45 | | | 7 | 44 | 2 | 24 | 9 | 68 | 14:45 | | | 104 | 347 | 77 | 236 | 181 | 583 |
| 03:00 | | | 2 | | 10 | | 12 | | 15:00 | | | 104 | | 77 | | 181 | |
| 03:15 | | | 3 | | 1 | | 4 | | 15:15 | | | 77 | | 68 | | 145 | |
| 03:30 | | | 2 | | 2 | | 4 | | 15:30 | | | 95 | | 79 | | 174 | |
| 03:45 | | | 9 | 16 | 3 | 16 | 12 | 32 | 15:45 | | | 89 | 365 | 66 | 290 | 155 | 655 |
| 04:00 | | | 13 | | 16 | | 29 | | 16:00 | | | 133 | | 50 | | 183 | |
| 04:15 | | | 17 | | 6 | | 23 | | 16:15 | | | 145 | | 50 | | 195 | |
| 04:30 | | | 19 | | 15 | | 34 | | 16:30 | | | 171 | | 57 | | 228 | |
| 04:45 | | | 25 | 74 | 10 | 47 | 35 | 121 | 16:45 | | | 172 | 621 | 46 | 203 | 218 | 824 |
| 05:00 | | | 29 | | 17 | | 46 | | 17:00 | | | 191 | | 46 | | 237 | |
| 05:15 | | | 49 | | 19 | | 68 | | 17:15 | | | 208 | | 49 | | 257 | |
| 05:30 | | | 91 | | 27 | | 118 | | 17:30 | | | 185 | | 47 | | 232 | |
| 05:45 | | | 95 | 264 | 25 | 88 | 120 | 352 | 17:45 | | | 111 | 695 | 30 | 172 | 141 | 867 |
| 06:00 | | | 90 | | 43 | | 133 | | 18:00 | | | 122 | | 32 | | 154 | |
| 06:15 | | | 80 | | 41 | | 121 | | 18:15 | | | 68 | | 20 | | 88 | |
| 06:30 | | | 82 | | 67 | | 149 | | 18:30 | | | 47 | | 28 | | 75 | |
| 06:45 | | | 58 | 310 | 63 | 214 | 121 | 524 | 18:45 | | | 41 | 278 | 23 | 103 | 64 | 381 |
| 07:00 | | | 44 | | 71 | | 115 | | 19:00 | | | 32 | | 33 | | 65 | |
| 07:15 | | | 73 | | 130 | | 203 | | 19:15 | | | 37 | | 19 | | 56 | |
| 07:30 | | | 47 | | 136 | | 183 | | 19:30 | | | 21 | | 23 | | 44 | |
| 07:45 | | | 62 | 226 | 121 | 458 | 183 | 684 | 19:45 | | | 32 | 122 | 26 | 101 | 58 | 223 |
| 08:00 | | | 42 | | 131 | | 173 | | 20:00 | | | 41 | | 15 | | 56 | |
| 08:15 | | | 45 | | 142 | | 187 | | 20:15 | | | 18 | | 14 | | 32 | |
| 08:30 | | | 57 | | 92 | | 149 | | 20:30 | | | 28 | | 18 | | 46 | |
| 08:45 | | | 65 | 209 | 74 | 439 | 139 | 648 | 20:45 | | | 15 | 102 | 9 | 56 | 24 | 158 |
| 09:00 | | | 58 | | 46 | | 104 | | 21:00 | | | 20 | | 22 | | 42 | |
| 09:15 | | | 45 | | 49 | | 94 | | 21:15 | | | 29 | | 24 | | 53 | |
| 09:30 | | | 76 | | 43 | | 119 | | 21:30 | | | 20 | | 9 | | 29 | |
| 09:45 | | | 58 | 237 | 55 | 193 | 113 | 430 | 21:45 | | | 15 | 84 | 16 | 71 | 31 | 155 |
| 10:00 | | | 76 | | 41 | | 117 | | 22:00 | | | 22 | | 21 | | 43 | |
| 10:15 | | | 68 | | 63 | | 131 | | 22:15 | | | 25 | | 6 | | 31 | |
| 10:30 | | | 72 | | 53 | | 125 | | 22:30 | | | 16 | | 15 | | 31 | |
| 10:45 | | | 72 | 288 | 60 | 217 | 132 | 505 | 22:45 | | | 26 | 89 | 12 | 54 | 38 | 143 |
| 11:00 | | | 62 | | 71 | | 133 | | 23:00 | | | 24 | | 10 | | 34 | |
| 11:15 | | | 59 | | 45 | | 104 | | 23:15 | | | 14 | | 5 | | 19 | |
| 11:30 | | | 64 | | 59 | | 123 | | 23:30 | | | 23 | | 6 | | 29 | |
| 11:45 | | | 68 | 253 | 57 | 232 | 125 | 485 | 23:45 | | | 24 | 85 | 10 | 31 | 34 | 116 |
| TOTALS | | | | 2069 | | 2019 | | 4088 | TOTALS | | | | 3332 | | 1720 | | 5052 |
| SPLIT % | | | | 50.6% | | 49.4% | | 44.7% | SPLIT % | | | | 66.0% | | 34.0% | | 55.3% |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 5,401 | 3,739 | 9,140 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM Peak Hour | | | | 05:30 | 07:30 | 07:15 | PM Peak Hour | | | | 16:45 | 14:45 | 16:45 |
| AM Pk Volume | | | | 356 | 530 | 742 | PM Pk Volume | | | | 756 | 301 | 944 |
| Pk Hr Factor | | | | 0.937 | 0.933 | 0.914 | Pk Hr Factor | | | | 0.909 | 0.953 | 0.918 |
| 7 - 9 Volume | 0 | 0 | | 435 | 897 | 1332 | 4 - 6 Volume | 0 | 0 | | 1316 | 375 | 1691 |
| 7 - 9 Peak Hour | | | | 07:00 | 07:30 | 07:15 | 4 - 6 Peak Hour | | | | 16:45 | 16:00 | 16:45 |
| 7 - 9 Pk Volume | 0 | 0 | | 226 | 530 | 742 | 4 - 6 Pk Volume | 0 | 0 | | 756 | 203 | 944 |
| Pk Hr Factor | 0.000 | 0.000 | | 0.774 | 0.933 | 0.914 | Pk Hr Factor | 0.000 | 0.000 | | 0.909 | 0.890 | 0.918 |

Prepared by NDS/ATD

# VOLUME

Harbor Dr between Sampson St & 28th St

**Day:** Thursday
**Date:** 3/3/2011

**City:** San Diego
**Project #:** CA11_4064_003

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 5,888 | 4,197 | 10,085 |

| AM Period | NB | SB | EB | | WB | | TOTAL | | PM Period | NB | SB | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | | | 32 | | 11 | | 43 | | 12:00 | | | 69 | | 72 | | 141 | |
| 00:15 | | | 11 | | 8 | | 19 | | 12:15 | | | 79 | | 71 | | 150 | |
| 00:30 | | | 24 | | 17 | | 41 | | 12:30 | | | 65 | | 74 | | 139 | |
| 00:45 | | | 11 | 78 | 12 | 48 | 23 | 126 | 12:45 | | | 70 | 283 | 48 | 265 | 118 | 548 |
| 01:00 | | | 8 | | 8 | | 16 | | 13:00 | | | 80 | | 41 | | 121 | |
| 01:15 | | | 5 | | 3 | | 8 | | 13:15 | | | 73 | | 66 | | 139 | |
| 01:30 | | | 32 | | 5 | | 37 | | 13:30 | | | 108 | | 51 | | 159 | |
| 01:45 | | | 10 | 55 | 6 | 22 | 16 | 77 | 13:45 | | | 82 | 343 | 59 | 217 | 141 | 560 |
| 02:00 | | | 9 | | 3 | | 12 | | 14:00 | | | 93 | | 76 | | 169 | |
| 02:15 | | | 11 | | 0 | | 11 | | 14:15 | | | 91 | | 85 | | 176 | |
| 02:30 | | | 6 | | 4 | | 10 | | 14:30 | | | 175 | | 95 | | 270 | |
| 02:45 | | | 9 | 35 | 1 | 8 | 10 | 43 | 14:45 | | | 237 | 596 | 73 | 329 | 310 | 925 |
| 03:00 | | | 1 | | 4 | | 5 | | 15:00 | | | 165 | | 98 | | 263 | |
| 03:15 | | | 3 | | 5 | | 8 | | 15:15 | | | 142 | | 84 | | 226 | |
| 03:30 | | | 3 | | 2 | | 5 | | 15:30 | | | 153 | | 76 | | 229 | |
| 03:45 | | | 1 | 8 | 14 | 25 | 15 | 33 | 15:45 | | | 149 | 609 | 63 | 321 | 212 | 930 |
| 04:00 | | | 7 | | 12 | | 19 | | 16:00 | | | 146 | | 42 | | 188 | |
| 04:15 | | | 6 | | 24 | | 30 | | 16:15 | | | 132 | | 32 | | 164 | |
| 04:30 | | | 10 | | 53 | | 63 | | 16:30 | | | 189 | | 46 | | 235 | |
| 04:45 | | | 14 | 37 | 41 | 130 | 55 | 167 | 16:45 | | | 174 | 641 | 39 | 159 | 213 | 800 |
| 05:00 | | | 20 | | 54 | | 74 | | 17:00 | | | 209 | | 38 | | 247 | |
| 05:15 | | | 47 | | 60 | | 107 | | 17:15 | | | 187 | | 34 | | 221 | |
| 05:30 | | | 66 | | 72 | | 138 | | 17:30 | | | 156 | | 40 | | 196 | |
| 05:45 | | | 91 | 224 | 46 | 232 | 137 | 456 | 17:45 | | | 99 | 651 | 34 | 146 | 133 | 797 |
| 06:00 | | | 104 | | 41 | | 145 | | 18:00 | | | 78 | | 34 | | 112 | |
| 06:15 | | | 97 | | 70 | | 167 | | 18:15 | | | 40 | | 22 | | 62 | |
| 06:30 | | | 80 | | 81 | | 161 | | 18:30 | | | 34 | | 25 | | 59 | |
| 06:45 | | | 53 | 334 | 75 | 267 | 128 | 601 | 18:45 | | | 32 | 184 | 29 | 110 | 61 | 294 |
| 07:00 | | | 50 | | 89 | | 139 | | 19:00 | | | 33 | | 19 | | 52 | |
| 07:15 | | | 53 | | 127 | | 180 | | 19:15 | | | 37 | | 19 | | 56 | |
| 07:30 | | | 46 | | 148 | | 194 | | 19:30 | | | 48 | | 18 | | 66 | |
| 07:45 | | | 62 | 211 | 177 | 541 | 239 | 752 | 19:45 | | | 23 | 141 | 22 | 78 | 45 | 219 |
| 08:00 | | | 43 | | 125 | | 168 | | 20:00 | | | 33 | | 22 | | 55 | |
| 08:15 | | | 51 | | 89 | | 140 | | 20:15 | | | 25 | | 13 | | 38 | |
| 08:30 | | | 65 | | 76 | | 141 | | 20:30 | | | 19 | | 12 | | 31 | |
| 08:45 | | | 53 | 212 | 57 | 347 | 110 | 559 | 20:45 | | | 22 | 99 | 15 | 62 | 37 | 161 |
| 09:00 | | | 66 | | 58 | | 124 | | 21:00 | | | 31 | | 15 | | 46 | |
| 09:15 | | | 70 | | 67 | | 137 | | 21:15 | | | 17 | | 11 | | 28 | |
| 09:30 | | | 78 | | 61 | | 139 | | 21:30 | | | 18 | | 12 | | 30 | |
| 09:45 | | | 52 | 266 | 58 | 244 | 110 | 510 | 21:45 | | | 18 | 84 | 17 | 55 | 35 | 139 |
| 10:00 | | | 72 | | 68 | | 140 | | 22:00 | | | 28 | | 12 | | 40 | |
| 10:15 | | | 67 | | 57 | | 124 | | 22:15 | | | 22 | | 14 | | 36 | |
| 10:30 | | | 76 | | 53 | | 129 | | 22:30 | | | 40 | | 7 | | 47 | |
| 10:45 | | | 76 | 291 | 57 | 235 | 133 | 526 | 22:45 | | | 14 | 104 | 11 | 44 | 25 | 148 |
| 11:00 | | | 81 | | 75 | | 156 | | 23:00 | | | 19 | | 6 | | 25 | |
| 11:15 | | | 80 | | 61 | | 141 | | 23:15 | | | 17 | | 10 | | 27 | |
| 11:30 | | | 62 | | 79 | | 141 | | 23:30 | | | 50 | | 10 | | 60 | |
| 11:45 | | | 67 | 290 | 60 | 275 | 127 | 565 | 23:45 | | | 26 | 112 | 11 | 37 | 37 | 149 |
| **TOTALS** | | | | 2041 | | 2374 | | **4415** | **TOTALS** | | | | 3847 | | 1823 | | **5670** |
| **SPLIT %** | | | | 46.2% | | 53.8% | | **43.8%** | **SPLIT %** | | | | 67.8% | | 32.2% | | **56.2%** |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 5,888 | 4,197 | 10,085 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM Peak Hour** | | | 05:45 | 07:15 | **07:15** | **PM Peak Hour** | | | 16:30 | 14:15 | **14:30** |
| **AM Pk Volume** | | | 372 | 577 | **781** | **PM Pk Volume** | | | 759 | 351 | **1069** |
| **Pk Hr Factor** | | | 0.894 | 0.815 | **0.817** | **Pk Hr Factor** | | | 0.908 | 0.895 | **0.862** |
| **7 - 9 Volume** | 0 | 0 | 423 | 888 | **1311** | **4 - 6 Volume** | 0 | 0 | 1292 | 305 | **1597** |
| **7 - 9 Peak Hour** | | | 07:45 | 07:15 | **07:15** | **4 - 6 Peak Hour** | | | 16:30 | 16:00 | **16:30** |
| **7 - 9 Pk Volume** | 0 | 0 | 221 | 577 | **781** | **4 - 6 Pk Volume** | 0 | 0 | 759 | 159 | **916** |
| **Pk Hr Factor** | 0.000 | 0.000 | 0.850 | 0.815 | **0.817** | **Pk Hr Factor** | 0.000 | 0.000 | 0.908 | 0.864 | **0.927** |

Prepared by NDS/ATD

# VOLUME

Harbor Dr between 28th St & 32nd St

**Day:** Thursday
**Date:** 3/3/2011

**City:** San Diego
**Project #:** CA11_4064_004

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 8,109 | 6,131 | 14,240 |

| AM Period | NB | SB | EB | | WB | | TOTAL | | PM Period | NB | SB | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | | | 30 | | 6 | | 36 | | 12:00 | | | 87 | | 99 | | 186 | |
| 00:15 | | | 17 | | 12 | | 29 | | 12:15 | | | 105 | | 89 | | 194 | |
| 00:30 | | | 43 | | 7 | | 50 | | 12:30 | | | 84 | | 112 | | 196 | |
| 00:45 | | | 17 | 107 | 4 | 29 | 21 | 136 | 12:45 | | | 125 | 401 | 73 | 373 | 198 | 774 |
| 01:00 | | | 14 | | 0 | | 14 | | 13:00 | | | 77 | | 90 | | 167 | |
| 01:15 | | | 3 | | 4 | | 7 | | 13:15 | | | 97 | | 100 | | 197 | |
| 01:30 | | | 11 | | 3 | | 14 | | 13:30 | | | 123 | | 86 | | 209 | |
| 01:45 | | | 7 | 35 | 4 | 11 | 11 | 46 | 13:45 | | | 94 | 391 | 92 | 368 | 186 | 759 |
| 02:00 | | | 7 | | 4 | | 11 | | 14:00 | | | 98 | | 112 | | 210 | |
| 02:15 | | | 12 | | 4 | | 16 | | 14:15 | | | 111 | | 113 | | 224 | |
| 02:30 | | | 5 | | 6 | | 11 | | 14:30 | | | 234 | | 116 | | 350 | |
| 02:45 | | | 2 | 26 | 9 | 23 | 11 | 49 | 14:45 | | | 324 | 767 | 83 | 424 | 407 | 1191 |
| 03:00 | | | 6 | | 9 | | 15 | | 15:00 | | | 327 | | 85 | | 412 | |
| 03:15 | | | 3 | | 10 | | 13 | | 15:15 | | | 300 | | 107 | | 407 | |
| 03:30 | | | 4 | | 12 | | 16 | | 15:30 | | | 230 | | 106 | | 336 | |
| 03:45 | | | 6 | 19 | 33 | 64 | 39 | 83 | 15:45 | | | 226 | 1083 | 72 | 370 | 298 | 1453 |
| 04:00 | | | 24 | | 41 | | 65 | | 16:00 | | | 221 | | 66 | | 287 | |
| 04:15 | | | 16 | | 53 | | 69 | | 16:15 | | | 230 | | 68 | | 298 | |
| 04:30 | | | 28 | | 79 | | 107 | | 16:30 | | | 225 | | 68 | | 293 | |
| 04:45 | | | 46 | 114 | 104 | 277 | 150 | 391 | 16:45 | | | 267 | 943 | 65 | 267 | 332 | 1210 |
| 05:00 | | | 51 | | 159 | | 210 | | 17:00 | | | 248 | | 88 | | 336 | |
| 05:15 | | | 76 | | 187 | | 263 | | 17:15 | | | 268 | | 61 | | 329 | |
| 05:30 | | | 81 | | 184 | | 265 | | 17:30 | | | 218 | | 56 | | 274 | |
| 05:45 | | | 132 | 340 | 134 | 664 | 266 | 1004 | 17:45 | | | 152 | 886 | 58 | 263 | 210 | 1149 |
| 06:00 | | | 148 | | 88 | | 236 | | 18:00 | | | 108 | | 69 | | 177 | |
| 06:15 | | | 155 | | 77 | | 232 | | 18:15 | | | 70 | | 48 | | 118 | |
| 06:30 | | | 126 | | 96 | | 222 | | 18:30 | | | 43 | | 35 | | 78 | |
| 06:45 | | | 89 | 518 | 100 | 361 | 189 | 879 | 18:45 | | | 33 | 254 | 34 | 186 | 67 | 440 |
| 07:00 | | | 80 | | 117 | | 197 | | 19:00 | | | 35 | | 25 | | 60 | |
| 07:15 | | | 66 | | 149 | | 215 | | 19:15 | | | 47 | | 36 | | 83 | |
| 07:30 | | | 67 | | 173 | | 240 | | 19:30 | | | 45 | | 21 | | 66 | |
| 07:45 | | | 64 | 277 | 183 | 622 | 247 | 899 | 19:45 | | | 40 | 167 | 23 | 105 | 63 | 272 |
| 08:00 | | | 73 | | 132 | | 205 | | 20:00 | | | 38 | | 25 | | 63 | |
| 08:15 | | | 47 | | 111 | | 158 | | 20:15 | | | 28 | | 20 | | 48 | |
| 08:30 | | | 57 | | 95 | | 152 | | 20:30 | | | 22 | | 17 | | 39 | |
| 08:45 | | | 91 | 268 | 69 | 407 | 160 | 675 | 20:45 | | | 24 | 112 | 23 | 85 | 47 | 197 |
| 09:00 | | | 85 | | 76 | | 161 | | 21:00 | | | 33 | | 23 | | 56 | |
| 09:15 | | | 79 | | 76 | | 155 | | 21:15 | | | 16 | | 15 | | 31 | |
| 09:30 | | | 88 | | 80 | | 168 | | 21:30 | | | 20 | | 16 | | 36 | |
| 09:45 | | | 78 | 330 | 79 | 311 | 157 | 641 | 21:45 | | | 15 | 84 | 18 | 72 | 33 | 156 |
| 10:00 | | | 81 | | 95 | | 176 | | 22:00 | | | 34 | | 19 | | 53 | |
| 10:15 | | | 94 | | 88 | | 182 | | 22:15 | | | 21 | | 20 | | 41 | |
| 10:30 | | | 85 | | 74 | | 159 | | 22:30 | | | 33 | | 8 | | 41 | |
| 10:45 | | | 102 | 362 | 102 | 359 | 204 | 721 | 22:45 | | | 15 | 103 | 13 | 60 | 28 | 163 |
| 11:00 | | | 96 | | 104 | | 200 | | 23:00 | | | 25 | | 13 | | 38 | |
| 11:15 | | | 117 | | 104 | | 221 | | 23:15 | | | 19 | | 14 | | 33 | |
| 11:30 | | | 85 | | 92 | | 177 | | 23:30 | | | 54 | | 8 | | 62 | |
| 11:45 | | | 99 | 397 | 88 | 388 | 187 | 785 | 23:45 | | | 27 | 125 | 7 | 42 | 34 | 167 |
| TOTALS | | | | 2793 | | 3516 | | 6309 | TOTALS | | | | 5316 | | 2615 | | 7931 |
| SPLIT % | | | | 44.3% | | 55.7% | | 44.3% | SPLIT % | | | | 67.0% | | 33.0% | | 55.7% |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 8,109 | 6,131 | 14,240 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM Peak Hour | | | 05:45 | 05:00 | 05:15 | PM Peak Hour | | | 14:30 | 13:45 | 14:30 |
| AM Pk Volume | | | 561 | 664 | 1030 | PM Pk Volume | | | 1185 | 433 | 1576 |
| Pk Hr Factor | | | 0.905 | 0.888 | 0.968 | Pk Hr Factor | | | 0.906 | 0.933 | 0.956 |
| 7 - 9 Volume | 0 | 0 | 545 | 1029 | 1574 | 4 - 6 Volume | 0 | 0 | 1829 | 530 | 2359 |
| 7 - 9 Peak Hour | | | 07:00 | 07:15 | 07:15 | 4 - 6 Peak Hour | | | 16:30 | 16:15 | 16:30 |
| 7 - 9 Pk Volume | 0 | 0 | 277 | 637 | 907 | 4 - 6 Pk Volume | 0 | 0 | 1008 | 289 | 1290 |
| Pk Hr Factor | 0.000 | 0.000 | 0.866 | 0.870 | 0.918 | Pk Hr Factor | 0.000 | 0.000 | 0.940 | 0.821 | 0.960 |

Prepared by NDS/ATD

# VOLUME

28th St between Harbor Dr & Main St

**Day:** Thursday
**Date:** 3/3/2011

**City:** San Diego
**Project #:** CA11_4064_005

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 7,611 | 7,620 | 0 | 0 | 15,231 |

| AM Period | NB | | SB | | EB | WB | TOTAL | | PM Period | NB | | SB | | EB | WB | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | 20 | | 11 | | | | 31 | | 12:00 | 171 | | 130 | | | | 301 | |
| 00:15 | 8 | | 12 | | | | 20 | | 12:15 | 152 | | 164 | | | | 316 | |
| 00:30 | 53 | | 5 | | | | 58 | | 12:30 | 136 | | 152 | | | | 288 | |
| 00:45 | 22 | 103 | 10 | 38 | | | 32 | 141 | 12:45 | 183 | 642 | 150 | 596 | | | 333 | 1238 |
| 01:00 | 2 | | 11 | | | | 13 | | 13:00 | 160 | | 115 | | | | 275 | |
| 01:15 | 11 | | 3 | | | | 14 | | 13:15 | 163 | | 139 | | | | 302 | |
| 01:30 | 29 | | 6 | | | | 35 | | 13:30 | 165 | | 126 | | | | 291 | |
| 01:45 | 9 | 51 | 12 | 32 | | | 21 | 83 | 13:45 | 160 | 648 | 114 | 494 | | | 274 | 1142 |
| 02:00 | 16 | | 1 | | | | 17 | | 14:00 | 141 | | 106 | | | | 247 | |
| 02:15 | 6 | | 4 | | | | 10 | | 14:15 | 131 | | 97 | | | | 228 | |
| 02:30 | 11 | | 7 | | | | 18 | | 14:30 | 163 | | 99 | | | | 262 | |
| 02:45 | 15 | 48 | 7 | 19 | | | 22 | 67 | 14:45 | 174 | 609 | 108 | 410 | | | 282 | 1019 |
| 03:00 | 5 | | 6 | | | | 11 | | 15:00 | 175 | | 89 | | | | 264 | |
| 03:15 | 8 | | 14 | | | | 22 | | 15:15 | 179 | | 110 | | | | 289 | |
| 03:30 | 11 | | 22 | | | | 33 | | 15:30 | 157 | | 120 | | | | 277 | |
| 03:45 | 5 | 29 | 32 | 74 | | | 37 | 103 | 15:45 | 143 | 654 | 103 | 422 | | | 246 | 1076 |
| 04:00 | 12 | | 31 | | | | 43 | | 16:00 | 181 | | 80 | | | | 261 | |
| 04:15 | 16 | | 49 | | | | 65 | | 16:15 | 132 | | 95 | | | | 227 | |
| 04:30 | 9 | | 79 | | | | 88 | | 16:30 | 160 | | 89 | | | | 249 | |
| 04:45 | 11 | 48 | 96 | 255 | | | 107 | 303 | 16:45 | 121 | 594 | 78 | 342 | | | 199 | 936 |
| 05:00 | 19 | | 83 | | | | 102 | | 17:00 | 134 | | 59 | | | | 193 | |
| 05:15 | 26 | | 150 | | | | 176 | | 17:15 | 130 | | 92 | | | | 222 | |
| 05:30 | 52 | | 242 | | | | 294 | | 17:30 | 73 | | 79 | | | | 152 | |
| 05:45 | 61 | 158 | 278 | 753 | | | 339 | 911 | 17:45 | 87 | 424 | 82 | 312 | | | 169 | 736 |
| 06:00 | 58 | | 194 | | | | 252 | | 18:00 | 87 | | 77 | | | | 164 | |
| 06:15 | 58 | | 209 | | | | 267 | | 18:15 | 91 | | 52 | | | | 143 | |
| 06:30 | 53 | | 172 | | | | 225 | | 18:30 | 71 | | 38 | | | | 109 | |
| 06:45 | 55 | 224 | 149 | 724 | | | 204 | 948 | 18:45 | 84 | 333 | 51 | 218 | | | 135 | 551 |
| 07:00 | 92 | | 169 | | | | 261 | | 19:00 | 67 | | 38 | | | | 105 | |
| 07:15 | 64 | | 142 | | | | 206 | | 19:15 | 52 | | 35 | | | | 87 | |
| 07:30 | 81 | | 136 | | | | 217 | | 19:30 | 69 | | 43 | | | | 112 | |
| 07:45 | 56 | 293 | 86 | 533 | | | 142 | 826 | 19:45 | 42 | 230 | 45 | 161 | | | 87 | 391 |
| 08:00 | 50 | | 97 | | | | 147 | | 20:00 | 58 | | 25 | | | | 83 | |
| 08:15 | 65 | | 107 | | | | 172 | | 20:15 | 35 | | 24 | | | | 59 | |
| 08:30 | 79 | | 102 | | | | 181 | | 20:30 | 41 | | 33 | | | | 74 | |
| 08:45 | 76 | 270 | 97 | 403 | | | 173 | 673 | 20:45 | 32 | 166 | 22 | 104 | | | 54 | 270 |
| 09:00 | 98 | | 95 | | | | 193 | | 21:00 | 44 | | 27 | | | | 71 | |
| 09:15 | 122 | | 100 | | | | 222 | | 21:15 | 19 | | 18 | | | | 37 | |
| 09:30 | 116 | | 94 | | | | 210 | | 21:30 | 40 | | 21 | | | | 61 | |
| 09:45 | 109 | 445 | 124 | 413 | | | 233 | 858 | 21:45 | 27 | 130 | 30 | 96 | | | 57 | 226 |
| 10:00 | 108 | | 116 | | | | 224 | | 22:00 | 22 | | 23 | | | | 45 | |
| 10:15 | 137 | | 114 | | | | 251 | | 22:15 | 22 | | 18 | | | | 40 | |
| 10:30 | 143 | | 132 | | | | 275 | | 22:30 | 38 | | 13 | | | | 51 | |
| 10:45 | 158 | 546 | 126 | 488 | | | 284 | 1034 | 22:45 | 25 | 107 | 13 | 67 | | | 38 | 174 |
| 11:00 | 209 | | 139 | | | | 348 | | 23:00 | 22 | | 10 | | | | 32 | |
| 11:15 | 159 | | 144 | | | | 303 | | 23:15 | 14 | | 12 | | | | 26 | |
| 11:30 | 206 | | 167 | | | | 373 | | 23:30 | 56 | | 16 | | | | 72 | |
| 11:45 | 175 | 749 | 168 | 618 | | | 343 | 1367 | 23:45 | 18 | 110 | 10 | 48 | | | 28 | 158 |
| **TOTALS** | | 2964 | | 4350 | | | | **7314** | **TOTALS** | | 4647 | | 3270 | | | | **7917** |
| **SPLIT %** | | 40.5% | | 59.5% | | | | **48.0%** | **SPLIT %** | | 58.7% | | 41.3% | | | | **52.0%** |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 7,611 | 7,620 | 0 | 0 | 15,231 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM Peak Hour** | 11:00 | 05:30 | | | | | | **11:00** | **PM Peak Hour** | 14:30 | 12:00 | | | | | | **12:00** |
| **AM Pk Volume** | 749 | 923 | | | | | | **1367** | **PM Pk Volume** | 691 | 596 | | | | | | **1238** |
| **Pk Hr Factor** | 0.896 | 0.830 | | | | | | **0.916** | **Pk Hr Factor** | 0.965 | 0.909 | | | | | | **0.929** |
| **7 - 9 Volume** | 563 | 936 | 0 | 0 | | | | **1499** | **4 - 6 Volume** | 1018 | 654 | 0 | 0 | | | | **1672** |
| **7 - 9 Peak Hour** | 07:00 | 07:00 | | | | | | **07:00** | **4 - 6 Peak Hour** | 16:00 | 16:00 | | | | | | **16:00** |
| **7 - 9 Pk Volume** | 293 | 533 | 0 | 0 | | | | **826** | **4 - 6 Pk Volume** | 594 | 342 | 0 | 0 | | | | **936** |
| **Pk Hr Factor** | 0.796 | 0.788 | 0.000 | 0.000 | | | | **0.791** | **Pk Hr Factor** | 0.820 | 0.900 | 0.000 | 0.000 | | | | **0.897** |

Prepared by NDS/ATD

# VOLUME

28th St between Main St & Boston Ave

**Day:** Thursday
**Date:** 3/3/2011

**City:** San Diego
**Project #:** CA11_4064_006

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 9,671 | 8,783 | 0 | 0 | 18,454 |

| AM Period | NB | | SB | | EB | WB | TOTAL | | PM Period | NB | | SB | | EB | WB | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | 16 | | 21 | | | | 37 | | 12:00 | 189 | | 129 | | | | 318 | |
| 00:15 | 22 | | 20 | | | | 42 | | 12:15 | 175 | | 155 | | | | 330 | |
| 00:30 | 49 | | 15 | | | | 64 | | 12:30 | 172 | | 136 | | | | 308 | |
| 00:45 | 35 | 122 | 13 | 69 | | | 48 | 191 | 12:45 | 175 | 711 | 141 | 561 | | | 316 | 1272 |
| 01:00 | 20 | | 11 | | | | 31 | | 13:00 | 174 | | 138 | | | | 312 | |
| 01:15 | 13 | | 17 | | | | 30 | | 13:15 | 196 | | 153 | | | | 349 | |
| 01:30 | 39 | | 11 | | | | 50 | | 13:30 | 165 | | 117 | | | | 282 | |
| 01:45 | 17 | 89 | 17 | 56 | | | 34 | 145 | 13:45 | 177 | 712 | 129 | 537 | | | 306 | 1249 |
| 02:00 | 17 | | 12 | | | | 29 | | 14:00 | 193 | | 120 | | | | 313 | |
| 02:15 | 17 | | 12 | | | | 29 | | 14:15 | 162 | | 126 | | | | 288 | |
| 02:30 | 9 | | 7 | | | | 16 | | 14:30 | 233 | | 122 | | | | 355 | |
| 02:45 | 18 | 61 | 7 | 38 | | | 25 | 99 | 14:45 | 231 | 819 | 108 | 476 | | | 339 | 1295 |
| 03:00 | 5 | | 9 | | | | 14 | | 15:00 | 251 | | 137 | | | | 388 | |
| 03:15 | 6 | | 22 | | | | 28 | | 15:15 | 224 | | 132 | | | | 356 | |
| 03:30 | 12 | | 33 | | | | 45 | | 15:30 | 239 | | 142 | | | | 381 | |
| 03:45 | 13 | 36 | 29 | 93 | | | 42 | 129 | 15:45 | 178 | 892 | 139 | 550 | | | 317 | 1442 |
| 04:00 | 23 | | 40 | | | | 63 | | 16:00 | 196 | | 135 | | | | 331 | |
| 04:15 | 18 | | 53 | | | | 71 | | 16:15 | 170 | | 159 | | | | 329 | |
| 04:30 | 25 | | 74 | | | | 99 | | 16:30 | 206 | | 150 | | | | 356 | |
| 04:45 | 31 | 97 | 92 | 259 | | | 123 | 356 | 16:45 | 184 | 756 | 138 | 582 | | | 322 | 1338 |
| 05:00 | 29 | | 101 | | | | 130 | | 17:00 | 188 | | 135 | | | | 323 | |
| 05:15 | 31 | | 146 | | | | 177 | | 17:15 | 182 | | 148 | | | | 330 | |
| 05:30 | 67 | | 185 | | | | 252 | | 17:30 | 109 | | 140 | | | | 249 | |
| 05:45 | 72 | 199 | 188 | 620 | | | 260 | 819 | 17:45 | 133 | 612 | 133 | 556 | | | 266 | 1168 |
| 06:00 | 72 | | 159 | | | | 231 | | 18:00 | 135 | | 118 | | | | 253 | |
| 06:15 | 80 | | 149 | | | | 229 | | 18:15 | 116 | | 84 | | | | 200 | |
| 06:30 | 98 | | 155 | | | | 253 | | 18:30 | 99 | | 63 | | | | 162 | |
| 06:45 | 83 | 333 | 150 | 613 | | | 233 | 946 | 18:45 | 116 | 466 | 76 | 341 | | | 192 | 807 |
| 07:00 | 120 | | 155 | | | | 275 | | 19:00 | 94 | | 47 | | | | 141 | |
| 07:15 | 79 | | 144 | | | | 223 | | 19:15 | 79 | | 61 | | | | 140 | |
| 07:30 | 126 | | 130 | | | | 256 | | 19:30 | 74 | | 52 | | | | 126 | |
| 07:45 | 90 | 415 | 121 | 550 | | | 211 | 965 | 19:45 | 64 | 311 | 56 | 216 | | | 120 | 527 |
| 08:00 | 70 | | 111 | | | | 181 | | 20:00 | 62 | | 56 | | | | 118 | |
| 08:15 | 91 | | 136 | | | | 227 | | 20:15 | 70 | | 39 | | | | 109 | |
| 08:30 | 115 | | 127 | | | | 242 | | 20:30 | 59 | | 43 | | | | 102 | |
| 08:45 | 99 | 375 | 131 | 505 | | | 230 | 880 | 20:45 | 54 | 245 | 31 | 169 | | | 85 | 414 |
| 09:00 | 112 | | 114 | | | | 226 | | 21:00 | 50 | | 26 | | | | 76 | |
| 09:15 | 123 | | 137 | | | | 260 | | 21:15 | 45 | | 37 | | | | 82 | |
| 09:30 | 129 | | 112 | | | | 241 | | 21:30 | 45 | | 38 | | | | 83 | |
| 09:45 | 146 | 510 | 146 | 509 | | | 292 | 1019 | 21:45 | 42 | 182 | 30 | 131 | | | 72 | 313 |
| 10:00 | 146 | | 116 | | | | 262 | | 22:00 | 40 | | 38 | | | | 78 | |
| 10:15 | 150 | | 124 | | | | 274 | | 22:15 | 21 | | 32 | | | | 53 | |
| 10:30 | 156 | | 130 | | | | 286 | | 22:30 | 60 | | 27 | | | | 87 | |
| 10:45 | 158 | 610 | 144 | 514 | | | 302 | 1124 | 22:45 | 33 | 154 | 28 | 125 | | | 61 | 279 |
| 11:00 | 191 | | 138 | | | | 329 | | 23:00 | 32 | | 19 | | | | 51 | |
| 11:15 | 215 | | 144 | | | | 359 | | 23:15 | 30 | | 26 | | | | 56 | |
| 11:30 | 197 | | 177 | | | | 374 | | 23:30 | 51 | | 21 | | | | 72 | |
| 11:45 | 221 | 824 | 167 | 626 | | | 388 | 1450 | 23:45 | 27 | 140 | 21 | 87 | | | 48 | 227 |
| TOTALS | | 3671 | | 4452 | | | | 8123 | TOTALS | | 6000 | | 4331 | | | | 10331 |
| SPLIT % | | 45.2% | | 54.8% | | | | 44.0% | SPLIT % | | 58.1% | | 41.9% | | | | 56.0% |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 9,671 | 8,783 | 0 | 0 | 18,454 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM Peak Hour | 11:00 | 05:30 | | | 11:00 | PM Peak Hour | 14:45 | 15:45 | | | 14:45 |
| AM Pk Volume | 824 | 681 | | | 1450 | PM Pk Volume | 945 | 583 | | | 1464 |
| Pk Hr Factor | 0.932 | 0.906 | | | 0.934 | Pk Hr Factor | 0.941 | 0.917 | | | 0.943 |
| 7 - 9 Volume | 790 | 1055 | 0 | 0 | 1845 | 4 - 6 Volume | 1368 | 1138 | 0 | 0 | 2506 |
| 7 - 9 Peak Hour | 07:00 | 07:00 | | | 07:00 | 4 - 6 Peak Hour | 16:30 | 16:00 | | | 16:00 |
| 7 - 9 Pk Volume | 415 | 550 | 0 | 0 | 965 | 4 - 6 Pk Volume | 760 | 582 | 0 | 0 | 1338 |
| Pk Hr Factor | 0.823 | 0.887 | 0.000 | 0.000 | 0.877 | Pk Hr Factor | 0.922 | 0.915 | 0.000 | 0.000 | 0.940 |

Prepared by NDS/ATD

# VOLUME

28th St between Boston Ave & National Ave

**Day:** Thursday
**Date:** 3/3/2011

**City:** San Diego
**Project #:** CA11_4064_007

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 7,943 | 6,673 | 0 | 0 | 14,616 |

| AM Period | NB | | SB | | EB | WB | TOTAL | | PM Period | NB | | SB | | EB | WB | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | 12 | | 13 | | | | 25 | | 12:00 | 157 | | 117 | | | | 274 | |
| 00:15 | 9 | | 22 | | | | 31 | | 12:15 | 147 | | 126 | | | | 273 | |
| 00:30 | 8 | | 9 | | | | 17 | | 12:30 | 135 | | 116 | | | | 251 | |
| 00:45 | 11 | 40 | 14 | 58 | | | 25 | 98 | 12:45 | 150 | 589 | 109 | 468 | | | 259 | 1057 |
| 01:00 | 9 | | 5 | | | | 14 | | 13:00 | 146 | | 117 | | | | 263 | |
| 01:15 | 10 | | 15 | | | | 25 | | 13:15 | 155 | | 106 | | | | 261 | |
| 01:30 | 13 | | 10 | | | | 23 | | 13:30 | 137 | | 123 | | | | 260 | |
| 01:45 | 7 | 39 | 7 | 37 | | | 14 | 76 | 13:45 | 134 | 572 | 114 | 460 | | | 248 | 1032 |
| 02:00 | 8 | | 3 | | | | 11 | | 14:00 | 151 | | 100 | | | | 251 | |
| 02:15 | 12 | | 13 | | | | 25 | | 14:15 | 130 | | 94 | | | | 224 | |
| 02:30 | 6 | | 7 | | | | 13 | | 14:30 | 164 | | 121 | | | | 285 | |
| 02:45 | 4 | 30 | 9 | 32 | | | 13 | 62 | 14:45 | 184 | 629 | 108 | 423 | | | 292 | 1052 |
| 03:00 | 6 | | 6 | | | | 12 | | 15:00 | 206 | | 120 | | | | 326 | |
| 03:15 | 5 | | 27 | | | | 32 | | 15:15 | 222 | | 117 | | | | 339 | |
| 03:30 | 11 | | 26 | | | | 37 | | 15:30 | 169 | | 135 | | | | 304 | |
| 03:45 | 5 | 27 | 21 | 80 | | | 26 | 107 | 15:45 | 171 | 768 | 122 | 494 | | | 293 | 1262 |
| 04:00 | 6 | | 25 | | | | 31 | | 16:00 | 161 | | 115 | | | | 276 | |
| 04:15 | 8 | | 33 | | | | 41 | | 16:15 | 150 | | 112 | | | | 262 | |
| 04:30 | 20 | | 54 | | | | 74 | | 16:30 | 161 | | 98 | | | | 259 | |
| 04:45 | 24 | 58 | 55 | 167 | | | 79 | 225 | 16:45 | 148 | 620 | 94 | 419 | | | 242 | 1039 |
| 05:00 | 20 | | 69 | | | | 89 | | 17:00 | 147 | | 101 | | | | 248 | |
| 05:15 | 28 | | 75 | | | | 103 | | 17:15 | 143 | | 90 | | | | 233 | |
| 05:30 | 55 | | 113 | | | | 168 | | 17:30 | 114 | | 110 | | | | 224 | |
| 05:45 | 45 | 148 | 117 | 374 | | | 162 | 522 | 17:45 | 121 | 525 | 110 | 411 | | | 231 | 936 |
| 06:00 | 70 | | 89 | | | | 159 | | 18:00 | 125 | | 102 | | | | 227 | |
| 06:15 | 66 | | 80 | | | | 146 | | 18:15 | 100 | | 89 | | | | 189 | |
| 06:30 | 93 | | 73 | | | | 166 | | 18:30 | 88 | | 81 | | | | 169 | |
| 06:45 | 84 | 313 | 93 | 335 | | | 177 | 648 | 18:45 | 93 | 406 | 73 | 345 | | | 166 | 751 |
| 07:00 | 105 | | 70 | | | | 175 | | 19:00 | 81 | | 72 | | | | 153 | |
| 07:15 | 91 | | 58 | | | | 149 | | 19:15 | 59 | | 63 | | | | 122 | |
| 07:30 | 114 | | 81 | | | | 195 | | 19:30 | 52 | | 53 | | | | 105 | |
| 07:45 | 90 | 400 | 90 | 299 | | | 180 | 699 | 19:45 | 57 | 249 | 66 | 254 | | | 123 | 503 |
| 08:00 | 77 | | 70 | | | | 147 | | 20:00 | 47 | | 55 | | | | 102 | |
| 08:15 | 81 | | 101 | | | | 182 | | 20:15 | 56 | | 47 | | | | 103 | |
| 08:30 | 107 | | 87 | | | | 194 | | 20:30 | 78 | | 40 | | | | 118 | |
| 08:45 | 103 | 368 | 87 | 345 | | | 190 | 713 | 20:45 | 48 | 229 | 38 | 180 | | | 86 | 409 |
| 09:00 | 89 | | 89 | | | | 178 | | 21:00 | 35 | | 32 | | | | 67 | |
| 09:15 | 107 | | 96 | | | | 203 | | 21:15 | 41 | | 64 | | | | 105 | |
| 09:30 | 99 | | 87 | | | | 186 | | 21:30 | 32 | | 50 | | | | 82 | |
| 09:45 | 119 | 414 | 85 | 357 | | | 204 | 771 | 21:45 | 31 | 139 | 30 | 176 | | | 61 | 315 |
| 10:00 | 130 | | 99 | | | | 229 | | 22:00 | 19 | | 30 | | | | 49 | |
| 10:15 | 126 | | 86 | | | | 212 | | 22:15 | 14 | | 26 | | | | 40 | |
| 10:30 | 145 | | 78 | | | | 223 | | 22:30 | 22 | | 24 | | | | 46 | |
| 10:45 | 147 | 548 | 90 | 353 | | | 237 | 901 | 22:45 | 23 | 78 | 42 | 122 | | | 65 | 200 |
| 11:00 | 163 | | 93 | | | | 256 | | 23:00 | 20 | | 21 | | | | 41 | |
| 11:15 | 162 | | 115 | | | | 277 | | 23:15 | 8 | | 10 | | | | 18 | |
| 11:30 | 164 | | 105 | | | | 269 | | 23:30 | 26 | | 11 | | | | 37 | |
| 11:45 | 191 | 680 | 114 | 427 | | | 305 | 1107 | 23:45 | 20 | 74 | 15 | 57 | | | 35 | 131 |
| **TOTALS** | | 3065 | | 2864 | | | | **5929** | **TOTALS** | | 4878 | | 3809 | | | | **8687** |
| **SPLIT %** | | 51.7% | | 48.3% | | | | **40.6%** | **SPLIT %** | | 56.2% | | 43.8% | | | | **59.4%** |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 7,943 | 6,673 | 0 | 0 | 14,616 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM Peak Hour** | 11:00 | 11:45 | | | **11:15** | **PM Peak Hour** | 14:45 | 15:00 | | | **15:00** |
| **AM Pk Volume** | 680 | 473 | | | **1125** | **PM Pk Volume** | 781 | 494 | | | **1262** |
| **Pk Hr Factor** | 0.890 | 0.938 | | | **0.922** | **Pk Hr Factor** | 0.880 | 0.915 | | | **0.931** |
| **7 - 9 Volume** | 768 | 644 | 0 | 0 | **1412** | **4 - 6 Volume** | 1145 | 830 | 0 | 0 | **1975** |
| **7 - 9 Peak Hour** | 07:00 | 07:45 | | | **08:00** | **4 - 6 Peak Hour** | 16:00 | 16:00 | | | **16:00** |
| **7 - 9 Pk Volume** | 400 | 348 | 0 | 0 | **713** | **4 - 6 Pk Volume** | 620 | 419 | 0 | 0 | **1039** |
| **Pk Hr Factor** | 0.877 | 0.861 | 0.000 | 0.000 | **0.919** | **Pk Hr Factor** | 0.963 | 0.911 | 0.000 | 0.000 | **0.941** |

Prepared by NDS/ATD

# VOLUME

National Ave between 28th St & I-5 NB Ramps

**Day:** Thursday
**Date:** 3/3/2011

**City:** San Diego
**Project #:** CA11_4064_008

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 5,206 | 12,485 | 17,691 |

| AM Period | NB | SB | EB | | WB | | TOTAL | | PM Period | NB | SB | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | | | 9 | | 25 | | 34 | | 12:00 | | | 92 | | 162 | | 254 | |
| 00:15 | | | 6 | | 23 | | 29 | | 12:15 | | | 93 | | 203 | | 296 | |
| 00:30 | | | 13 | | 17 | | 30 | | 12:30 | | | 93 | | 193 | | 286 | |
| 00:45 | | | 11 | 39 | 14 | 79 | 25 | 118 | 12:45 | | | 93 | 371 | 230 | 788 | 323 | 1159 |
| 01:00 | | | 6 | | 15 | | 21 | | 13:00 | | | 94 | | 242 | | 336 | |
| 01:15 | | | 6 | | 18 | | 24 | | 13:15 | | | 78 | | 213 | | 291 | |
| 01:30 | | | 3 | | 14 | | 17 | | 13:30 | | | 72 | | 252 | | 324 | |
| 01:45 | | | 7 | 22 | 12 | 59 | 19 | 81 | 13:45 | | | 75 | 319 | 225 | 932 | 300 | 1251 |
| 02:00 | | | 8 | | 6 | | 14 | | 14:00 | | | 105 | | 202 | | 307 | |
| 02:15 | | | 3 | | 14 | | 17 | | 14:15 | | | 68 | | 243 | | 311 | |
| 02:30 | | | 1 | | 16 | | 17 | | 14:30 | | | 136 | | 228 | | 364 | |
| 02:45 | | | 2 | 14 | 15 | 51 | 17 | 65 | 14:45 | | | 139 | 448 | 228 | 901 | 367 | 1349 |
| 03:00 | | | 4 | | 19 | | 23 | | 15:00 | | | 141 | | 212 | | 353 | |
| 03:15 | | | 0 | | 32 | | 32 | | 15:15 | | | 148 | | 204 | | 352 | |
| 03:30 | | | 3 | | 35 | | 38 | | 15:30 | | | 107 | | 216 | | 323 | |
| 03:45 | | | 1 | 8 | 41 | 127 | 42 | 135 | 15:45 | | | 137 | 533 | 188 | 820 | 325 | 1353 |
| 04:00 | | | 2 | | 59 | | 61 | | 16:00 | | | 134 | | 184 | | 318 | |
| 04:15 | | | 4 | | 98 | | 102 | | 16:15 | | | 104 | | 182 | | 286 | |
| 04:30 | | | 1 | | 134 | | 135 | | 16:30 | | | 141 | | 174 | | 315 | |
| 04:45 | | | 4 | 11 | 171 | 462 | 175 | 473 | 16:45 | | | 125 | 504 | 130 | 670 | 255 | 1174 |
| 05:00 | | | 4 | | 187 | | 191 | | 17:00 | | | 155 | | 145 | | 300 | |
| 05:15 | | | 9 | | 239 | | 248 | | 17:15 | | | 95 | | 161 | | 256 | |
| 05:30 | | | 14 | | 252 | | 266 | | 17:30 | | | 107 | | 142 | | 249 | |
| 05:45 | | | 26 | 53 | 205 | 883 | 231 | 936 | 17:45 | | | 109 | 466 | 150 | 598 | 259 | 1064 |
| 06:00 | | | 35 | | 169 | | 204 | | 18:00 | | | 98 | | 155 | | 253 | |
| 06:15 | | | 34 | | 178 | | 212 | | 18:15 | | | 90 | | 136 | | 226 | |
| 06:30 | | | 20 | | 168 | | 188 | | 18:30 | | | 64 | | 138 | | 202 | |
| 06:45 | | | 34 | 123 | 212 | 727 | 246 | 850 | 18:45 | | | 67 | 319 | 112 | 541 | 179 | 860 |
| 07:00 | | | 35 | | 193 | | 228 | | 19:00 | | | 50 | | 110 | | 160 | |
| 07:15 | | | 54 | | 212 | | 266 | | 19:15 | | | 35 | | 89 | | 124 | |
| 07:30 | | | 55 | | 204 | | 259 | | 19:30 | | | 37 | | 99 | | 136 | |
| 07:45 | | | 61 | 205 | 189 | 798 | 250 | 1003 | 19:45 | | | 42 | 164 | 90 | 388 | 132 | 552 |
| 08:00 | | | 63 | | 185 | | 248 | | 20:00 | | | 47 | | 77 | | 124 | |
| 08:15 | | | 52 | | 211 | | 263 | | 20:15 | | | 37 | | 70 | | 107 | |
| 08:30 | | | 59 | | 180 | | 239 | | 20:30 | | | 42 | | 76 | | 118 | |
| 08:45 | | | 70 | 244 | 175 | 751 | 245 | 995 | 20:45 | | | 36 | 162 | 68 | 291 | 104 | 453 |
| 09:00 | | | 73 | | 159 | | 232 | | 21:00 | | | 32 | | 72 | | 104 | |
| 09:15 | | | 70 | | 166 | | 236 | | 21:15 | | | 29 | | 68 | | 97 | |
| 09:30 | | | 75 | | 140 | | 215 | | 21:30 | | | 27 | | 88 | | 115 | |
| 09:45 | | | 88 | 306 | 173 | 638 | 261 | 944 | 21:45 | | | 38 | 126 | 76 | 304 | 114 | 430 |
| 10:00 | | | 62 | | 170 | | 232 | | 22:00 | | | 31 | | 40 | | 71 | |
| 10:15 | | | 67 | | 147 | | 214 | | 22:15 | | | 24 | | 52 | | 76 | |
| 10:30 | | | 65 | | 170 | | 235 | | 22:30 | | | 22 | | 44 | | 66 | |
| 10:45 | | | 70 | 264 | 157 | 644 | 227 | 908 | 22:45 | | | 17 | 94 | 47 | 183 | 64 | 277 |
| 11:00 | | | 75 | | 176 | | 251 | | 23:00 | | | 12 | | 24 | | 36 | |
| 11:15 | | | 84 | | 168 | | 252 | | 23:15 | | | 16 | | 23 | | 39 | |
| 11:30 | | | 89 | | 229 | | 318 | | 23:30 | | | 15 | | 28 | | 43 | |
| 11:45 | | | 109 | 357 | 175 | 748 | 284 | 1105 | 23:45 | | | 11 | 54 | 27 | 102 | 38 | 156 |
| TOTALS | | | | 1646 | | 5967 | | 7613 | TOTALS | | | | 3560 | | 6518 | | 10078 |
| SPLIT % | | | | 21.6% | | 78.4% | | 43.0% | SPLIT % | | | | 35.3% | | 64.7% | | 57.0% |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 5,206 | 12,485 | 17,691 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM Peak Hour | | | 11:45 | 05:00 | 11:30 | PM Peak Hour | | | 14:30 | 12:45 | 14:30 |
| AM Pk Volume | | | 387 | 883 | 1152 | PM Pk Volume | | | 564 | 937 | 1436 |
| Pk Hr Factor | | | 0.888 | 0.876 | 0.906 | Pk Hr Factor | | | 0.953 | 0.930 | 0.978 |
| 7 - 9 Volume | 0 | 0 | 449 | 1549 | 1998 | 4 - 6 Volume | 0 | 0 | 970 | 1268 | 2238 |
| 7 - 9 Peak Hour | | | 08:00 | 07:00 | 07:15 | 4 - 6 Peak Hour | | | 16:15 | 16:00 | 16:00 |
| 7 - 9 Pk Volume | 0 | 0 | 244 | 798 | 1023 | 4 - 6 Pk Volume | 0 | 0 | 525 | 670 | 1174 |
| Pk Hr Factor | 0.000 | 0.000 | 0.871 | 0.941 | 0.961 | Pk Hr Factor | 0.000 | 0.000 | 0.847 | 0.910 | 0.923 |

Prepared by NDS/ATD

# VOLUME

Boston Ave between 28th St & I-5 SB Ramps

**Day:** Thursday
**Date:** 3/3/2011

**City:** San Diego
**Project #:** CA11_4064_009

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 7,392 | 796 | 8,188 |

| AM Period | NB | SB | EB | | WB | | TOTAL | | PM Period | NB | SB | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | | | 23 | | 0 | | 23 | | 12:00 | | | 128 | | 9 | | 137 | |
| 00:15 | | | 14 | | 2 | | 16 | | 12:15 | | | 115 | | 13 | | 128 | |
| 00:30 | | | 56 | | 3 | | 59 | | 12:30 | | | 102 | | 14 | | 116 | |
| 00:45 | | | 29 | 122 | 1 | 6 | 30 | 128 | 12:45 | | | 98 | 443 | 10 | 46 | 108 | 489 |
| 01:00 | | | 13 | | 1 | | 14 | | 13:00 | | | 105 | | 13 | | 118 | |
| 01:15 | | | 7 | | 0 | | 7 | | 13:15 | | | 118 | | 14 | | 132 | |
| 01:30 | | | 36 | | 5 | | 41 | | 13:30 | | | 130 | | 11 | | 141 | |
| 01:45 | | | 10 | 66 | 2 | 8 | 12 | 74 | 13:45 | | | 126 | 479 | 12 | 50 | 138 | 529 |
| 02:00 | | | 9 | | 0 | | 9 | | 14:00 | | | 125 | | 9 | | 134 | |
| 02:15 | | | 8 | | 0 | | 8 | | 14:15 | | | 111 | | 6 | | 117 | |
| 02:30 | | | 7 | | 0 | | 7 | | 14:30 | | | 255 | | 13 | | 268 | |
| 02:45 | | | 12 | 36 | 3 | 3 | 15 | 39 | 14:45 | | | 282 | 773 | 20 | 48 | 302 | 821 |
| 03:00 | | | 5 | | 0 | | 5 | | 15:00 | | | 310 | | 17 | | 327 | |
| 03:15 | | | 4 | | 0 | | 4 | | 15:15 | | | 265 | | 29 | | 294 | |
| 03:30 | | | 7 | | 2 | | 9 | | 15:30 | | | 190 | | 11 | | 201 | |
| 03:45 | | | 9 | 25 | 6 | 8 | 15 | 33 | 15:45 | | | 161 | 926 | 9 | 66 | 170 | 992 |
| 04:00 | | | 18 | | 2 | | 20 | | 16:00 | | | 147 | | 14 | | 161 | |
| 04:15 | | | 14 | | 2 | | 16 | | 16:15 | | | 132 | | 7 | | 139 | |
| 04:30 | | | 10 | | 8 | | 18 | | 16:30 | | | 137 | | 9 | | 146 | |
| 04:45 | | | 27 | 69 | 4 | 16 | 31 | 85 | 16:45 | | | 143 | 559 | 14 | 44 | 157 | 603 |
| 05:00 | | | 16 | | 4 | | 20 | | 17:00 | | | 143 | | 11 | | 154 | |
| 05:15 | | | 24 | | 6 | | 30 | | 17:15 | | | 139 | | 11 | | 150 | |
| 05:30 | | | 49 | | 11 | | 60 | | 17:30 | | | 106 | | 12 | | 118 | |
| 05:45 | | | 71 | 160 | 13 | 34 | 84 | 194 | 17:45 | | | 114 | 502 | 9 | 43 | 123 | 545 |
| 06:00 | | | 73 | | 19 | | 92 | | 18:00 | | | 95 | | 9 | | 104 | |
| 06:15 | | | 48 | | 9 | | 57 | | 18:15 | | | 89 | | 9 | | 98 | |
| 06:30 | | | 49 | | 9 | | 58 | | 18:30 | | | 84 | | 9 | | 93 | |
| 06:45 | | | 53 | 223 | 9 | 46 | 62 | 269 | 18:45 | | | 73 | 341 | 9 | 36 | 82 | 377 |
| 07:00 | | | 75 | | 14 | | 89 | | 19:00 | | | 82 | | 11 | | 93 | |
| 07:15 | | | 51 | | 17 | | 68 | | 19:15 | | | 79 | | 10 | | 89 | |
| 07:30 | | | 84 | | 25 | | 109 | | 19:30 | | | 61 | | 5 | | 66 | |
| 07:45 | | | 87 | 297 | 14 | 70 | 101 | 367 | 19:45 | | | 64 | 286 | 7 | 33 | 71 | 319 |
| 08:00 | | | 70 | | 13 | | 83 | | 20:00 | | | 51 | | 0 | | 51 | |
| 08:15 | | | 74 | | 11 | | 85 | | 20:15 | | | 57 | | 6 | | 63 | |
| 08:30 | | | 80 | | 11 | | 91 | | 20:30 | | | 63 | | 4 | | 67 | |
| 08:45 | | | 55 | 279 | 11 | 46 | 66 | 325 | 20:45 | | | 52 | 223 | 6 | 16 | 58 | 239 |
| 09:00 | | | 82 | | 13 | | 95 | | 21:00 | | | 40 | | 5 | | 45 | |
| 09:15 | | | 90 | | 13 | | 103 | | 21:15 | | | 43 | | 3 | | 46 | |
| 09:30 | | | 74 | | 9 | | 83 | | 21:30 | | | 59 | | 8 | | 67 | |
| 09:45 | | | 99 | 345 | 8 | 43 | 107 | 388 | 21:45 | | | 24 | 166 | 3 | 19 | 27 | 185 |
| 10:00 | | | 102 | | 11 | | 113 | | 22:00 | | | 33 | | 3 | | 36 | |
| 10:15 | | | 95 | | 14 | | 109 | | 22:15 | | | 27 | | 3 | | 30 | |
| 10:30 | | | 88 | | 9 | | 97 | | 22:30 | | | 58 | | 3 | | 61 | |
| 10:45 | | | 80 | 365 | 14 | 48 | 94 | 413 | 22:45 | | | 40 | 158 | 3 | 12 | 43 | 170 |
| 11:00 | | | 95 | | 9 | | 104 | | 23:00 | | | 32 | | 5 | | 37 | |
| 11:15 | | | 126 | | 14 | | 140 | | 23:15 | | | 20 | | 2 | | 22 | |
| 11:30 | | | 100 | | 11 | | 111 | | 23:30 | | | 36 | | 0 | | 36 | |
| 11:45 | | | 118 | 439 | 13 | 47 | 131 | 486 | 23:45 | | | 22 | 110 | 1 | 8 | 23 | 118 |
| **TOTALS** | | | | 2426 | | 375 | | **2801** | **TOTALS** | | | | 4966 | | 421 | | **5387** |
| **SPLIT %** | | | | 86.6% | | 13.4% | | **34.2%** | **SPLIT %** | | | | 92.2% | | 7.8% | | **65.8%** |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 7,392 | 796 | 8,188 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM Peak Hour** | | | 11:15 | 07:00 | **11:15** | **PM Peak Hour** | | | 14:30 | 14:30 | **14:30** |
| **AM Pk Volume** | | | 472 | 70 | **519** | **PM Pk Volume** | | | 1112 | 79 | **1191** |
| **Pk Hr Factor** | | | 0.922 | 0.700 | **0.927** | **Pk Hr Factor** | | | 0.897 | 0.681 | **0.911** |
| **7 - 9 Volume** | 0 | 0 | 576 | 116 | **692** | **4 - 6 Volume** | 0 | 0 | 1061 | 87 | **1148** |
| **7 - 9 Peak Hour** | | | 07:30 | 07:00 | **07:30** | **4 - 6 Peak Hour** | | | 16:30 | 16:45 | **16:30** |
| **7 - 9 Pk Volume** | 0 | 0 | 315 | 70 | **378** | **4 - 6 Pk Volume** | 0 | 0 | 562 | 48 | **607** |
| **Pk Hr Factor** | 0.000 | 0.000 | 0.905 | 0.700 | **0.867** | **Pk Hr Factor** | 0.000 | 0.000 | 0.983 | 0.857 | **0.967** |

Prepared by NDS/ATD

# VOLUME

24th St between I-5 NB Ramps & I-5 SB Ramps

**Day:** Tuesday
**Date:** 3/8/2011

**City:** San Diego
**Project #:** CA11_4064_010

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 8,109 | 8,607 | 16,716 |

| AM Period | NB | SB | EB | | WB | | TOTAL | | PM Period | NB | SB | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | | | 19 | | 17 | | 36 | | 12:00 | | | 144 | | 167 | | 311 | |
| 00:15 | | | 25 | | 19 | | 44 | | 12:15 | | | 139 | | 186 | | 325 | |
| 00:30 | | | 23 | | 16 | | 39 | | 12:30 | | | 145 | | 179 | | 324 | |
| 00:45 | | | 12 | 79 | 13 | 65 | 25 | 144 | 12:45 | | | 149 | 577 | 174 | 706 | 323 | 1283 |
| 01:00 | | | 6 | | 14 | | 20 | | 13:00 | | | 134 | | 152 | | 286 | |
| 01:15 | | | 7 | | 13 | | 20 | | 13:15 | | | 133 | | 161 | | 294 | |
| 01:30 | | | 14 | | 11 | | 25 | | 13:30 | | | 133 | | 122 | | 255 | |
| 01:45 | | | 22 | 49 | 9 | 47 | 31 | 96 | 13:45 | | | 155 | 555 | 133 | 568 | 288 | 1123 |
| 02:00 | | | 8 | | 15 | | 23 | | 14:00 | | | 147 | | 123 | | 270 | |
| 02:15 | | | 6 | | 21 | | 27 | | 14:15 | | | 164 | | 128 | | 292 | |
| 02:30 | | | 7 | | 22 | | 29 | | 14:30 | | | 177 | | 133 | | 310 | |
| 02:45 | | | 5 | 26 | 42 | 100 | 47 | 126 | 14:45 | | | 226 | 714 | 120 | 504 | 346 | 1218 |
| 03:00 | | | 3 | | 6 | | 9 | | 15:00 | | | 189 | | 124 | | 313 | |
| 03:15 | | | 11 | | 8 | | 19 | | 15:15 | | | 177 | | 147 | | 324 | |
| 03:30 | | | 8 | | 15 | | 23 | | 15:30 | | | 230 | | 156 | | 386 | |
| 03:45 | | | 9 | 31 | 28 | 57 | 37 | 88 | 15:45 | | | 152 | 748 | 146 | 573 | 298 | 1321 |
| 04:00 | | | 8 | | 32 | | 40 | | 16:00 | | | 187 | | 132 | | 319 | |
| 04:15 | | | 17 | | 41 | | 58 | | 16:15 | | | 167 | | 162 | | 329 | |
| 04:30 | | | 4 | | 39 | | 43 | | 16:30 | | | 195 | | 175 | | 370 | |
| 04:45 | | | 9 | 38 | 85 | 197 | 94 | 235 | 16:45 | | | 148 | 697 | 117 | 586 | 265 | 1283 |
| 05:00 | | | 23 | | 34 | | 57 | | 17:00 | | | 161 | | 155 | | 316 | |
| 05:15 | | | 27 | | 58 | | 85 | | 17:15 | | | 158 | | 152 | | 310 | |
| 05:30 | | | 39 | | 120 | | 159 | | 17:30 | | | 131 | | 111 | | 242 | |
| 05:45 | | | 36 | 125 | 157 | 369 | 193 | 494 | 17:45 | | | 123 | 573 | 94 | 512 | 217 | 1085 |
| 06:00 | | | 38 | | 113 | | 151 | | 18:00 | | | 114 | | 134 | | 248 | |
| 06:15 | | | 65 | | 124 | | 189 | | 18:15 | | | 88 | | 103 | | 191 | |
| 06:30 | | | 54 | | 131 | | 185 | | 18:30 | | | 95 | | 105 | | 200 | |
| 06:45 | | | 59 | 216 | 164 | 532 | 223 | 748 | 18:45 | | | 91 | 388 | 70 | 412 | 161 | 800 |
| 07:00 | | | 73 | | 108 | | 181 | | 19:00 | | | 76 | | 90 | | 166 | |
| 07:15 | | | 90 | | 125 | | 215 | | 19:15 | | | 75 | | 68 | | 143 | |
| 07:30 | | | 106 | | 139 | | 245 | | 19:30 | | | 43 | | 58 | | 101 | |
| 07:45 | | | 133 | 402 | 181 | 553 | 314 | 955 | 19:45 | | | 60 | 254 | 66 | 282 | 126 | 536 |
| 08:00 | | | 114 | | 146 | | 260 | | 20:00 | | | 50 | | 64 | | 114 | |
| 08:15 | | | 118 | | 117 | | 235 | | 20:15 | | | 70 | | 54 | | 124 | |
| 08:30 | | | 118 | | 133 | | 251 | | 20:30 | | | 58 | | 66 | | 124 | |
| 08:45 | | | 125 | 475 | 78 | 474 | 203 | 949 | 20:45 | | | 42 | 220 | 71 | 255 | 113 | 475 |
| 09:00 | | | 109 | | 105 | | 214 | | 21:00 | | | 59 | | 75 | | 134 | |
| 09:15 | | | 110 | | 94 | | 204 | | 21:15 | | | 39 | | 41 | | 80 | |
| 09:30 | | | 133 | | 112 | | 245 | | 21:30 | | | 40 | | 44 | | 84 | |
| 09:45 | | | 107 | 459 | 124 | 435 | 231 | 894 | 21:45 | | | 32 | 170 | 34 | 194 | 66 | 364 |
| 10:00 | | | 118 | | 93 | | 211 | | 22:00 | | | 33 | | 31 | | 64 | |
| 10:15 | | | 116 | | 127 | | 243 | | 22:15 | | | 39 | | 34 | | 73 | |
| 10:30 | | | 124 | | 109 | | 233 | | 22:30 | | | 32 | | 21 | | 53 | |
| 10:45 | | | 122 | 480 | 139 | 468 | 261 | 948 | 22:45 | | | 27 | 131 | 24 | 110 | 51 | 241 |
| 11:00 | | | 139 | | 134 | | 273 | | 23:00 | | | 29 | | 19 | | 48 | |
| 11:15 | | | 159 | | 149 | | 308 | | 23:15 | | | 23 | | 16 | | 39 | |
| 11:30 | | | 184 | | 123 | | 307 | | 23:30 | | | 19 | | 15 | | 34 | |
| 11:45 | | | 130 | 612 | 129 | 535 | 259 | 1147 | 23:45 | | | 19 | 90 | 23 | 73 | 42 | 163 |
| TOTALS | | | | 2992 | | 3832 | | 6824 | TOTALS | | | | 5117 | | 4775 | | 9892 |
| SPLIT % | | | | 43.8% | | 56.2% | | 40.8% | SPLIT % | | | | 51.7% | | 48.3% | | 59.2% |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 8,109 | 8,607 | 16,716 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM Peak Hour | | | 11:15 | 11:45 | 11:45 | PM Peak Hour | | | 14:45 | 12:00 | 14:45 |
| AM Pk Volume | | | 617 | 661 | 1219 | PM Pk Volume | | | 822 | 706 | 1369 |
| Pk Hr Factor | | | 0.838 | 0.888 | 0.938 | Pk Hr Factor | | | 0.893 | 0.949 | 0.887 |
| 7 - 9 Volume | 0 | 0 | 877 | 1027 | 1904 | 4 - 6 Volume | 0 | 0 | 1270 | 1098 | 2368 |
| 7 - 9 Peak Hour | | | 07:45 | 07:15 | 07:45 | 4 - 6 Peak Hour | | | 16:00 | 16:15 | 16:00 |
| 7 - 9 Pk Volume | 0 | 0 | 483 | 591 | 1060 | 4 - 6 Pk Volume | 0 | 0 | 697 | 609 | 1283 |
| Pk Hr Factor | 0.000 | 0.000 | 0.908 | 0.816 | 0.844 | Pk Hr Factor | 0.000 | 0.000 | 0.894 | 0.870 | 0.867 |

Prepared by NDS/ATD

# VOLUME

24th St between I-5 SB Ramps & Cleveland St

**Day:** Thursday
**Date:** 3/3/2011

**City:** San Diego
**Project #:** CA11_4064_011

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 4,570 | 4,827 | 9,397 |

| AM Period | NB | SB | EB | | WB | | TOTAL | | PM Period | NB | SB | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | | | 10 | | 11 | | 21 | | 12:00 | | | 92 | | 76 | | 168 | |
| 00:15 | | | 2 | | 6 | | 8 | | 12:15 | | | 84 | | 112 | | 196 | |
| 00:30 | | | 3 | | 3 | | 6 | | 12:30 | | | 81 | | 87 | | 168 | |
| 00:45 | | | 6 | 21 | 2 | 22 | 8 | 43 | 12:45 | | | 87 | 344 | 109 | 384 | 196 | 728 |
| 01:00 | | | 7 | | 3 | | 10 | | 13:00 | | | 118 | | 104 | | 222 | |
| 01:15 | | | 9 | | 4 | | 13 | | 13:15 | | | 85 | | 86 | | 171 | |
| 01:30 | | | 1 | | 6 | | 7 | | 13:30 | | | 107 | | 69 | | 176 | |
| 01:45 | | | 2 | 19 | 4 | 17 | 6 | 36 | 13:45 | | | 65 | 375 | 75 | 334 | 140 | 709 |
| 02:00 | | | 2 | | 4 | | 6 | | 14:00 | | | 68 | | 63 | | 131 | |
| 02:15 | | | 4 | | 6 | | 10 | | 14:15 | | | 78 | | 81 | | 159 | |
| 02:30 | | | 7 | | 10 | | 17 | | 14:30 | | | 126 | | 62 | | 188 | |
| 02:45 | | | 6 | 19 | 44 | 64 | 50 | 83 | 14:45 | | | 92 | 364 | 64 | 270 | 156 | 634 |
| 03:00 | | | 14 | | 9 | | 23 | | 15:00 | | | 99 | | 69 | | 168 | |
| 03:15 | | | 10 | | 3 | | 13 | | 15:15 | | | 121 | | 59 | | 180 | |
| 03:30 | | | 9 | | 6 | | 15 | | 15:30 | | | 158 | | 58 | | 216 | |
| 03:45 | | | 10 | 43 | 29 | 47 | 39 | 90 | 15:45 | | | 108 | 486 | 47 | 233 | 155 | 719 |
| 04:00 | | | 9 | | 21 | | 30 | | 16:00 | | | 130 | | 49 | | 179 | |
| 04:15 | | | 14 | | 37 | | 51 | | 16:15 | | | 87 | | 53 | | 140 | |
| 04:30 | | | 14 | | 23 | | 37 | | 16:30 | | | 155 | | 44 | | 199 | |
| 04:45 | | | 6 | 43 | 41 | 122 | 47 | 165 | 16:45 | | | 93 | 465 | 36 | 182 | 129 | 647 |
| 05:00 | | | 8 | | 36 | | 44 | | 17:00 | | | 151 | | 48 | | 199 | |
| 05:15 | | | 8 | | 61 | | 69 | | 17:15 | | | 108 | | 52 | | 160 | |
| 05:30 | | | 10 | | 94 | | 104 | | 17:30 | | | 94 | | 20 | | 114 | |
| 05:45 | | | 22 | 48 | 146 | 337 | 168 | 385 | 17:45 | | | 78 | 431 | 29 | 149 | 107 | 580 |
| 06:00 | | | 19 | | 96 | | 115 | | 18:00 | | | 91 | | 40 | | 131 | |
| 06:15 | | | 29 | | 113 | | 142 | | 18:15 | | | 54 | | 20 | | 74 | |
| 06:30 | | | 46 | | 120 | | 166 | | 18:30 | | | 32 | | 32 | | 64 | |
| 06:45 | | | 38 | 132 | 156 | 485 | 194 | 617 | 18:45 | | | 21 | 198 | 30 | 122 | 51 | 320 |
| 07:00 | | | 39 | | 119 | | 158 | | 19:00 | | | 41 | | 17 | | 58 | |
| 07:15 | | | 30 | | 100 | | 130 | | 19:15 | | | 22 | | 21 | | 43 | |
| 07:30 | | | 36 | | 120 | | 156 | | 19:30 | | | 21 | | 26 | | 47 | |
| 07:45 | | | 47 | 152 | 143 | 482 | 190 | 634 | 19:45 | | | 22 | 106 | 22 | 86 | 44 | 192 |
| 08:00 | | | 42 | | 109 | | 151 | | 20:00 | | | 21 | | 17 | | 38 | |
| 08:15 | | | 38 | | 90 | | 128 | | 20:15 | | | 20 | | 19 | | 39 | |
| 08:30 | | | 31 | | 83 | | 114 | | 20:30 | | | 20 | | 24 | | 44 | |
| 08:45 | | | 48 | 159 | 81 | 363 | 129 | 522 | 20:45 | | | 24 | 85 | 14 | 74 | 38 | 159 |
| 09:00 | | | 60 | | 88 | | 148 | | 21:00 | | | 25 | | 13 | | 38 | |
| 09:15 | | | 56 | | 71 | | 127 | | 21:15 | | | 9 | | 11 | | 20 | |
| 09:30 | | | 54 | | 77 | | 131 | | 21:30 | | | 28 | | 14 | | 42 | |
| 09:45 | | | 61 | 231 | 76 | 312 | 137 | 543 | 21:45 | | | 14 | 76 | 12 | 50 | 26 | 126 |
| 10:00 | | | 78 | | 69 | | 147 | | 22:00 | | | 58 | | 19 | | 77 | |
| 10:15 | | | 58 | | 68 | | 126 | | 22:15 | | | 15 | | 6 | | 21 | |
| 10:30 | | | 72 | | 56 | | 128 | | 22:30 | | | 11 | | 8 | | 19 | |
| 10:45 | | | 73 | 281 | 61 | 254 | 134 | 535 | 22:45 | | | 21 | 105 | 8 | 41 | 29 | 146 |
| 11:00 | | | 65 | | 89 | | 154 | | 23:00 | | | 11 | | 8 | | 19 | |
| 11:15 | | | 80 | | 103 | | 183 | | 23:15 | | | 10 | | 11 | | 21 | |
| 11:30 | | | 112 | | 76 | | 188 | | 23:30 | | | 4 | | 10 | | 14 | |
| 11:45 | | | 99 | 356 | 94 | 362 | 193 | 718 | 23:45 | | | 6 | 31 | 6 | 35 | 12 | 66 |
| **TOTALS** | | | | 1504 | | 2867 | | **4371** | **TOTALS** | | | | 3066 | | 1960 | | **5026** |
| **SPLIT %** | | | | 34.4% | | 65.6% | | **46.5%** | **SPLIT %** | | | | 61.0% | | 39.0% | | **53.5%** |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 4,570 | 4,827 | 9,397 |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM Peak Hour** | | | 11:30 | 06:15 | **11:30** | **PM Peak Hour** | | | 15:15 | 12:15 | **12:15** |
| **AM Pk Volume** | | | 387 | 508 | **745** | **PM Pk Volume** | | | 517 | 412 | **782** |
| **Pk Hr Factor** | | | 0.864 | 0.814 | **0.950** | **Pk Hr Factor** | | | 0.818 | 0.920 | **0.881** |
| **7 - 9 Volume** | 0 | 0 | 311 | 845 | **1156** | **4 - 6 Volume** | 0 | 0 | 896 | 331 | **1227** |
| **7 - 9 Peak Hour** | | | 07:30 | 07:00 | **07:00** | **4 - 6 Peak Hour** | | | 16:30 | 16:00 | **16:30** |
| **7 - 9 Pk Volume** | 0 | 0 | 163 | 482 | **634** | **4 - 6 Pk Volume** | 0 | 0 | 507 | 182 | **687** |
| **Pk Hr Factor** | 0.000 | 0.000 | 0.867 | 0.843 | **0.834** | **Pk Hr Factor** | 0.000 | 0.000 | 0.818 | 0.858 | **0.863** |

Prepared by NDS/ATD

# VOLUME

24th St between Cleveland St & W 32nd St

**Day:** Tuesday
**Date:** 3/8/2011

**City:** San Diego
**Project #:** CA11_4064_012

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 2,941 | 3,351 | 6,292 |

| AM Period | NB | SB | EB | | WB | | TOTAL | | PM Period | NB | SB | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | | | 5 | | 4 | | 9 | | 12:00 | | | 57 | | 68 | | 125 | |
| 00:15 | | | 6 | | 1 | | 7 | | 12:15 | | | 47 | | 67 | | 114 | |
| 00:30 | | | 1 | | 8 | | 9 | | 12:30 | | | 55 | | 82 | | 137 | |
| 00:45 | | | 0 | 12 | 2 | 15 | 2 | 27 | 12:45 | | | 49 | 208 | 91 | 308 | 140 | 516 |
| 01:00 | | | 1 | | 2 | | 3 | | 13:00 | | | 76 | | 62 | | 138 | |
| 01:15 | | | 0 | | 9 | | 9 | | 13:15 | | | 56 | | 60 | | 116 | |
| 01:30 | | | 3 | | 4 | | 7 | | 13:30 | | | 70 | | 54 | | 124 | |
| 01:45 | | | 7 | 11 | 1 | 16 | 8 | 27 | 13:45 | | | 68 | 270 | 55 | 231 | 123 | 501 |
| 02:00 | | | 2 | | 7 | | 9 | | 14:00 | | | 41 | | 37 | | 78 | |
| 02:15 | | | 4 | | 18 | | 22 | | 14:15 | | | 62 | | 58 | | 120 | |
| 02:30 | | | 1 | | 22 | | 23 | | 14:30 | | | 122 | | 53 | | 175 | |
| 02:45 | | | 0 | 7 | 30 | 77 | 30 | 84 | 14:45 | | | 76 | 301 | 56 | 204 | 132 | 505 |
| 03:00 | | | 2 | | 8 | | 10 | | 15:00 | | | 68 | | 43 | | 111 | |
| 03:15 | | | 7 | | 5 | | 12 | | 15:15 | | | 70 | | 35 | | 105 | |
| 03:30 | | | 6 | | 6 | | 12 | | 15:30 | | | 122 | | 60 | | 182 | |
| 03:45 | | | 5 | 20 | 10 | 29 | 15 | 49 | 15:45 | | | 58 | 318 | 31 | 169 | 89 | 487 |
| 04:00 | | | 3 | | 7 | | 10 | | 16:00 | | | 62 | | 29 | | 91 | |
| 04:15 | | | 11 | | 12 | | 23 | | 16:15 | | | 80 | | 27 | | 107 | |
| 04:30 | | | 10 | | 16 | | 26 | | 16:30 | | | 116 | | 19 | | 135 | |
| 04:45 | | | 4 | 28 | 41 | 76 | 45 | 104 | 16:45 | | | 44 | 302 | 19 | 94 | 63 | 396 |
| 05:00 | | | 16 | | 23 | | 39 | | 17:00 | | | 74 | | 28 | | 102 | |
| 05:15 | | | 8 | | 34 | | 42 | | 17:15 | | | 50 | | 25 | | 75 | |
| 05:30 | | | 20 | | 70 | | 90 | | 17:30 | | | 64 | | 21 | | 85 | |
| 05:45 | | | 27 | 71 | 93 | 220 | 120 | 291 | 17:45 | | | 36 | 224 | 23 | 97 | 59 | 321 |
| 06:00 | | | 16 | | 73 | | 89 | | 18:00 | | | 35 | | 19 | | 54 | |
| 06:15 | | | 22 | | 58 | | 80 | | 18:15 | | | 12 | | 11 | | 23 | |
| 06:30 | | | 26 | | 84 | | 110 | | 18:30 | | | 21 | | 12 | | 33 | |
| 06:45 | | | 23 | 87 | 109 | 324 | 132 | 411 | 18:45 | | | 16 | 84 | 13 | 55 | 29 | 139 |
| 07:00 | | | 20 | | 72 | | 92 | | 19:00 | | | 19 | | 13 | | 32 | |
| 07:15 | | | 32 | | 74 | | 106 | | 19:15 | | | 16 | | 6 | | 22 | |
| 07:30 | | | 30 | | 78 | | 108 | | 19:30 | | | 11 | | 11 | | 22 | |
| 07:45 | | | 26 | 108 | 103 | 327 | 129 | 435 | 19:45 | | | 10 | 56 | 16 | 46 | 26 | 102 |
| 08:00 | | | 24 | | 77 | | 101 | | 20:00 | | | 13 | | 8 | | 21 | |
| 08:15 | | | 38 | | 63 | | 101 | | 20:15 | | | 9 | | 14 | | 23 | |
| 08:30 | | | 32 | | 55 | | 87 | | 20:30 | | | 15 | | 3 | | 18 | |
| 08:45 | | | 23 | 117 | 45 | 240 | 68 | 357 | 20:45 | | | 24 | 61 | 8 | 33 | 32 | 94 |
| 09:00 | | | 17 | | 51 | | 68 | | 21:00 | | | 7 | | 7 | | 14 | |
| 09:15 | | | 27 | | 42 | | 69 | | 21:15 | | | 14 | | 6 | | 20 | |
| 09:30 | | | 34 | | 63 | | 97 | | 21:30 | | | 15 | | 10 | | 25 | |
| 09:45 | | | 27 | 105 | 71 | 227 | 98 | 332 | 21:45 | | | 4 | 40 | 7 | 30 | 11 | 70 |
| 10:00 | | | 27 | | 43 | | 70 | | 22:00 | | | 29 | | 8 | | 37 | |
| 10:15 | | | 33 | | 81 | | 114 | | 22:15 | | | 12 | | 1 | | 13 | |
| 10:30 | | | 45 | | 60 | | 105 | | 22:30 | | | 1 | | 1 | | 2 | |
| 10:45 | | | 43 | 148 | 50 | 234 | 93 | 382 | 22:45 | | | 2 | 44 | 9 | 19 | 11 | 63 |
| 11:00 | | | 46 | | 54 | | 100 | | 23:00 | | | 9 | | 2 | | 11 | |
| 11:15 | | | 67 | | 59 | | 126 | | 23:15 | | | 3 | | 6 | | 9 | |
| 11:30 | | | 113 | | 72 | | 185 | | 23:30 | | | 7 | | 1 | | 8 | |
| 11:45 | | | 71 | 297 | 84 | 269 | 155 | 566 | 23:45 | | | 3 | 22 | 2 | 11 | 5 | 33 |
| **TOTALS** | | | | 1011 | | 2054 | | **3065** | **TOTALS** | | | | 1930 | | 1297 | | **3227** |
| **SPLIT %** | | | | 33.0% | | 67.0% | | **48.7%** | **SPLIT %** | | | | 59.8% | | 40.2% | | **51.3%** |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 2,941 | 3,351 | 6,292 |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM Peak Hour** | | | | 11:15 | 06:30 | **11:15** | **PM Peak Hour** | | | | 14:30 | 12:00 | **14:15** |
| **AM Pk Volume** | | | | 308 | 339 | **591** | **PM Pk Volume** | | | | 336 | 308 | **538** |
| **Pk Hr Factor** | | | | 0.681 | 0.778 | **0.799** | **Pk Hr Factor** | | | | 0.689 | 0.846 | **0.769** |
| **7 - 9 Volume** | 0 | 0 | | 225 | 567 | **792** | **4 - 6 Volume** | 0 | 0 | | 526 | 191 | **717** |
| **7 - 9 Peak Hour** | | | | 07:45 | 07:15 | **07:15** | **4 - 6 Peak Hour** | | | | 16:15 | 17:00 | **16:15** |
| **7 - 9 Pk Volume** | 0 | 0 | | 120 | 332 | **444** | **4 - 6 Pk Volume** | 0 | 0 | | 314 | 97 | **407** |
| **Pk Hr Factor** | 0.000 | 0.000 | | 0.789 | 0.806 | **0.860** | **Pk Hr Factor** | 0.000 | 0.000 | | 0.677 | 0.866 | **0.754** |

Prepared by NDS/ATD

# VOLUME

24th St between W 32nd St & Tidelands Ave

**Day:** Thursday
**Date:** 3/3/2011

**City:** San Diego
**Project #:** CA11_4064_013

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 1,880 | 1,966 | 3,846 |

| AM Period | NB | SB | EB | | WB | | TOTAL | | PM Period | NB | SB | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | | | 2 | | 0 | | 2 | | 12:00 | | | 42 | | 35 | | 77 | |
| 00:15 | | | 0 | | 0 | | 0 | | 12:15 | | | 32 | | 35 | | 67 | |
| 00:30 | | | 0 | | 1 | | 1 | | 12:30 | | | 38 | | 30 | | 68 | |
| 00:45 | | | 4 | 6 | 0 | 1 | 4 | 7 | 12:45 | | | 42 | 154 | 40 | 140 | 82 | 294 |
| 01:00 | | | 0 | | 1 | | 1 | | 13:00 | | | 46 | | 49 | | 95 | |
| 01:15 | | | 1 | | 3 | | 4 | | 13:15 | | | 44 | | 37 | | 81 | |
| 01:30 | | | 0 | | 0 | | 0 | | 13:30 | | | 36 | | 23 | | 59 | |
| 01:45 | | | 2 | 3 | 2 | 6 | 4 | 9 | 13:45 | | | 42 | 168 | 26 | 135 | 68 | 303 |
| 02:00 | | | 1 | | 0 | | 1 | | 14:00 | | | 22 | | 24 | | 46 | |
| 02:15 | | | 2 | | 3 | | 5 | | 14:15 | | | 34 | | 38 | | 72 | |
| 02:30 | | | 0 | | 0 | | 0 | | 14:30 | | | 67 | | 23 | | 90 | |
| 02:45 | | | 0 | 3 | 4 | 7 | 4 | 10 | 14:45 | | | 55 | 178 | 29 | 114 | 84 | 292 |
| 03:00 | | | 5 | | 3 | | 8 | | 15:00 | | | 49 | | 44 | | 93 | |
| 03:15 | | | 8 | | 0 | | 8 | | 15:15 | | | 41 | | 18 | | 59 | |
| 03:30 | | | 0 | | 1 | | 1 | | 15:30 | | | 57 | | 21 | | 78 | |
| 03:45 | | | 2 | 15 | 5 | 9 | 7 | 24 | 15:45 | | | 48 | 195 | 9 | 92 | 57 | 287 |
| 04:00 | | | 4 | | 2 | | 6 | | 16:00 | | | 46 | | 15 | | 61 | |
| 04:15 | | | 4 | | 4 | | 8 | | 16:15 | | | 20 | | 8 | | 28 | |
| 04:30 | | | 6 | | 3 | | 9 | | 16:30 | | | 69 | | 17 | | 86 | |
| 04:45 | | | 5 | 19 | 10 | 19 | 15 | 38 | 16:45 | | | 41 | 176 | 14 | 54 | 55 | 230 |
| 05:00 | | | 3 | | 10 | | 13 | | 17:00 | | | 43 | | 13 | | 56 | |
| 05:15 | | | 5 | | 26 | | 31 | | 17:15 | | | 15 | | 22 | | 37 | |
| 05:30 | | | 8 | | 53 | | 61 | | 17:30 | | | 24 | | 7 | | 31 | |
| 05:45 | | | 11 | 27 | 78 | 167 | 89 | 194 | 17:45 | | | 24 | 106 | 11 | 53 | 35 | 159 |
| 06:00 | | | 1 | | 51 | | 52 | | 18:00 | | | 32 | | 18 | | 50 | |
| 06:15 | | | 14 | | 58 | | 72 | | 18:15 | | | 12 | | 6 | | 18 | |
| 06:30 | | | 21 | | 68 | | 89 | | 18:30 | | | 8 | | 4 | | 12 | |
| 06:45 | | | 16 | 52 | 73 | 250 | 89 | 302 | 18:45 | | | 3 | 55 | 3 | 31 | 6 | 86 |
| 07:00 | | | 13 | | 57 | | 70 | | 19:00 | | | 9 | | 11 | | 20 | |
| 07:15 | | | 15 | | 31 | | 46 | | 19:15 | | | 4 | | 7 | | 11 | |
| 07:30 | | | 21 | | 58 | | 79 | | 19:30 | | | 5 | | 3 | | 8 | |
| 07:45 | | | 23 | 72 | 51 | 197 | 74 | 269 | 19:45 | | | 8 | 26 | 7 | 28 | 15 | 54 |
| 08:00 | | | 28 | | 41 | | 69 | | 20:00 | | | 7 | | 6 | | 13 | |
| 08:15 | | | 30 | | 28 | | 58 | | 20:15 | | | 3 | | 4 | | 7 | |
| 08:30 | | | 18 | | 31 | | 49 | | 20:30 | | | 13 | | 8 | | 21 | |
| 08:45 | | | 30 | 106 | 50 | 150 | 80 | 256 | 20:45 | | | 4 | 27 | 9 | 27 | 13 | 54 |
| 09:00 | | | 36 | | 44 | | 80 | | 21:00 | | | 6 | | 4 | | 10 | |
| 09:15 | | | 43 | | 35 | | 78 | | 21:15 | | | 1 | | 5 | | 6 | |
| 09:30 | | | 30 | | 23 | | 53 | | 21:30 | | | 3 | | 6 | | 9 | |
| 09:45 | | | 44 | 153 | 20 | 122 | 64 | 275 | 21:45 | | | 2 | 12 | 0 | 15 | 2 | 27 |
| 10:00 | | | 33 | | 30 | | 63 | | 22:00 | | | 9 | | 7 | | 16 | |
| 10:15 | | | 39 | | 34 | | 73 | | 22:15 | | | 1 | | 0 | | 1 | |
| 10:30 | | | 28 | | 30 | | 58 | | 22:30 | | | 3 | | 4 | | 7 | |
| 10:45 | | | 28 | 128 | 33 | 127 | 61 | 255 | 22:45 | | | 17 | 30 | 1 | 12 | 18 | 42 |
| 11:00 | | | 29 | | 36 | | 65 | | 23:00 | | | 2 | | 6 | | 8 | |
| 11:15 | | | 49 | | 59 | | 108 | | 23:15 | | | 1 | | 11 | | 12 | |
| 11:30 | | | 42 | | 56 | | 98 | | 23:30 | | | 0 | | 4 | | 4 | |
| 11:45 | | | 46 | 166 | 38 | 189 | 84 | 355 | 23:45 | | | 0 | 3 | 0 | 21 | 0 | 24 |
| **TOTALS** | | | | 750 | | 1244 | | **1994** | **TOTALS** | | | | 1130 | | 722 | | **1852** |
| **SPLIT %** | | | | 37.6% | | 62.4% | | **51.8%** | **SPLIT %** | | | | 61.0% | | 39.0% | | **48.2%** |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 0 | 0 | 1,880 | 1,966 | 3,846 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AM Peak Hour** | | | 11:15 | 06:15 | **11:15** | **PM Peak Hour** | | | 14:30 | 12:30 | **14:15** |
| **AM Pk Volume** | | | 179 | 256 | **367** | **PM Pk Volume** | | | 212 | 156 | **339** |
| **Pk Hr Factor** | | | 0.913 | 0.877 | **0.850** | **Pk Hr Factor** | | | 0.791 | 0.796 | **0.911** |
| **7 - 9 Volume** | 0 | 0 | 178 | 347 | **525** | **4 - 6 Volume** | 0 | 0 | 282 | 107 | **389** |
| **7 - 9 Peak Hour** | | | 08:00 | 07:00 | **07:30** | **4 - 6 Peak Hour** | | | 16:00 | 16:30 | **16:30** |
| **7 - 9 Pk Volume** | 0 | 0 | 106 | 197 | **280** | **4 - 6 Pk Volume** | 0 | 0 | 176 | 66 | **234** |
| **Pk Hr Factor** | 0.000 | 0.000 | 0.883 | 0.849 | **0.886** | **Pk Hr Factor** | 0.000 | 0.000 | 0.638 | 0.750 | **0.680** |

Prepared by NDS/ATD

# VOLUME

W 32nd St between 24th St & Tidelands Ave

**Day:** Thursday
**Date:** 3/3/2011

**City:** San Diego
**Project #:** CA11_4064_014

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 551 | 451 | 0 | 0 | 1,002 |

| AM Period | NB | | SB | | EB | | WB | | TOTAL | | PM Period | NB | | SB | | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | 0 | | 2 | | | | | | 2 | | 12:00 | 13 | | 9 | | | | | | 22 | |
| 00:15 | 2 | | 1 | | | | | | 3 | | 12:15 | 18 | | 14 | | | | | | 32 | |
| 00:30 | 0 | | 0 | | | | | | 0 | | 12:30 | 13 | | 8 | | | | | | 21 | |
| 00:45 | 1 | 3 | 0 | 3 | | | | | 1 | 6 | 12:45 | 14 | 58 | 12 | 43 | | | | | 26 | 101 |
| 01:00 | 0 | | 0 | | | | | | 0 | | 13:00 | 1 | | 3 | | | | | | 4 | |
| 01:15 | 0 | | 0 | | | | | | 0 | | 13:15 | 11 | | 8 | | | | | | 19 | |
| 01:30 | 0 | | 0 | | | | | | 0 | | 13:30 | 10 | | 7 | | | | | | 17 | |
| 01:45 | 0 | | 0 | | | | | | 0 | | 13:45 | 12 | 34 | 7 | 25 | | | | | 19 | 59 |
| 02:00 | 0 | | 0 | | | | | | 0 | | 14:00 | 14 | | 5 | | | | | | 19 | |
| 02:15 | 0 | | 0 | | | | | | 0 | | 14:15 | 8 | | 5 | | | | | | 13 | |
| 02:30 | 0 | | 0 | | | | | | 0 | | 14:30 | 15 | | 11 | | | | | | 26 | |
| 02:45 | 0 | | 0 | | | | | | 0 | | 14:45 | 9 | 46 | 13 | 34 | | | | | 22 | 80 |
| 03:00 | 0 | | 0 | | | | | | 0 | | 15:00 | 15 | | 5 | | | | | | 20 | |
| 03:15 | 0 | | 0 | | | | | | 0 | | 15:15 | 12 | | 6 | | | | | | 18 | |
| 03:30 | 1 | | 1 | | | | | | 2 | | 15:30 | 14 | | 11 | | | | | | 25 | |
| 03:45 | 0 | 1 | 0 | 1 | | | | | 0 | 2 | 15:45 | 9 | 50 | 8 | 30 | | | | | 17 | 80 |
| 04:00 | 0 | | 0 | | | | | | 0 | | 16:00 | 8 | | 8 | | | | | | 16 | |
| 04:15 | 0 | | 0 | | | | | | 0 | | 16:15 | 8 | | 13 | | | | | | 21 | |
| 04:30 | 0 | | 0 | | | | | | 0 | | 16:30 | 28 | | 5 | | | | | | 33 | |
| 04:45 | 0 | | 0 | | | | | | 0 | | 16:45 | 8 | 52 | 10 | 36 | | | | | 18 | 88 |
| 05:00 | 0 | | 1 | | | | | | 1 | | 17:00 | 9 | | 15 | | | | | | 24 | |
| 05:15 | 1 | | 2 | | | | | | 3 | | 17:15 | 15 | | 6 | | | | | | 21 | |
| 05:30 | 0 | | 3 | | | | | | 3 | | 17:30 | 19 | | 4 | | | | | | 23 | |
| 05:45 | 4 | 5 | 5 | 11 | | | | | 9 | 16 | 17:45 | 11 | 54 | 6 | 31 | | | | | 17 | 85 |
| 06:00 | 5 | | 2 | | | | | | 7 | | 18:00 | 5 | | 9 | | | | | | 14 | |
| 06:15 | 5 | | 5 | | | | | | 10 | | 18:15 | 9 | | 5 | | | | | | 14 | |
| 06:30 | 6 | | 1 | | | | | | 7 | | 18:30 | 7 | | 6 | | | | | | 13 | |
| 06:45 | 2 | 18 | 3 | 11 | | | | | 5 | 29 | 18:45 | 4 | 25 | 4 | 24 | | | | | 8 | 49 |
| 07:00 | 2 | | 5 | | | | | | 7 | | 19:00 | 4 | | 6 | | | | | | 10 | |
| 07:15 | 9 | | 7 | | | | | | 16 | | 19:15 | 3 | | 3 | | | | | | 6 | |
| 07:30 | 7 | | 1 | | | | | | 8 | | 19:30 | 5 | | 3 | | | | | | 8 | |
| 07:45 | 5 | 23 | 4 | 17 | | | | | 9 | 40 | 19:45 | 3 | 15 | 4 | 16 | | | | | 7 | 31 |
| 08:00 | 9 | | 5 | | | | | | 14 | | 20:00 | 1 | | 3 | | | | | | 4 | |
| 08:15 | 6 | | 9 | | | | | | 15 | | 20:15 | 0 | | 4 | | | | | | 4 | |
| 08:30 | 6 | | 6 | | | | | | 12 | | 20:30 | 1 | | 4 | | | | | | 5 | |
| 08:45 | 9 | 30 | 7 | 27 | | | | | 16 | 57 | 20:45 | 4 | 6 | 2 | 13 | | | | | 6 | 19 |
| 09:00 | 11 | | 7 | | | | | | 18 | | 21:00 | 7 | | 2 | | | | | | 9 | |
| 09:15 | 13 | | 14 | | | | | | 27 | | 21:15 | 1 | | 2 | | | | | | 3 | |
| 09:30 | 1 | | 11 | | | | | | 12 | | 21:30 | 4 | | 0 | | | | | | 4 | |
| 09:45 | 6 | 31 | 20 | 52 | | | | | 26 | 83 | 21:45 | 4 | 16 | 0 | 4 | | | | | 4 | 20 |
| 10:00 | 4 | | 8 | | | | | | 12 | | 22:00 | 6 | | 1 | | | | | | 7 | |
| 10:15 | 10 | | 6 | | | | | | 16 | | 22:15 | 2 | | 0 | | | | | | 2 | |
| 10:30 | 11 | | 6 | | | | | | 17 | | 22:30 | 1 | | 1 | | | | | | 2 | |
| 10:45 | 11 | 36 | 9 | 29 | | | | | 20 | 65 | 22:45 | 3 | 12 | 0 | 2 | | | | | 3 | 14 |
| 11:00 | 9 | | 9 | | | | | | 18 | | 23:00 | 0 | | 0 | | | | | | 0 | |
| 11:15 | 7 | | 13 | | | | | | 20 | | 23:15 | 0 | | 0 | | | | | | 0 | |
| 11:30 | 9 | | 11 | | | | | | 20 | | 23:30 | 0 | | 2 | | | | | | 2 | |
| 11:45 | 11 | 36 | 7 | 40 | | | | | 18 | 76 | 23:45 | 0 | | 0 | 2 | | | | | 0 | 2 |
| TOTALS | | 183 | | 191 | | | | | | 374 | TOTALS | | 368 | | 260 | | | | | | 628 |
| SPLIT % | | 48.9% | | 51.1% | | | | | | 37.3% | SPLIT % | | 58.6% | | 41.4% | | | | | | 62.7% |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 551 | 451 | 0 | 0 | 1,002 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AM Peak Hour | 11:45 | 09:15 | | | 11:45 | PM Peak Hour | 16:30 | 12:00 | | | 12:00 |
| AM Pk Volume | 55 | 53 | | | 93 | PM Pk Volume | 60 | 43 | | | 101 |
| Pk Hr Factor | 0.764 | 0.663 | | | 0.727 | Pk Hr Factor | 0.536 | 0.768 | | | 0.789 |
| 7 - 9 Volume | 53 | 44 | 0 | 0 | 97 | 4 - 6 Volume | 106 | 67 | 0 | 0 | 173 |
| 7 - 9 Peak Hour | 07:15 | 08:00 | | | 08:00 | 4 - 6 Peak Hour | 16:30 | 16:15 | | | 16:15 |
| 7 - 9 Pk Volume | 30 | 27 | 0 | 0 | 57 | 4 - 6 Pk Volume | 60 | 43 | 0 | 0 | 96 |
| Pk Hr Factor | 0.833 | 0.750 | 0.000 | 0.000 | 0.891 | Pk Hr Factor | 0.536 | 0.717 | 0.000 | 0.000 | 0.727 |

Prepared by NDS/ATD

# VOLUME

Tidelands Ave between 24th St & W 32nd St

**Day:** Thursday
**Date:** 3/3/2011

**City:** San Diego
**Project #:** CA11_4064_015

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 638 | 516 | 0 | 0 | 1,154 |

| AM Period | NB | | SB | | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | 0 | | 2 | | | | | | 2 | |
| 00:15 | 0 | | 0 | | | | | | 0 | |
| 00:30 | 0 | | 0 | | | | | | 0 | |
| 00:45 | 0 | | 0 | 2 | | | | | 0 | 2 |
| 01:00 | 0 | | 0 | | | | | | 0 | |
| 01:15 | 1 | | 0 | | | | | | 1 | |
| 01:30 | 0 | | 0 | | | | | | 0 | |
| 01:45 | 0 | 1 | 0 | | | | | | 0 | 1 |
| 02:00 | 1 | | 0 | | | | | | 1 | |
| 02:15 | 0 | | 1 | | | | | | 1 | |
| 02:30 | 0 | | 0 | | | | | | 0 | |
| 02:45 | 0 | 1 | 0 | 1 | | | | | 0 | 2 |
| 03:00 | 0 | | 0 | | | | | | 0 | |
| 03:15 | 1 | | 0 | | | | | | 1 | |
| 03:30 | 0 | | 0 | | | | | | 0 | |
| 03:45 | 0 | 1 | 0 | | | | | | 0 | 1 |
| 04:00 | 0 | | 0 | | | | | | 0 | |
| 04:15 | 3 | | 0 | | | | | | 3 | |
| 04:30 | 0 | | 1 | | | | | | 1 | |
| 04:45 | 1 | 4 | 1 | 2 | | | | | 2 | 6 |
| 05:00 | 0 | | 1 | | | | | | 1 | |
| 05:15 | 0 | | 7 | | | | | | 7 | |
| 05:30 | 3 | | 14 | | | | | | 17 | |
| 05:45 | 1 | 4 | 9 | 31 | | | | | 10 | 35 |
| 06:00 | 2 | | 1 | | | | | | 3 | |
| 06:15 | 0 | | 2 | | | | | | 2 | |
| 06:30 | 1 | | 4 | | | | | | 5 | |
| 06:45 | 2 | 5 | 3 | 10 | | | | | 5 | 15 |
| 07:00 | 7 | | 3 | | | | | | 10 | |
| 07:15 | 6 | | 4 | | | | | | 10 | |
| 07:30 | 17 | | 11 | | | | | | 28 | |
| 07:45 | 11 | 41 | 16 | 34 | | | | | 27 | 75 |
| 08:00 | 5 | | 14 | | | | | | 19 | |
| 08:15 | 8 | | 19 | | | | | | 27 | |
| 08:30 | 10 | | 23 | | | | | | 33 | |
| 08:45 | 6 | 29 | 20 | 76 | | | | | 26 | 105 |
| 09:00 | 7 | | 4 | | | | | | 11 | |
| 09:15 | 9 | | 11 | | | | | | 20 | |
| 09:30 | 22 | | 6 | | | | | | 28 | |
| 09:45 | 21 | 59 | 15 | 36 | | | | | 36 | 95 |
| 10:00 | 9 | | 9 | | | | | | 18 | |
| 10:15 | 4 | | 6 | | | | | | 10 | |
| 10:30 | 12 | | 12 | | | | | | 24 | |
| 10:45 | 4 | 29 | 11 | 38 | | | | | 15 | 67 |
| 11:00 | 9 | | 8 | | | | | | 17 | |
| 11:15 | 12 | | 20 | | | | | | 32 | |
| 11:30 | 9 | | 9 | | | | | | 18 | |
| 11:45 | 11 | 41 | 15 | 52 | | | | | 26 | 93 |
| **TOTALS** | | 215 | | 282 | | | | | | **497** |
| **SPLIT %** | | 43.3% | | 56.7% | | | | | | **43.1%** |

| PM Period | NB | | SB | | EB | | WB | | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 | 12 | | 6 | | | | | | 18 | |
| 12:15 | 9 | | 12 | | | | | | 21 | |
| 12:30 | 19 | | 5 | | | | | | 24 | |
| 12:45 | 12 | 52 | 7 | 30 | | | | | 19 | 82 |
| 13:00 | 12 | | 7 | | | | | | 19 | |
| 13:15 | 11 | | 11 | | | | | | 22 | |
| 13:30 | 5 | | 13 | | | | | | 18 | |
| 13:45 | 8 | 36 | 6 | 37 | | | | | 14 | 73 |
| 14:00 | 3 | | 9 | | | | | | 12 | |
| 14:15 | 4 | | 2 | | | | | | 6 | |
| 14:30 | 12 | | 6 | | | | | | 18 | |
| 14:45 | 11 | 30 | 9 | 26 | | | | | 20 | 56 |
| 15:00 | 2 | | 14 | | | | | | 16 | |
| 15:15 | 37 | | 6 | | | | | | 43 | |
| 15:30 | 23 | | 8 | | | | | | 31 | |
| 15:45 | 33 | 95 | 4 | 32 | | | | | 37 | 127 |
| 16:00 | 43 | | 3 | | | | | | 46 | |
| 16:15 | 23 | | 4 | | | | | | 27 | |
| 16:30 | 17 | | 7 | | | | | | 24 | |
| 16:45 | 5 | 88 | 8 | 22 | | | | | 13 | 110 |
| 17:00 | 2 | | 4 | | | | | | 6 | |
| 17:15 | 1 | | 7 | | | | | | 8 | |
| 17:30 | 4 | | 7 | | | | | | 11 | |
| 17:45 | 8 | 15 | 8 | 26 | | | | | 16 | 41 |
| 18:00 | 12 | | 5 | | | | | | 17 | |
| 18:15 | 9 | | 2 | | | | | | 11 | |
| 18:30 | 0 | | 2 | | | | | | 2 | |
| 18:45 | 12 | 33 | 4 | 13 | | | | | 16 | 46 |
| 19:00 | 3 | | 6 | | | | | | 9 | |
| 19:15 | 5 | | 1 | | | | | | 6 | |
| 19:30 | 5 | | 2 | | | | | | 7 | |
| 19:45 | 1 | 14 | 5 | 14 | | | | | 6 | 28 |
| 20:00 | 6 | | 4 | | | | | | 10 | |
| 20:15 | 5 | | 3 | | | | | | 8 | |
| 20:30 | 1 | | 2 | | | | | | 3 | |
| 20:45 | 4 | 16 | 3 | 12 | | | | | 7 | 28 |
| 21:00 | 3 | | 1 | | | | | | 4 | |
| 21:15 | 1 | | 0 | | | | | | 1 | |
| 21:30 | 0 | | 0 | | | | | | 0 | |
| 21:45 | 2 | 6 | 0 | 1 | | | | | 2 | 7 |
| 22:00 | 5 | | 2 | | | | | | 7 | |
| 22:15 | 5 | | 0 | | | | | | 5 | |
| 22:30 | 4 | | 3 | | | | | | 7 | |
| 22:45 | 19 | 33 | 3 | 8 | | | | | 22 | 41 |
| 23:00 | 0 | | 11 | | | | | | 11 | |
| 23:15 | 4 | | 1 | | | | | | 5 | |
| 23:30 | 1 | | 1 | | | | | | 2 | |
| 23:45 | 0 | 5 | 0 | 13 | | | | | 0 | 18 |
| **TOTALS** | | 423 | | 234 | | | | | | **657** |
| **SPLIT %** | | 64.4% | | 35.6% | | | | | | **56.9%** |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 638 | 516 | 0 | 0 | 1,154 |

| | | | | | |
|---|---|---|---|---|---|
| **AM Peak Hour** | 09:15 | 08:00 | | | **07:45** |
| **AM Pk Volume** | 61 | 76 | | | **106** |
| **Pk Hr Factor** | 0.693 | 0.826 | | | **0.803** |
| **7 - 9 Volume** | 70 | 110 | 0 | 0 | **180** |
| **7 - 9 Peak Hour** | 07:00 | 08:00 | | | **07:45** |
| **7 - 9 Pk Volume** | 41 | 76 | 0 | 0 | **106** |
| **Pk Hr Factor** | 0.603 | 0.826 | 0.000 | 0.000 | **0.803** |

| | | | | | |
|---|---|---|---|---|---|
| **PM Peak Hour** | 15:15 | 13:15 | | | **15:15** |
| **PM Pk Volume** | 136 | 39 | | | **157** |
| **Pk Hr Factor** | 0.791 | 0.750 | | | **0.853** |
| **4 - 6 Volume** | 103 | 48 | 0 | 0 | **151** |
| **4 - 6 Peak Hour** | 16:00 | 16:30 | | | **16:00** |
| **4 - 6 Pk Volume** | 88 | 26 | 0 | 0 | **110** |
| **Pk Hr Factor** | 0.512 | 0.813 | 0.000 | 0.000 | **0.598** |

# ATTACHMENT B

# CITY OF SAN DIEGO AND CITY OF NATIONAL CITY PROPOSED LOS STANDARDS

TABLE 2
Roadway Classifications, Levels of Service (LOS)
and Average Daily Traffic (ADT)

| | | | LEVEL OF SERVICE | | | | |
|---|---|---|---|---|---|---|---|
| STREET CLASSIFICATION | LANES | CROSS SECTIONS | A | B | C | D | E |
| Freeway | 8 lanes | | 60,000 | 84,000 | 120,000 | 140,000 | 150,000 |
| Freeway | 6 lanes | | 45,000 | 63,000 | 90,000 | 110,000 | 120,000 |
| Freeway | 4 lanes | | 30,000 | 42,000 | 60,000 | 70,000 | 80,000 |
| Expressway | 6 lanes | 102/122 | 30,000 | 42,000 | 60,000 | 70,000 | 80,000 |
| Primary Arterial | 6 lanes | 102/122 | 25,000 | 35,000 | 50,000 | 55,000 | 60,000 |
| Major Arterial | 6 lanes | 102/122 | 20,000 | 28,000 | 40,000 | 45,000 | 50,000 |
| Major Arterial | 4 lanes | 78/98 | 15,000 | 21,000 | 30,000 | 35,000 | 40,000 |
| Collector | 4 lanes | 72/92 | 10,000 | 14,000 | 20,000 | 25,000 | 30,000 |
| Collector (no center lane)<br>continuous left-turn lane) | 4 lanes<br>2 lanes | 64/84<br>50/70 | 5,000 | 7,000 | 10,000 | 13,000 | 15,000 |
| Collector<br>(no fronting property) | 2 lanes | 40/60 | 4,000 | 5,500 | 7,500 | 9,000 | 10,000 |
| Collector<br>(commercial-industrial fronting) | 2 lanes | 50/70 | 2,500 | 3,500 | 5,000 | 6,500 | 8,000 |
| Collector<br>(multifamily) | 2 lanes | 40/60 | 2,500 | 3,500 | 5,000 | 6,500 | 8,000 |
| Sub-Collector<br>(single-family) | 2 lanes | 36/56 | — | — | 2,200 | — | — |

LEGEND:

XXX/XXX = Curb to curb width (feet)/right-of-way width (feet): based on the City of San Diego Street Design. Manual

XX/XXX= Approximate recommended ADT based on the City of San Diego Street Design Manual.

NOTES:

1. The volumes and the average daily level of service listed above are only intended as a general planning guideline.

2. Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

**TABLE 3.2:**
**CIRCULATION ELEMENT ROADWAY CLASSIFICATIONS**
**CAPACITY AND LEVEL OF SERVICE STANDARDS**

| Street Classification | Lanes | Level of Service* | | | | | |
|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F |
| Major Arterial | 6 | 0-20,000 | 20,001-28,000 | 28,001-40,000 | 40,001-45,000 | 45,001-40,000 | 50,001+ |
| Major Arterial | 4 | 0-15,000 | 15,001-21,000 | 21,001-30,000 | 30,001-35,000 | 35,001-40,000 | 40,001+ |
| Secondary Arterial | 4 | 0-10,000 | 10,001-14,000 | 14,001-20,000 | 20,001-25,000 | 25,001-30,000 | 30,001+ |
| Collector | 4 | 0-7,000 | 7,001-10,000 | 10,001-14,000 | 14,001-17,000 | 17,001-20,000 | 20,001+ |
| Collector | 2+1 | 0-5,000 | 5,001-7,000 | 7,001-10,000 | 10,001-13,000 | 13,001-15,000 | 15,000+ |
| Collector | 2 | 0-4,000 | 4,001-5,500 | 5,501-7,500 | 7,501-9,000 | 9,001-10,000 | 10,001+ |

* Approximate recommended Average Daily Traffic based upon the City of San Diego Street Design Manual, and adopted by the City of National City.

# ATTACHMENT C

# EXISTING LOS WORKSHEETS

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Park Boulevard/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.509 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 15.0 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| PHF Volume: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.91 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.62 | 0.00 | 0.38 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 2800 | 0 | 660 | 0 | 0 | 0 | 1769 | 3538 | 1583 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.03 | 0.09 | 0.31 | 0.09 | 0.19 | 0.00 |
| Crit Moves: | | | **** | | | | | | **** | **** | | |
| Green/Cycle: | 0.07 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.16 | 0.62 | 0.62 | 0.18 | 0.63 | 0.00 |
| Volume/Cap: | 0.49 | 0.00 | 0.51 | 0.00 | 0.00 | 0.00 | 0.17 | 0.15 | 0.51 | 0.51 | 0.30 | 0.00 |
| Delay/Veh: | 46.5 | 0.0 | 45.6 | 0.0 | 0.0 | 0.0 | 36.2 | 8.1 | 11.1 | 38.5 | 8.5 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 46.5 | 0.0 | 45.6 | 0.0 | 0.0 | 0.0 | 36.2 | 8.1 | 11.1 | 38.5 | 8.5 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | D | A | B | D | A | A |
| HCM2kAvgQ: | 2 | 0 | 3 | 0 | 0 | 0 | 1 | 2 | 9 | 4 | 5 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Cesar Chavez Parkway/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.512 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 31.4 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 0 1 | 0 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 4 | 28 | 16 | 41 | 82 | 312 | 156 | 143 | 21 | 44 | 430 | 63 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 28 | 16 | 41 | 82 | 312 | 156 | 143 | 21 | 44 | 430 | 63 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 28 | 16 | 41 | 82 | 312 | 156 | 143 | 21 | 44 | 430 | 63 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.96 | 0.96 | 0.83 | 0.93 | 0.91 | 0.91 | 0.93 | 0.91 | 0.91 |
| Lanes: | 1.00 | 0.64 | 0.36 | 0.34 | 0.66 | 1.00 | 1.00 | 1.74 | 0.26 | 1.00 | 1.75 | 0.25 |
| Final Sat.: | 1769 | 1129 | 632 | 616 | 1215 | 1583 | 1769 | 3022 | 449 | 1769 | 3030 | 441 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.02 | 0.02 | 0.07 | 0.07 | 0.20 | 0.09 | 0.05 | 0.05 | 0.02 | 0.14 | 0.14 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.18 | 0.18 | 0.24 | 0.36 | 0.36 | 0.16 | 0.21 | 0.21 | 0.21 | 0.26 | 0.26 |
| Volume/Cap: | 0.05 | 0.14 | 0.14 | 0.28 | 0.18 | 0.54 | 0.54 | 0.22 | 0.22 | 0.12 | 0.54 | 0.54 |
| Delay/Veh: | 45.5 | 35.0 | 35.0 | 31.5 | 21.8 | 26.2 | 40.5 | 32.7 | 32.7 | 31.9 | 32.4 | 32.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 45.5 | 35.0 | 35.0 | 31.5 | 21.8 | 26.2 | 40.5 | 32.7 | 32.7 | 31.9 | 32.4 | 32.4 |
| LOS by Move: | D | C | C | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 0 | 1 | 1 | 3 | 3 | 8 | 4 | 2 | 2 | 1 | 7 | 7 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Sampson Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.265 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 20.4 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 1 0 | 1 | 0 | 1 0 | 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 135 | 31 | 87 | 477 | 6 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 135 | 31 | 87 | 477 | 6 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 142 | 33 | 92 | 502 | 6 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 142 | 33 | 92 | 502 | 6 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 142 | 33 | 92 | 502 | 6 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 0.92 | 0.92 | 0.92 | 0.93 | 0.90 | 0.90 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.18 | 0.30 | 0.52 | 0.09 | 0.63 | 0.28 | 1.00 | 1.63 | 0.37 | 1.00 | 1.98 | 0.02 |
| Final Sat.: | 288 | 501 | 850 | 155 | 1110 | 488 | 1769 | 2797 | 642 | 1769 | 3487 | 44 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.07 | 0.07 | 0.05 | 0.05 | 0.05 | 0.01 | 0.05 | 0.05 | 0.05 | 0.14 | 0.14 |
| Crit Moves: | **** | | | | | | **** | | | | **** | |
| Green/Cycle: | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.05 | 0.29 | 0.29 | 0.29 | 0.53 | 0.53 |
| Volume/Cap: | 0.27 | 0.27 | 0.27 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.27 | 0.27 |
| Delay/Veh: | 30.0 | 30.0 | 30.0 | 29.2 | 29.2 | 29.2 | 46.5 | 26.7 | 26.7 | 26.4 | 12.8 | 12.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 30.0 | 30.0 | 30.0 | 29.2 | 29.2 | 29.2 | 46.5 | 26.7 | 26.7 | 26.4 | 12.8 | 12.8 |
| LOS by Move: | C | C | C | C | C | C | D | C | C | C | B | B |
| HCM2kAvgQ: | 3 | 3 | 3 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 4 | 4 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 28th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.423 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 27.9 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 4 | 7 | 5 | 315 | 9 | 28 | 36 | 186 | 7 | 12 | 448 | 142 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 4 | 7 | 5 | 315 | 9 | 28 | 36 | 186 | 7 | 12 | 448 | 142 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 4 | 7 | 5 | 335 | 10 | 30 | 38 | 198 | 7 | 13 | 476 | 151 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 7 | 5 | 335 | 10 | 30 | 38 | 198 | 7 | 13 | 476 | 151 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 7 | 5 | 335 | 10 | 30 | 38 | 198 | 7 | 13 | 476 | 151 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.93 | 0.82 | 0.82 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.83 |
| Lanes: | 0.25 | 0.44 | 0.31 | 1.00 | 1.00 | 1.00 | 1.00 | 1.93 | 0.07 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 441 | 771 | 551 | 1769 | 1567 | 1567 | 1769 | 3392 | 128 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.01 | 0.01 | 0.19 | 0.01 | 0.02 | 0.02 | 0.06 | 0.06 | 0.01 | 0.13 | 0.10 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.24 | 0.05 | 0.05 | 0.43 | 0.24 | 0.24 | 0.05 | 0.19 | 0.19 | 0.17 | 0.31 | 0.31 |
| Volume/Cap: | 0.04 | 0.19 | 0.19 | 0.44 | 0.03 | 0.08 | 0.43 | 0.30 | 0.30 | 0.04 | 0.44 | 0.31 |
| Delay/Veh: | 29.1 | 46.6 | 46.6 | 20.3 | 29.0 | 29.4 | 49.5 | 34.9 | 34.9 | 35.2 | 28.0 | 26.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 29.1 | 46.6 | 46.6 | 20.3 | 29.0 | 29.4 | 49.5 | 34.9 | 34.9 | 35.2 | 28.0 | 26.9 |
| LOS by Move: | C | D | D | C | C | C | D | C | C | D | C | C |
| HCM2kAvgQ: | 0 | 1 | 1 | 7 | 0 | 1 | 1 | 3 | 3 | 0 | 6 | 4 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 28th Street/Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.388 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 30.0 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 35 | 191 | 58 | 163 | 413 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 35 | 191 | 58 | 163 | 413 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 37 | 202 | 61 | 172 | 437 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 37 | 202 | 61 | 172 | 437 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 37 | 202 | 61 | 172 | 437 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.93 | 0.92 | 0.92 | 0.93 | 0.89 | 0.89 | 0.93 | 0.87 | 0.87 |
| Lanes: | 1.00 | 1.53 | 0.47 | 1.00 | 1.82 | 0.18 | 1.00 | 1.34 | 0.66 | 1.00 | 1.06 | 0.94 |
| Final Sat.: | 1769 | 2619 | 795 | 1769 | 3176 | 315 | 1769 | 2260 | 1104 | 1769 | 1744 | 1546 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.08 | 0.08 | 0.10 | 0.14 | 0.14 | 0.04 | 0.04 | 0.04 | 0.03 | 0.13 | 0.13 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.18 | 0.18 | 0.23 | 0.35 | 0.35 | 0.10 | 0.22 | 0.22 | 0.22 | 0.33 | 0.33 |
| Volume/Cap: | 0.39 | 0.43 | 0.43 | 0.43 | 0.39 | 0.39 | 0.39 | 0.19 | 0.19 | 0.15 | 0.39 | 0.39 |
| Delay/Veh: | 48.3 | 36.9 | 36.9 | 33.7 | 24.4 | 24.4 | 43.4 | 32.2 | 32.2 | 31.9 | 26.0 | 26.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 48.3 | 36.9 | 36.9 | 33.7 | 24.4 | 24.4 | 43.4 | 32.2 | 32.2 | 31.9 | 26.0 | 26.0 |
| LOS by Move: | D | D | D | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 2 | 4 | 4 | 4 | 6 | 6 | 2 | 2 | 2 | 1 | 5 | 5 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 28th Street/Boston Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.306 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 18.4 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 351 | 80 | 137 | 650 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 351 | 80 | 137 | 650 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 3 | 372 | 85 | 145 | 689 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 3 | 372 | 85 | 145 | 689 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 3 | 372 | 85 | 145 | 689 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.93 | 0.93 | 0.96 | 0.96 | 0.93 | 0.87 | 0.87 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.92 | 0.08 | 1.00 | 0.87 | 0.13 | 1.00 | 0.25 | 0.75 |
| Final Sat.: | 1769 | 3538 | 1583 | 1769 | 3381 | 135 | 1769 | 1594 | 232 | 1769 | 420 | 1233 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.11 | 0.05 | 0.08 | 0.20 | 0.20 | 0.01 | 0.03 | 0.03 | 0.01 | 0.04 | 0.04 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.38 | 0.38 | 0.30 | 0.62 | 0.62 | 0.05 | 0.08 | 0.08 | 0.08 | 0.12 | 0.12 |
| Volume/Cap: | 0.04 | 0.28 | 0.14 | 0.28 | 0.33 | 0.33 | 0.28 | 0.39 | 0.39 | 0.08 | 0.33 | 0.33 |
| Delay/Veh: | 45.4 | 21.7 | 20.5 | 27.3 | 9.0 | 9.0 | 47.5 | 45.1 | 45.1 | 42.6 | 41.6 | 41.6 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 45.4 | 21.7 | 20.5 | 27.3 | 9.0 | 9.0 | 47.5 | 45.1 | 45.1 | 42.6 | 41.6 | 41.6 |
| LOS by Move: | D | C | C | C | A | A | D | D | D | D | D | D |
| HCM2kAvgQ: | 0 | 4 | 2 | 3 | 5 | 5 | 1 | 2 | 2 | 0 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
Unknown Method (Base Volume Alternative)

Intersection #7 28th Street/I-5 southbound ramp

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 2 | 0 | 0 | 0 0 1 | 1 | 0 | 0 0 0 | 0 | 1 | 0 0 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 415 | 0 | 0 | 303 | 0 | 0 | 0 | 508 | 0 | 0 | 0 |
| Growth Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| PHF Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCE Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| MLF Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical Gap Module: >> Population:0 << >> Run Speed(N/S): 30 MPH << | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Level Of Service Module: | | | | | | | | | | | | |
| LOS by Move: | | | | | | | | | | | | |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 28th Street/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.781 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 33.7 |
| Optimal Cycle: | 82 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 1 | 0 | 0 0 | 1! 0 | 0 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 146 | 537 | 86 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 146 | 537 | 86 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 151 | 556 | 89 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 151 | 556 | 89 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 151 | 556 | 89 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.68 | 0.68 | 0.68 | 0.85 | 0.85 | 0.85 | 0.93 | 0.91 | 0.91 | 0.93 | 0.96 | 0.96 |
| Lanes: | 0.55 | 0.97 | 0.48 | 0.13 | 0.37 | 0.50 | 1.00 | 1.75 | 0.25 | 1.00 | 0.86 | 0.14 |
| Final Sat.: | 712 | 1251 | 616 | 221 | 596 | 808 | 1769 | 3030 | 440 | 1769 | 1571 | 252 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.05 | 0.05 | 0.23 | 0.23 | 0.23 | 0.07 | 0.06 | 0.06 | 0.09 | 0.35 | 0.35 |
| Crit Moves: | | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.09 | 0.22 | 0.22 | 0.32 | 0.45 | 0.45 |
| Volume/Cap: | 0.18 | 0.18 | 0.18 | 0.78 | 0.78 | 0.78 | 0.78 | 0.27 | 0.27 | 0.27 | 0.78 | 0.78 |
| Delay/Veh: | 26.0 | 26.0 | 26.0 | 39.9 | 39.9 | 39.9 | 67.3 | 32.5 | 32.5 | 25.6 | 27.9 | 27.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.0 | 26.0 | 26.0 | 39.9 | 39.9 | 39.9 | 67.3 | 32.5 | 32.5 | 25.6 | 27.9 | 27.9 |
| LOS by Move: | C | C | C | D | D | D | E | C | C | C | C | C |
| HCM2kAvgQ: | 2 | 2 | 2 | 13 | 13 | 13 | 6 | 3 | 3 | 3 | 18 | 18 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #9 I-5 northbound ramps/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.493 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 18.6 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 0 1 | 0 0 | 0 | 0 0 | 0 0 | 1 | 0 1 | 0 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 304 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 304 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.00 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 319 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 319 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 319 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 1769 | 0 | 1583 | 0 | 0 | 0 | 0 | 1862 | 1900 | 0 | 1862 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.18 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.25 | 0.00 |
| Crit Moves: | **** | | | | | | | | | | **** | |
| Green/Cycle: | 0.37 | 0.00 | 0.37 | 0.00 | 0.00 | 0.00 | 0.00 | 0.51 | 0.00 | 0.00 | 0.51 | 0.00 |
| Volume/Cap: | 0.49 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.26 | 0.00 | 0.00 | 0.49 | 0.00 |
| Delay/Veh: | 25.1 | 0.0 | 21.3 | 0.0 | 0.0 | 0.0 | 0.0 | 13.7 | 0.0 | 0.0 | 16.2 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.1 | 0.0 | 21.3 | 0.0 | 0.0 | 0.0 | 0.0 | 13.7 | 0.0 | 0.0 | 16.2 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | B | A | A | B | A |
| HCM2kAvgQ: | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 9 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 I-5 southbound ramp/Boston Avenue

Average Delay (sec/veh): 6.1 Worst Case Level Of Service: C[ 15.2]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 1 | 0 | 0 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | | 1 | 0 | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 1 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 9 | 23 | | 5 | | | 0 | | 0 | | 0 | | 255 | 26 | | 8 | | | 2 | 50 | | | 43 | |
| Growth Adj: | 1.00 | 1.00 | | 1.00 | | | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | | 1.00 | 1.00 | | | 1.00 | |
| Initial Bse: | 9 | 23 | | 5 | | | 0 | | 0 | | 0 | | 255 | 26 | | 8 | | | 2 | 50 | | | 43 | |
| User Adj: | 1.00 | 1.00 | | 1.00 | | | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | | 1.00 | 1.00 | | | 1.00 | |
| PHF Adj: | 1.00 | 1.00 | | 1.00 | | | 1.00 | | 1.00 | | 1.00 | | 1.00 | 1.00 | | 1.00 | | | 1.00 | 1.00 | | | 1.00 | |
| PHF Volume: | 9 | 23 | | 5 | | | 0 | | 0 | | 0 | | 255 | 26 | | 8 | | | 2 | 50 | | | 43 | |
| Reduct Vol: | 0 | 0 | | 0 | | | 0 | | 0 | | 0 | | 0 | 0 | | 0 | | | 0 | 0 | | | 0 | |
| FinalVolume: | 9 | 23 | | 5 | | | 0 | | 0 | | 0 | | 255 | 26 | | 8 | | | 2 | 50 | | | 43 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | | 6.2 | xxxxx | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | 4.1 | xxxx | xxxxx | | | | | | | | | |
| FollowUpTim: | 3.5 | 4.0 | | 3.3 | xxxxx | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | 2.2 | xxxx | xxxxx | | | | | | | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 616 | 637 | | 30 | xxxx | xxxx | xxxxx | | 93 | xxxx | xxxxx | | 34 | xxxx | xxxxx | | | | | | | | | |
| Potent Cap.: | 454 | 395 | | 1044 | xxxx | xxxx | xxxxx | | 1501 | xxxx | xxxxx | | 1578 | xxxx | xxxxx | | | | | | | | | |
| Move Cap.: | 395 | 327 | | 1044 | xxxx | xxxx | xxxxx | | 1501 | xxxx | xxxxx | | 1578 | xxxx | xxxxx | | | | | | | | | |
| Volume/Cap: | 0.02 | 0.07 | | 0.00 | xxxx | xxxx | xxxx | | 0.17 | xxxx | xxxx | | 0.00 | xxxx | xxxx | | | | | | | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.1 | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | 0.6 | xxxx | xxxxx | | 0.0 | xxxx | xxxxx | | | | | | | | | |
| Control Del: | 14.3 | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | | 7.9 | xxxx | xxxxx | | 7.3 | xxxx | xxxxx | | | | | | | | | |
| LOS by Move: | B | * | | * | | * | | * | | A | * | | * | | A | * | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | xxxx | xxxx | | 373 | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | xxxx | xxxx | xxxxx | | | | | | | | | |
| SharedQueue: | xxxxx | xxxx | | 0.2 | xxxxx | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | | 0.0 | xxxx | xxxxx | | | | | | | | | |
| Shrd ConDel: | xxxxx | xxxx | | 15.4 | xxxxx | xxxx | xxxxx | | xxxxx | xxxx | xxxxx | | 7.3 | xxxx | xxxxx | | | | | | | | | |
| Shared LOS: | * | * | | C | * | * | * | | * | * | * | | A | * | * | | | | | | | | | |
| ApproachDel: | 15.2 | | | | xxxxxx | | | | xxxxxx | | | | xxxxxx | | | | | | | | | | | |
| ApproachLOS: | C | | | | * | | | | * | | | | * | | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 I-5 northbound ramps/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.718 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 25.3 |
| Optimal Cycle: | 62 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 1 | 0 0 | 0 0 | 0 | 1 0 | 2 0 | 0 | 0 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 236 | 145 | 400 | 0 | 0 | 0 | 53 | 350 | 0 | 0 | 280 | 371 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 236 | 145 | 400 | 0 | 0 | 0 | 53 | 350 | 0 | 0 | 280 | 371 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| PHF Volume: | 275 | 169 | 467 | 0 | 0 | 0 | 62 | 408 | 0 | 0 | 327 | 433 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 275 | 169 | 467 | 0 | 0 | 0 | 62 | 408 | 0 | 0 | 327 | 433 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 275 | 169 | 467 | 0 | 0 | 0 | 62 | 408 | 0 | 0 | 327 | 433 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 1.00 | 1.00 | 0.85 | 0.85 |
| Lanes: | 1.25 | 0.31 | 1.44 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 0.00 | 0.00 | 1.00 | 1.00 |
| Final Sat.: | 2060 | 514 | 2350 | 0 | 0 | 0 | 1769 | 3538 | 0 | 0 | 1619 | 1619 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.13 | 0.33 | 0.20 | 0.00 | 0.00 | 0.00 | 0.03 | 0.12 | 0.00 | 0.00 | 0.20 | 0.27 |
| Crit Moves: | | **** | | | | | **** | | | | | **** |
| Green/Cycle: | 0.46 | 0.46 | 0.46 | 0.00 | 0.00 | 0.00 | 0.05 | 0.29 | 0.00 | 0.00 | 0.37 | 0.37 |
| Volume/Cap: | 0.29 | 0.72 | 0.43 | 0.00 | 0.00 | 0.00 | 0.70 | 0.39 | 0.00 | 0.00 | 0.54 | 0.72 |
| Delay/Veh: | 17.0 | 23.9 | 18.5 | 0.0 | 0.0 | 0.0 | 68.7 | 28.4 | 0.0 | 0.0 | 25.1 | 29.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 17.0 | 23.9 | 18.5 | 0.0 | 0.0 | 0.0 | 68.7 | 28.4 | 0.0 | 0.0 | 25.1 | 29.3 |
| LOS by Move: | B | C | B | A | A | A | E | C | A | A | C | C |
| HCM2kAvgQ: | 4 | 14 | 7 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 9 | 13 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #12 I-5 southbound ramps/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.288 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 23.5 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 0 | 0 0 | 1 1 | 0 | 0 1 | 0 0 | 2 | 0 1 | 1 0 | 2 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 362 | 0 | 122 | 0 | 67 | 79 | 181 | 324 | 0 |
| Growth Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| Initial Bse: | 0 | 0 | 0 | 362 | 0 | 122 | 0 | 67 | 79 | 181 | 324 | 0 |
| User Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| PHF Adj: | 0.88 0.88 | 0.88 | | 0.88 0.88 | 0.88 | | 0.88 0.88 | 0.88 | | 0.88 0.88 | 0.88 | |
| PHF Volume: | 0 | 0 | 0 | 411 | 0 | 138 | 0 | 76 | 0 | 205 | 368 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 411 | 0 | 138 | 0 | 76 | 0 | 205 | 368 | 0 |
| PCE Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| MLF Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| FinalVolume: | 0 | 0 | 0 | 411 | 0 | 138 | 0 | 76 | 0 | 205 | 368 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 1900 | 1900 | | 1900 1900 | 1900 | | 1900 1900 | 1900 | | 1900 1900 | 1900 | |
| Adjustment: | 1.00 1.00 | 1.00 | | 0.93 1.00 | 0.83 | | 1.00 0.93 | 1.00 | | 0.93 0.93 | 1.00 | |
| Lanes: | 0.00 0.00 | 0.00 | | 2.00 0.00 | 1.00 | | 0.00 2.00 | 1.00 | | 1.00 2.00 | 0.00 | |
| Final Sat.: | 0 | 0 | 0 | 3545 | 0 | 1583 | 0 | 3538 | 1900 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 0.00 | 0.00 | | 0.12 0.00 | 0.09 | | 0.00 0.02 | 0.00 | | 0.12 0.10 | 0.00 | |
| Crit Moves: | | | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.00 0.00 | 0.00 | | 0.40 0.00 | 0.40 | | 0.00 0.07 | 0.00 | | 0.40 0.32 | 0.00 | |
| Volume/Cap: | 0.00 0.00 | 0.00 | | 0.29 0.00 | 0.22 | | 0.00 0.29 | 0.00 | | 0.29 0.32 | 0.00 | |
| Delay/Veh: | 0.0 | 0.0 | 0.0 | 20.3 | 0.0 | 19.7 | 0.0 44.4 | 0.0 | | 20.4 25.8 | 0.0 | |
| User DelAdj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| AdjDel/Veh: | 0.0 | 0.0 | 0.0 | 20.3 | 0.0 | 19.7 | 0.0 44.4 | 0.0 | | 20.4 25.8 | 0.0 | |
| LOS by Move: | A | A | A | C | A | B | A | D | A | C | C | A |
| HCM2kAvgQ: | 0 | 0 | 0 | 4 | 0 | 3 | 0 | 1 | 0 | 4 | 4 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #13 Cleveland Street/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.308 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.9 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.29 | 0.71 | 1.00 | 1.00 | 1.00 | 0.19 | 1.73 | 0.08 | 0.04 | 1.14 | 0.82 |
| Final Sat.: | 536 | 180 | 450 | 526 | 567 | 637 | 130 | 1186 | 53 | 32 | 853 | 679 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.03 | 0.03 | 0.08 | 0.00 | 0.01 | 0.08 | 0.08 | 0.07 | 0.31 | 0.30 | 0.27 |
| Crit Moves: | | **** | | **** | | | **** | | | **** | | |
| Delay/Veh: | 9.0 | 8.2 | 8.2 | 9.6 | 8.6 | 8.0 | 8.3 | 8.2 | 8.2 | 9.7 | 9.5 | 8.5 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.0 | 8.2 | 8.2 | 9.6 | 8.6 | 8.0 | 8.3 | 8.2 | 8.2 | 9.7 | 9.5 | 8.5 |
| LOS by Move: | A | A | A | A | A | A | A | A | A | A | A | A |
| ApproachDel: | 8.2 | | | 9.3 | | | 8.3 | | | 9.1 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 8.2 | | | 9.3 | | | 8.3 | | | 9.1 | | |
| LOS by Appr: | A | | | A | | | A | | | A | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.4 | 0.4 | 0.4 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #14 W. 32nd Street/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.113 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 11.3 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 0 | 1 | 0 0 | 0 0 | 0 | 0 0 | 1 1 | 0 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 79 | 1 | 17 | 250 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 79 | 1 | 17 | 250 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| PHF Volume: | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 92 | 1 | 20 | 292 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 92 | 1 | 20 | 292 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 92 | 1 | 20 | 292 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 1.00 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.98 | 0.02 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 1900 | 0 | 1583 | 0 | 0 | 0 | 0 | 3487 | 44 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.03 | 0.01 | 0.08 | 0.00 |
| Crit Moves: | | | **** | | | | **** | | | | **** | |
| Green/Cycle: | 0.00 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.37 | 0.37 | 0.37 | 0.69 | 0.00 |
| Volume/Cap: | 0.00 | 0.00 | 0.12 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.07 | 0.03 | 0.12 | 0.00 |
| Delay/Veh: | 0.0 | 0.0 | 37.7 | 0.0 | 0.0 | 0.0 | 0.0 | 20.5 | 20.5 | 20.1 | 5.3 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 0.0 | 37.7 | 0.0 | 0.0 | 0.0 | 0.0 | 20.5 | 20.5 | 20.1 | 5.3 | 0.0 |
| LOS by Move: | A | A | D | A | A | A | A | C | C | C | A | A |
| HCM2kAvgQ: | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #15 Tidelands Avenue/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.087 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 26.4 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 8 | 13 | 18 | 37 | 15 | 13 | 19 | 4 | 31 | 61 | 37 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 8 | 13 | 18 | 37 | 15 | 13 | 19 | 4 | 31 | 61 | 37 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 0 | 9 | 14 | 20 | 41 | 17 | 14 | 21 | 4 | 34 | 68 | 41 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 9 | 14 | 20 | 41 | 17 | 14 | 21 | 4 | 34 | 68 | 41 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 9 | 14 | 20 | 41 | 17 | 14 | 21 | 4 | 34 | 68 | 41 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 1.00 | 0.89 | 0.89 | 0.93 | 0.94 | 0.94 | 0.93 | 0.91 | 0.91 | 0.93 | 0.88 | 0.88 |
| Lanes: | 1.00 | 0.38 | 0.62 | 1.00 | 0.71 | 0.29 | 1.00 | 1.65 | 0.35 | 1.00 | 1.24 | 0.76 |
| Final Sat.: | 1900 | 643 | 1045 | 1769 | 1268 | 514 | 1769 | 2847 | 599 | 1769 | 2077 | 1260 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.01 | 0.01 | 0.01 | 0.03 | 0.03 | 0.01 | 0.01 | 0.01 | 0.02 | 0.03 | 0.03 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.00 | 0.20 | 0.20 | 0.20 | 0.35 | 0.35 | 0.09 | 0.22 | 0.22 | 0.22 | 0.35 | 0.35 |
| Volume/Cap: | 0.00 | 0.07 | 0.07 | 0.06 | 0.09 | 0.09 | 0.09 | 0.03 | 0.03 | 0.09 | 0.09 | 0.09 |
| Delay/Veh: | 0.0 | 32.5 | 32.5 | 32.4 | 21.9 | 21.9 | 42.2 | 30.7 | 30.7 | 31.1 | 21.7 | 21.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 32.5 | 32.5 | 32.4 | 21.9 | 21.9 | 42.2 | 30.7 | 30.7 | 31.1 | 21.7 | 21.7 |
| LOS by Move: | A | C | C | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Tidelands Avenue/W. 32nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.066 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 7.3 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 | 1 | 0 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 1 0 | 1 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 1.00 | 0.00 | 1.00 | 0.15 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 0 | 770 | 0 | 704 | 137 | 759 | 682 | 753 | 883 | 676 | 745 | 871 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | xxxx | 0.01 | xxxx | 0.01 | 0.07 | 0.07 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crit Moves: | | **** | | | | **** | **** | | | | | **** |
| Delay/Veh: | 0.0 | 7.7 | 0.0 | 7.8 | 7.0 | 7.0 | 8.1 | 7.4 | 0.0 | 0.0 | 0.0 | 6.8 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 7.7 | 0.0 | 7.8 | 7.0 | 7.0 | 8.1 | 7.4 | 0.0 | 0.0 | 0.0 | 6.8 |
| LOS by Move: | * | A | * | A | A | A | A | A | * | * | * | A |
| ApproachDel: | | 7.7 | | | 7.1 | | | 8.0 | | | 6.8 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 7.7 | | | 7.1 | | | 8.0 | | | 6.8 | |
| LOS by Appr: | | A | | | A | | | A | | | A | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Park Boulevard/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.425 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 13.9 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.90 | 1.00 | 0.90 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.48 | 0.00 | 0.52 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 2529 | 0 | 888 | 0 | 0 | 0 | 1769 | 3538 | 1583 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.06 | 0.03 | 0.11 | 0.00 |
| Crit Moves: | | | **** | | | | | **** | | **** | | |
| Green/Cycle: | 0.10 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.23 | 0.66 | 0.66 | 0.07 | 0.50 | 0.00 |
| Volume/Cap: | 0.41 | 0.00 | 0.42 | 0.00 | 0.00 | 0.00 | 0.02 | 0.42 | 0.09 | 0.42 | 0.22 | 0.00 |
| Delay/Veh: | 43.0 | 0.0 | 39.4 | 0.0 | 0.0 | 0.0 | 29.8 | 8.2 | 6.3 | 46.7 | 14.0 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 43.0 | 0.0 | 39.4 | 0.0 | 0.0 | 0.0 | 29.8 | 8.2 | 6.3 | 46.7 | 14.0 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | C | A | A | D | B | A |
| HCM2kAvgQ: | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 8 | 1 | 2 | 3 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Cesar Chavez Parkway/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.457 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 25.8 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 0 1 | 0 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 23 | 85 | 38 | 51 | 40 | 175 | 383 | 741 | 11 | 12 | 131 | 22 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 23 | 85 | 38 | 51 | 40 | 175 | 383 | 741 | 11 | 12 | 131 | 22 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 23 | 85 | 38 | 51 | 40 | 175 | 383 | 741 | 11 | 12 | 131 | 22 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.95 | 0.95 | 0.83 | 0.93 | 0.93 | 0.93 | 0.93 | 0.91 | 0.91 |
| Lanes: | 1.00 | 0.69 | 0.31 | 0.56 | 0.44 | 1.00 | 1.00 | 1.97 | 0.03 | 1.00 | 1.71 | 0.29 |
| Final Sat.: | 1769 | 1232 | 544 | 1016 | 795 | 1583 | 1769 | 3479 | 52 | 1769 | 2959 | 501 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.07 | 0.07 | 0.05 | 0.05 | 0.11 | 0.22 | 0.21 | 0.21 | 0.01 | 0.04 | 0.04 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.17 | 0.17 | 0.12 | 0.24 | 0.24 | 0.46 | 0.45 | 0.45 | 0.11 | 0.09 | 0.09 |
| Volume/Cap: | 0.26 | 0.42 | 0.42 | 0.42 | 0.21 | 0.47 | 0.47 | 0.47 | 0.47 | 0.07 | 0.47 | 0.47 |
| Delay/Veh: | 47.3 | 38.4 | 38.4 | 42.1 | 31.0 | 33.8 | 19.0 | 19.5 | 19.5 | 40.4 | 44.0 | 44.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 47.3 | 38.4 | 38.4 | 42.1 | 31.0 | 33.8 | 19.0 | 19.5 | 19.5 | 40.4 | 44.0 | 44.0 |
| LOS by Move: | D | D | D | D | C | C | B | B | B | D | D | D |
| HCM2kAvgQ: | 1 | 4 | 4 | 3 | 2 | 5 | 8 | 8 | 8 | 0 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Sampson Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.323 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 17.3 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 622 | 5 | 20 | 145 | 5 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 622 | 5 | 20 | 145 | 5 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 689 | 6 | 22 | 161 | 6 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 689 | 6 | 22 | 161 | 6 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 689 | 6 | 22 | 161 | 6 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 0.87 | 0.87 | 0.87 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.18 | 0.33 | 0.49 | 0.24 | 0.43 | 0.33 | 1.00 | 1.98 | 0.02 | 1.00 | 1.93 | 0.07 |
| Final Sat.: | 304 | 536 | 804 | 405 | 708 | 539 | 1769 | 3506 | 28 | 1769 | 3403 | 117 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.06 | 0.06 | 0.03 | 0.03 | 0.03 | 0.05 | 0.20 | 0.20 | 0.01 | 0.05 | 0.05 |
| Crit Moves: | **** | | | | | | | **** | | **** | | |
| Green/Cycle: | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.33 | 0.60 | 0.60 | 0.05 | 0.33 | 0.33 |
| Volume/Cap: | 0.33 | 0.33 | 0.33 | 0.17 | 0.17 | 0.17 | 0.14 | 0.33 | 0.33 | 0.25 | 0.15 | 0.15 |
| Delay/Veh: | 35.6 | 35.6 | 35.6 | 34.2 | 34.2 | 34.2 | 24.0 | 10.0 | 10.0 | 47.2 | 24.0 | 24.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 35.6 | 35.6 | 35.6 | 34.2 | 34.2 | 34.2 | 24.0 | 10.0 | 10.0 | 47.2 | 24.0 | 24.0 |
| LOS by Move: | D | D | D | C | C | C | C | B | B | D | C | C |
| HCM2kAvgQ: | 3 | 3 | 3 | 1 | 1 | 1 | 2 | 5 | 5 | 1 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 28th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.384 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 22.2 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 12 | 3 | 158 | 2 | 19 | 94 | 648 | 0 | 11 | 121 | 174 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 12 | 3 | 158 | 2 | 19 | 94 | 648 | 0 | 11 | 121 | 174 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| PHF Volume: | 3 | 13 | 3 | 177 | 2 | 21 | 105 | 725 | 0 | 12 | 135 | 195 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 3 | 13 | 3 | 177 | 2 | 21 | 105 | 725 | 0 | 12 | 135 | 195 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 3 | 13 | 3 | 177 | 2 | 21 | 105 | 725 | 0 | 12 | 135 | 195 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.95 | 0.93 | 0.80 | 0.80 | 0.93 | 0.93 | 0.95 | 0.93 | 0.93 | 0.83 |
| Lanes: | 0.16 | 0.67 | 0.17 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 0.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 301 | 1203 | 301 | 1769 | 1528 | 1528 | 1769 | 3538 | 0 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.01 | 0.01 | 0.10 | 0.00 | 0.01 | 0.06 | 0.20 | 0.00 | 0.01 | 0.04 | 0.12 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.15 | 0.05 | 0.05 | 0.24 | 0.15 | 0.15 | 0.18 | 0.50 | 0.00 | 0.05 | 0.37 | 0.37 |
| Volume/Cap: | 0.08 | 0.22 | 0.22 | 0.41 | 0.01 | 0.10 | 0.33 | 0.41 | 0.00 | 0.14 | 0.10 | 0.33 |
| Delay/Veh: | 37.0 | 46.9 | 46.9 | 32.5 | 36.5 | 37.1 | 36.5 | 16.0 | 0.0 | 46.2 | 20.7 | 23.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 37.0 | 46.9 | 46.9 | 32.5 | 36.5 | 37.1 | 36.5 | 16.0 | 0.0 | 46.2 | 20.7 | 23.0 |
| LOS by Move: | D | D | D | C | D | D | D | B | A | D | C | C |
| HCM2kAvgQ: | 1 | 1 | 1 | 5 | 0 | 1 | 3 | 7 | 0 | 0 | 1 | 4 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 28th Street/Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.622 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 33.3 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 20 | 438 | 112 | 295 | 312 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 20 | 438 | 112 | 295 | 312 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 21 | 469 | 120 | 316 | 334 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 21 | 469 | 120 | 316 | 334 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 21 | 469 | 120 | 316 | 334 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.93 | 0.91 | 0.91 | 0.93 | 0.91 | 0.91 | 0.93 | 0.84 | 0.84 |
| Lanes: | 1.00 | 1.59 | 0.41 | 1.00 | 1.76 | 0.24 | 1.00 | 1.69 | 0.31 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1769 | 2730 | 698 | 1769 | 3053 | 421 | 1769 | 2927 | 529 | 1769 | 1596 | 1596 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.17 | 0.17 | 0.18 | 0.11 | 0.11 | 0.06 | 0.06 | 0.06 | 0.03 | 0.06 | 0.11 |
| Crit Moves: | | **** | | **** | | | **** | | | | | **** |
| Green/Cycle: | 0.18 | 0.28 | 0.28 | 0.29 | 0.39 | 0.39 | 0.09 | 0.16 | 0.16 | 0.12 | 0.18 | 0.18 |
| Volume/Cap: | 0.07 | 0.62 | 0.62 | 0.62 | 0.28 | 0.28 | 0.62 | 0.41 | 0.41 | 0.21 | 0.33 | 0.62 |
| Delay/Veh: | 34.4 | 32.9 | 32.9 | 33.3 | 21.2 | 21.2 | 50.8 | 38.6 | 38.6 | 40.2 | 35.7 | 40.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 34.4 | 32.9 | 32.9 | 33.3 | 21.2 | 21.2 | 50.8 | 38.6 | 38.6 | 40.2 | 35.7 | 40.4 |
| LOS by Move: | C | C | C | C | C | C | D | D | D | D | D | D |
| HCM2kAvgQ: | 1 | 9 | 9 | 8 | 4 | 4 | 4 | 4 | 4 | 1 | 3 | 6 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 28th Street/Boston Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.477 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 26.0 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 6 | 528 | 207 | 213 | 657 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 6 | 528 | 207 | 213 | 657 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 6 | 571 | 224 | 230 | 710 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 6 | 571 | 224 | 230 | 710 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 6 | 571 | 224 | 230 | 710 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.83 | 0.93 | 0.92 | 0.92 | 0.93 | 0.97 | 0.97 | 0.93 | 0.86 | 0.86 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.90 | 0.10 | 1.00 | 0.95 | 0.05 | 1.00 | 0.18 | 0.82 |
| Final Sat.: | 1769 | 3538 | 1583 | 1769 | 3345 | 168 | 1769 | 1757 | 92 | 1769 | 297 | 1336 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.16 | 0.14 | 0.13 | 0.21 | 0.21 | 0.02 | 0.11 | 0.11 | 0.00 | 0.02 | 0.02 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.11 | 0.32 | 0.32 | 0.26 | 0.47 | 0.47 | 0.13 | 0.21 | 0.21 | 0.05 | 0.13 | 0.13 |
| Volume/Cap: | 0.03 | 0.50 | 0.44 | 0.50 | 0.45 | 0.45 | 0.16 | 0.50 | 0.50 | 0.09 | 0.17 | 0.17 |
| Delay/Veh: | 39.8 | 27.8 | 27.4 | 32.4 | 18.0 | 18.0 | 39.0 | 36.0 | 36.0 | 45.7 | 39.1 | 39.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 39.8 | 27.8 | 27.4 | 32.4 | 18.0 | 18.0 | 39.0 | 36.0 | 36.0 | 45.7 | 39.1 | 39.1 |
| LOS by Move: | D | C | C | C | B | B | D | D | D | D | D | D |
| HCM2kAvgQ: | 0 | 7 | 5 | 6 | 8 | 8 | 1 | 6 | 6 | 0 | 1 | 1 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
Unknown Method (Base Volume Alternative)

Intersection #7 28th Street/I-5 southbound ramp

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 2 | 0 | 0 | 0 0 1 | 1 | 0 | 0 0 0 | 0 | 1 | 0 0 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 587 | 0 | 0 | 381 | 0 | 0 | 0 | 526 | 0 | 0 | 0 |
| Growth Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| PHF Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCE Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| MLF Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical Gap Module: >> Population:0 << >> Run Speed(N/S): 30 MPH << | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Level Of Service Module: | | | | | | | | | | | | |
| LOS by Move: | | | | | | | | | | | | |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 28th Street/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.731 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 31.3 |
| Optimal Cycle: | 74 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 1 | 0 | 0 0 | 1! 0 | 0 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 127 | 347 | 179 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 127 | 347 | 179 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 131 | 359 | 185 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 131 | 359 | 185 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 131 | 359 | 185 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.73 | 0.73 | 0.73 | 0.84 | 0.84 | 0.84 | 0.93 | 0.91 | 0.91 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.45 | 1.03 | 0.52 | 0.21 | 0.49 | 0.30 | 1.00 | 1.67 | 0.33 | 1.00 | 0.66 | 0.34 |
| Final Sat.: | 619 | 1426 | 713 | 338 | 781 | 479 | 1769 | 2877 | 573 | 1769 | 1166 | 601 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.06 | 0.06 | 0.23 | 0.23 | 0.23 | 0.08 | 0.15 | 0.15 | 0.07 | 0.31 | 0.31 |
| Crit Moves: | | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.11 | 0.35 | 0.35 | 0.18 | 0.42 | 0.42 |
| Volume/Cap: | 0.18 | 0.18 | 0.18 | 0.73 | 0.73 | 0.73 | 0.73 | 0.42 | 0.42 | 0.42 | 0.73 | 0.73 |
| Delay/Veh: | 25.3 | 25.3 | 25.3 | 36.3 | 36.3 | 36.3 | 56.5 | 24.8 | 24.8 | 37.5 | 27.9 | 27.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.3 | 25.3 | 25.3 | 36.3 | 36.3 | 36.3 | 56.5 | 24.8 | 24.8 | 37.5 | 27.9 | 27.9 |
| LOS by Move: | C | C | C | D | D | D | E | C | C | D | C | C |
| HCM2kAvgQ: | 2 | 2 | 2 | 11 | 11 | 11 | 6 | 6 | 6 | 4 | 15 | 15 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #9 I-5 northbound ramps/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.526 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 18.8 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 0 1 | 0 0 | 0 | 0 0 | 0 0 | 1 | 0 1 | 0 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 313 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 313 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.00 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 331 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 331 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 331 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 1769 | 0 | 1583 | 0 | 0 | 0 | 0 | 1862 | 1900 | 0 | 1862 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.19 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.00 | 0.00 | 0.18 | 0.00 |
| Crit Moves: | **** | | | | | | | **** | | | | |
| Green/Cycle: | 0.36 | 0.00 | 0.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.52 | 0.00 | 0.00 | 0.52 | 0.00 |
| Volume/Cap: | 0.53 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.53 | 0.00 | 0.00 | 0.35 | 0.00 |
| Delay/Veh: | 26.4 | 0.0 | 22.8 | 0.0 | 0.0 | 0.0 | 0.0 | 16.1 | 0.0 | 0.0 | 14.0 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.4 | 0.0 | 22.8 | 0.0 | 0.0 | 0.0 | 0.0 | 16.1 | 0.0 | 0.0 | 14.0 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | B | A | A | B | A |
| HCM2kAvgQ: | 8 | 0 | 3 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 6 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 I-5 southbound ramp/Boston Avenue

Average Delay (sec/veh): 10.6 Worst Case Level Of Service: E[ 49.2]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 1 | 0 | 0 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | | 1 | 0 | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 1 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 8 | 51 | 11 | | | | 0 | 0 | 0 | | | | 535 | 53 | 16 | | | | 3 | 38 | 50 | | | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | |
| Initial Bse: | 8 | 51 | 11 | | | | 0 | 0 | 0 | | | | 535 | 53 | 16 | | | | 3 | 38 | 50 | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | |
| PHF Adj: | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | |
| PHF Volume: | 8 | 51 | 11 | | | | 0 | 0 | 0 | | | | 535 | 53 | 16 | | | | 3 | 38 | 50 | | | |
| Reduct Vol: | 0 | 0 | 0 | | | | 0 | 0 | 0 | | | | 0 | 0 | 0 | | | | 0 | 0 | 0 | | | |
| FinalVolume: | 8 | 51 | 11 | | | | 0 | 0 | 0 | | | | 535 | 53 | 16 | | | | 3 | 38 | 50 | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | | | | | | | 4.1 | xxxx | xxxxx | | | | 4.1 | xxxx | xxxxx | | | |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | | | | | | | 2.2 | xxxx | xxxxx | | | | 2.2 | xxxx | xxxxx | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 1200 | 1225 | 61 | xxxx | xxxx | xxxxx | | | | | | | 88 | xxxx | xxxxx | | | | 69 | xxxx | xxxxx | | | |
| Potent Cap.: | 204 | 179 | 1004 | xxxx | xxxx | xxxxx | | | | | | | 1508 | xxxx | xxxxx | | | | 1532 | xxxx | xxxxx | | | |
| Move Cap.: | 148 | 115 | 1004 | xxxx | xxxx | xxxxx | | | | | | | 1508 | xxxx | xxxxx | | | | 1532 | xxxx | xxxxx | | | |
| Volume/Cap: | 0.05 | 0.44 | 0.01 | xxxx | xxxx | xxxx | | | | | | | 0.35 | xxxx | xxxx | | | | 0.00 | xxxx | xxxx | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.2 | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | | | | 1.6 | xxxx | xxxxx | | | | 0.0 | xxxx | xxxxx | | | |
| Control Del: | 30.7 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | 8.7 | xxxx | xxxxx | | | | 7.4 | xxxx | xxxxx | | | |
| LOS by Move: | D | * | * | * | * | * | | | | | | | A | * | * | | | | A | * | * | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | xxxx | xxxx | 137 | xxxx | xxxx | xxxxx | | | | | | | xxxx | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | |
| SharedQueue: | xxxxx | xxxx | 2.0 | xxxxx | xxxx | xxxxx | | | | | | | xxxxx | xxxx | xxxxx | | | | 0.0 | xxxx | xxxxx | | | |
| Shrd ConDel: | xxxxx | xxxx | 51.6 | xxxxx | xxxx | xxxxx | | | | | | | xxxxx | xxxx | xxxxx | | | | 7.4 | xxxx | xxxxx | | | |
| Shared LOS: | * | * | F | * | * | * | | | | | | | * | * | * | | | | A | * | * | | | |
| ApproachDel: | 49.2 | | | xxxxxx | | | | | | | | | xxxxxx | | | | | | xxxxxx | | | | | |
| ApproachLOS: | E | | | * | | | | | | | | | * | | | | | | * | | | | | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #11 I-5 northbound ramps/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.589 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 22.3 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 1 | 0 0 | 0 0 | 0 | 1 0 | 2 0 | 0 | 0 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 87 | 4 | 382 | 0 | 0 | 0 | 101 | 511 | 0 | 0 | 528 | 401 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 87 | 4 | 382 | 0 | 0 | 0 | 101 | 511 | 0 | 0 | 528 | 401 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 92 | 4 | 406 | 0 | 0 | 0 | 107 | 543 | 0 | 0 | 561 | 426 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 92 | 4 | 406 | 0 | 0 | 0 | 107 | 543 | 0 | 0 | 561 | 426 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 92 | 4 | 406 | 0 | 0 | 0 | 107 | 543 | 0 | 0 | 561 | 426 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.84 | 0.84 | 0.84 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 1.00 | 1.00 | 0.87 | 0.87 |
| Lanes: | 1.18 | 0.02 | 1.80 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 0.00 | 0.00 | 1.14 | 0.86 |
| Final Sat.: | 1881 | 27 | 2865 | 0 | 0 | 0 | 1769 | 3538 | 0 | 0 | 1880 | 1428 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.16 | 0.14 | 0.00 | 0.00 | 0.00 | 0.06 | 0.15 | 0.00 | 0.00 | 0.30 | 0.30 |
| Crit Moves: | | **** | | | | | **** | | | | **** | |
| Green/Cycle: | 0.27 | 0.27 | 0.27 | 0.00 | 0.00 | 0.00 | 0.10 | 0.46 | 0.00 | 0.00 | 0.51 | 0.51 |
| Volume/Cap: | 0.18 | 0.59 | 0.52 | 0.00 | 0.00 | 0.00 | 0.59 | 0.33 | 0.00 | 0.00 | 0.59 | 0.59 |
| Delay/Veh: | 28.0 | 32.7 | 31.5 | 0.0 | 0.0 | 0.0 | 47.8 | 17.4 | 0.0 | 0.0 | 17.9 | 17.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 28.0 | 32.7 | 31.5 | 0.0 | 0.0 | 0.0 | 47.8 | 17.4 | 0.0 | 0.0 | 17.9 | 17.9 |
| LOS by Move: | C | C | C | A | A | A | D | B | A | A | B | B |
| HCM2kAvgQ: | 2 | 7 | 6 | 0 | 0 | 0 | 3 | 5 | 0 | 0 | 12 | 12 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #12 I-5 southbound ramps/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.588 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 27.7 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 0 | 0 0 | 1 1 | 0 | 0 1 | 0 0 | 2 | 0 1 | 1 0 | 2 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 441 | 0 | 43 | 0 | 159 | 367 | 490 | 118 | 0 |
| Growth Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| Initial Bse: | 0 | 0 | 0 | 441 | 0 | 43 | 0 | 159 | 367 | 490 | 118 | 0 |
| User Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| PHF Adj: | 0.86 0.86 | 0.86 | | 0.86 0.86 | 0.86 | | 0.86 0.86 | 0.86 | | 0.86 0.86 | 0.86 | |
| PHF Volume: | 0 | 0 | 0 | 512 | 0 | 50 | 0 | 184 | 0 | 568 | 137 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 512 | 0 | 50 | 0 | 184 | 0 | 568 | 137 | 0 |
| PCE Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| MLF Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| FinalVolume: | 0 | 0 | 0 | 512 | 0 | 50 | 0 | 184 | 0 | 568 | 137 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 1900 | 1900 | | 1900 1900 | 1900 | | 1900 1900 | 1900 | | 1900 1900 | 1900 | |
| Adjustment: | 1.00 1.00 | 1.00 | | 0.93 1.00 | 0.83 | | 1.00 0.93 | 1.00 | | 0.93 0.93 | 1.00 | |
| Lanes: | 0.00 0.00 | 0.00 | | 2.00 0.00 | 1.00 | | 0.00 2.00 | 1.00 | | 1.00 2.00 | 0.00 | |
| Final Sat.: | 0 | 0 | 0 | 3545 | 0 | 1583 | 0 | 3538 | 1900 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 0.00 | 0.00 | | 0.14 0.00 | 0.03 | | 0.00 0.05 | 0.00 | | 0.32 0.04 | 0.00 | |
| Crit Moves: | | | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.00 0.00 | 0.00 | | 0.25 0.00 | 0.25 | | 0.00 0.09 | 0.00 | | 0.55 0.32 | 0.00 | |
| Volume/Cap: | 0.00 0.00 | 0.00 | | 0.59 0.00 | 0.13 | | 0.00 0.59 | 0.00 | | 0.59 0.12 | 0.00 | |
| Delay/Veh: | 0.0 | 0.0 | 0.0 | 34.3 | 0.0 | 29.6 | 0.0 | 46.7 | 0.0 | 16.1 | 24.3 | 0.0 |
| User DelAdj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| AdjDel/Veh: | 0.0 | 0.0 | 0.0 | 34.3 | 0.0 | 29.6 | 0.0 | 46.7 | 0.0 | 16.1 | 24.3 | 0.0 |
| LOS by Move: | A | A | A | C | A | C | A | D | A | B | C | A |
| HCM2kAvgQ: | 0 | 0 | 0 | 8 | 0 | 1 | 0 | 4 | 0 | 11 | 1 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #13 Cleveland Street/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.323 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 10.0 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.07 | 0.93 | 1.00 | 1.00 | 1.00 | 0.04 | 1.94 | 0.02 | 0.35 | 1.20 | 0.45 |
| Final Sat.: | 517 | 43 | 578 | 535 | 574 | 646 | 28 | 1255 | 16 | 213 | 752 | 298 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.05 | 0.05 | 0.32 | 0.01 | 0.01 | 0.25 | 0.25 | 0.25 | 0.13 | 0.13 | 0.12 |
| Crit Moves: | | | **** | **** | | | **** | | | **** | | |
| Delay/Veh: | 9.2 | 8.3 | 8.3 | 12.0 | 8.6 | 8.0 | 9.8 | 9.8 | 9.7 | 9.3 | 9.0 | 8.6 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.2 | 8.3 | 8.3 | 12.0 | 8.6 | 8.0 | 9.8 | 9.8 | 9.7 | 9.3 | 9.0 | 8.6 |
| LOS by Move: | A | A | A | B | A | A | A | A | A | A | A | A |
| ApproachDel: | 8.3 | | | 11.7 | | | 9.8 | | | 8.9 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 8.3 | | | 11.7 | | | 9.8 | | | 8.9 | | |
| LOS by Appr: | A | | | B | | | A | | | A | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.3 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #14 W. 32nd Street/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.190 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 19.2 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 0 | 1 | 0 0 | 0 0 | 0 | 0 0 | 1 1 | 0 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 57 | 0 | 0 | 0 | 0 | 250 | 2 | 26 | 73 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 57 | 0 | 0 | 0 | 0 | 250 | 2 | 26 | 73 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| PHF Volume: | 0 | 0 | 78 | 0 | 0 | 0 | 0 | 343 | 3 | 36 | 100 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 78 | 0 | 0 | 0 | 0 | 343 | 3 | 36 | 100 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 78 | 0 | 0 | 0 | 0 | 343 | 3 | 36 | 100 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 1.00 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.98 | 0.02 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 1900 | 0 | 1583 | 0 | 0 | 0 | 0 | 3506 | 28 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 | 0.10 | 0.02 | 0.03 | 0.00 |
| Crit Moves: | | | **** | | | | | **** | | **** | | |
| Green/Cycle: | 0.00 | 0.00 | 0.26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.51 | 0.51 | 0.11 | 0.31 | 0.00 |
| Volume/Cap: | 0.00 | 0.00 | 0.19 | 0.00 | 0.00 | 0.00 | 0.00 | 0.19 | 0.19 | 0.19 | 0.09 | 0.00 |
| Delay/Veh: | 0.0 | 0.0 | 29.0 | 0.0 | 0.0 | 0.0 | 0.0 | 13.1 | 13.1 | 41.3 | 24.5 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 0.0 | 29.0 | 0.0 | 0.0 | 0.0 | 0.0 | 13.1 | 13.1 | 41.3 | 24.5 | 0.0 |
| LOS by Move: | A | A | C | A | A | A | A | B | B | D | C | A |
| HCM2kAvgQ: | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 1 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #15 Tidelands Avenue/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.117 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 29.9 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 5 | 31 | 20 | 3 | 8 | 5 | 86 | 1 | 24 | 18 | 14 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 5 | 31 | 20 | 3 | 8 | 5 | 86 | 1 | 24 | 18 | 14 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| PHF Volume: | 4 | 7 | 43 | 28 | 4 | 11 | 7 | 118 | 1 | 33 | 25 | 19 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 7 | 43 | 28 | 4 | 11 | 7 | 118 | 1 | 33 | 25 | 19 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 7 | 43 | 28 | 4 | 11 | 7 | 118 | 1 | 33 | 25 | 19 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.85 | 0.85 | 0.93 | 0.87 | 0.87 | 0.93 | 0.93 | 0.93 | 0.93 | 0.87 | 0.87 |
| Lanes: | 1.00 | 0.14 | 0.86 | 1.00 | 0.27 | 0.73 | 1.00 | 1.98 | 0.02 | 1.00 | 1.12 | 0.88 |
| Final Sat.: | 1769 | 225 | 1397 | 1769 | 452 | 1207 | 1769 | 3490 | 41 | 1769 | 1859 | 1446 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.03 | 0.03 | 0.02 | 0.01 | 0.01 | 0.00 | 0.03 | 0.03 | 0.02 | 0.01 | 0.01 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.20 | 0.26 | 0.26 | 0.13 | 0.20 | 0.20 | 0.22 | 0.29 | 0.29 | 0.16 | 0.22 | 0.22 |
| Volume/Cap: | 0.01 | 0.12 | 0.12 | 0.12 | 0.05 | 0.05 | 0.02 | 0.12 | 0.12 | 0.12 | 0.06 | 0.06 |
| Delay/Veh: | 32.4 | 28.4 | 28.4 | 38.5 | 32.7 | 32.7 | 30.3 | 26.2 | 26.2 | 36.2 | 30.6 | 30.6 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 32.4 | 28.4 | 28.4 | 38.5 | 32.7 | 32.7 | 30.3 | 26.2 | 26.2 | 36.2 | 30.6 | 30.6 |
| LOS by Move: | C | C | C | D | C | C | C | C | C | D | C | C |
| HCM2kAvgQ: | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Tidelands Avenue/W. 32nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.096 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.0 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 1 | 0 | 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 1 0 | 1 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| Growth Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| Initial Bse: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| User Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| PHF Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| PHF Volume: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| PCE Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| MLF Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| FinalVolume: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| Lanes: | 0.00 1.00 | 0.00 | | 1.00 0.59 | 0.41 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| Final Sat.: | 0 | 738 | 0 | 671 | 463 | 324 | 701 | 777 | 914 | 674 | 743 | 869 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | xxxx | 0.01 | xxxx | 0.00 | 0.02 | 0.02 | 0.10 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crit Moves: | | **** | | | | **** | **** | | | **** | | |
| Delay/Veh: | 0.0 | 7.8 | 0.0 | 8.0 | 7.3 | 7.3 | 8.3 | 7.4 | 0.0 | 8.0 | 7.5 | 6.8 |
| Delay Adj: | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | | 1.00 1.00 | 1.00 | |
| AdjDel/Veh: | 0.0 | 7.8 | 0.0 | 8.0 | 7.3 | 7.3 | 8.3 | 7.4 | 0.0 | 8.0 | 7.5 | 6.8 |
| LOS by Move: | * | A | * | A | A | A | A | A | * | A | A | A |
| ApproachDel: | 7.8 | | | 7.4 | | | 8.1 | | | 7.4 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 7.8 | | | 7.4 | | | 8.1 | | | 7.4 | | |
| LOS by Appr: | A | | | A | | | A | | | A | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

# ATTACHMENT D

# EXISTING WITH PROJECT TRAFFIC LOS WORKSHEETS (STAGING AREAS 1 & 2)

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Park Boulevard/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.509 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 15.0 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| PHF Volume: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.91 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.62 | 0.00 | 0.38 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 2800 | 0 | 660 | 0 | 0 | 0 | 1769 | 3538 | 1583 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.03 | 0.09 | 0.31 | 0.09 | 0.19 | 0.00 |
| Crit Moves: | | | **** | | | | | | **** | **** | | |
| Green/Cycle: | 0.07 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.16 | 0.62 | 0.62 | 0.18 | 0.63 | 0.00 |
| Volume/Cap: | 0.49 | 0.00 | 0.51 | 0.00 | 0.00 | 0.00 | 0.17 | 0.15 | 0.51 | 0.51 | 0.30 | 0.00 |
| Delay/Veh: | 46.5 | 0.0 | 45.6 | 0.0 | 0.0 | 0.0 | 36.2 | 8.1 | 11.1 | 38.5 | 8.5 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 46.5 | 0.0 | 45.6 | 0.0 | 0.0 | 0.0 | 36.2 | 8.1 | 11.1 | 38.5 | 8.5 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | D | A | B | D | A | A |
| HCM2kAvgQ: | 2 | 0 | 3 | 0 | 0 | 0 | 1 | 2 | 9 | 4 | 5 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Cesar Chavez Parkway/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.512 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 31.5 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 0 1 | 0 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| Added Vol: | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 4 | 25 | 29 | 37 | 73 | 279 | 140 | 128 | 19 | 83 | 385 | 56 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 4 | 28 | 32 | 41 | 82 | 312 | 156 | 143 | 21 | 93 | 430 | 63 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 28 | 32 | 41 | 82 | 312 | 156 | 143 | 21 | 93 | 430 | 63 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 28 | 32 | 41 | 82 | 312 | 156 | 143 | 21 | 93 | 430 | 63 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.96 | 0.96 | 0.83 | 0.93 | 0.91 | 0.91 | 0.93 | 0.91 | 0.91 |
| Lanes: | 1.00 | 0.46 | 0.54 | 0.34 | 0.66 | 1.00 | 1.00 | 1.74 | 0.26 | 1.00 | 1.75 | 0.25 |
| Final Sat.: | 1769 | 792 | 919 | 616 | 1215 | 1583 | 1769 | 3022 | 449 | 1769 | 3030 | 441 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.04 | 0.04 | 0.07 | 0.07 | 0.20 | 0.09 | 0.05 | 0.05 | 0.05 | 0.14 | 0.14 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.18 | 0.18 | 0.24 | 0.36 | 0.36 | 0.16 | 0.21 | 0.21 | 0.22 | 0.26 | 0.26 |
| Volume/Cap: | 0.05 | 0.20 | 0.20 | 0.28 | 0.18 | 0.54 | 0.54 | 0.23 | 0.23 | 0.24 | 0.54 | 0.54 |
| Delay/Veh: | 45.5 | 35.5 | 35.5 | 31.5 | 21.8 | 26.2 | 40.5 | 33.1 | 33.1 | 32.6 | 32.4 | 32.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 45.5 | 35.5 | 35.5 | 31.5 | 21.8 | 26.2 | 40.5 | 33.1 | 33.1 | 32.6 | 32.4 | 32.4 |
| LOS by Move: | D | D | D | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 0 | 2 | 2 | 3 | 3 | 8 | 4 | 2 | 2 | 2 | 7 | 7 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Sampson Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.280 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 19.9 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 1 0 | 1 | 0 | 1 0 | 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 135 | 31 | 87 | 477 | 6 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 135 | 31 | 87 | 477 | 6 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 44 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 150 | 31 | 87 | 521 | 6 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 158 | 33 | 92 | 548 | 6 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 158 | 33 | 92 | 548 | 6 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 158 | 33 | 92 | 548 | 6 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 0.92 | 0.92 | 0.92 | 0.93 | 0.91 | 0.91 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.18 | 0.30 | 0.52 | 0.09 | 0.63 | 0.28 | 1.00 | 1.66 | 0.34 | 1.00 | 1.98 | 0.02 |
| Final Sat.: | 288 | 501 | 849 | 155 | 1109 | 488 | 1769 | 2856 | 590 | 1769 | 3491 | 40 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.07 | 0.07 | 0.05 | 0.05 | 0.05 | 0.01 | 0.06 | 0.06 | 0.05 | 0.16 | 0.16 |
| Crit Moves: | **** | | | | | | **** | | | | **** | |
| Green/Cycle: | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.05 | 0.31 | 0.31 | 0.29 | 0.55 | 0.55 |
| Volume/Cap: | 0.29 | 0.29 | 0.29 | 0.20 | 0.20 | 0.20 | 0.18 | 0.18 | 0.18 | 0.18 | 0.29 | 0.29 |
| Delay/Veh: | 31.3 | 31.3 | 31.3 | 30.4 | 30.4 | 30.4 | 46.5 | 25.4 | 25.4 | 26.8 | 12.2 | 12.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 31.3 | 31.3 | 31.3 | 30.4 | 30.4 | 30.4 | 46.5 | 25.4 | 25.4 | 26.8 | 12.2 | 12.2 |
| LOS by Move: | C | C | C | C | C | C | D | C | C | C | B | B |
| HCM2kAvgQ: | 3 | 3 | 3 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 5 | 5 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 28th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.433 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 28.6 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 4 | 7 | 5 | 315 | 9 | 28 | 36 | 186 | 7 | 12 | 448 | 142 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 4 | 7 | 5 | 315 | 9 | 28 | 36 | 186 | 7 | 12 | 448 | 142 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 44 | 15 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 4 | 7 | 5 | 315 | 9 | 72 | 51 | 186 | 7 | 12 | 448 | 142 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 4 | 7 | 5 | 335 | 10 | 77 | 54 | 198 | 7 | 13 | 476 | 151 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 7 | 5 | 335 | 10 | 77 | 54 | 198 | 7 | 13 | 476 | 151 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 7 | 5 | 335 | 10 | 77 | 54 | 198 | 7 | 13 | 476 | 151 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.93 | 0.81 | 0.81 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.83 |
| Lanes: | 0.25 | 0.44 | 0.31 | 1.00 | 1.00 | 1.00 | 1.00 | 1.93 | 0.07 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 441 | 771 | 551 | 1769 | 1534 | 1534 | 1769 | 3392 | 128 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.01 | 0.01 | 0.19 | 0.01 | 0.05 | 0.03 | 0.06 | 0.06 | 0.01 | 0.13 | 0.10 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.24 | 0.05 | 0.05 | 0.42 | 0.24 | 0.24 | 0.07 | 0.20 | 0.20 | 0.17 | 0.30 | 0.30 |
| Volume/Cap: | 0.04 | 0.19 | 0.19 | 0.45 | 0.03 | 0.21 | 0.45 | 0.29 | 0.29 | 0.04 | 0.45 | 0.32 |
| Delay/Veh: | 29.5 | 46.6 | 46.6 | 21.1 | 29.4 | 31.0 | 47.4 | 34.4 | 34.4 | 34.7 | 28.6 | 27.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 29.5 | 46.6 | 46.6 | 21.1 | 29.4 | 31.0 | 47.4 | 34.4 | 34.4 | 34.7 | 28.6 | 27.5 |
| LOS by Move: | C | D | D | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 0 | 1 | 1 | 7 | 0 | 2 | 2 | 3 | 3 | 0 | 6 | 4 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 28th Street/Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.403 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 29.8 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 35 | 191 | 58 | 163 | 413 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 35 | 191 | 58 | 163 | 413 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| Added Vol: | 0 | 15 | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 35 | 206 | 58 | 163 | 457 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 37 | 218 | 61 | 172 | 483 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 37 | 218 | 61 | 172 | 483 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 37 | 218 | 61 | 172 | 483 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.93 | 0.92 | 0.92 | 0.93 | 0.89 | 0.89 | 0.93 | 0.87 | 0.87 |
| Lanes: | 1.00 | 1.56 | 0.44 | 1.00 | 1.84 | 0.16 | 1.00 | 1.34 | 0.66 | 1.00 | 1.06 | 0.94 |
| Final Sat.: | 1769 | 2669 | 752 | 1769 | 3208 | 288 | 1769 | 2260 | 1104 | 1769 | 1744 | 1546 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.08 | 0.08 | 0.10 | 0.15 | 0.15 | 0.04 | 0.04 | 0.04 | 0.03 | 0.13 | 0.13 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.19 | 0.19 | 0.23 | 0.37 | 0.37 | 0.10 | 0.21 | 0.21 | 0.21 | 0.32 | 0.32 |
| Volume/Cap: | 0.40 | 0.42 | 0.42 | 0.42 | 0.40 | 0.40 | 0.40 | 0.20 | 0.20 | 0.15 | 0.40 | 0.40 |
| Delay/Veh: | 48.8 | 35.8 | 35.8 | 33.4 | 23.3 | 23.3 | 43.9 | 32.9 | 32.9 | 32.6 | 27.0 | 27.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 48.8 | 35.8 | 35.8 | 33.4 | 23.3 | 23.3 | 43.9 | 32.9 | 32.9 | 32.6 | 27.0 | 27.0 |
| LOS by Move: | D | D | D | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 2 | 4 | 4 | 4 | 6 | 6 | 2 | 2 | 2 | 1 | 5 | 5 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 28th Street/Boston Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.322 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 18.0 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 351 | 80 | 137 | 650 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 351 | 80 | 137 | 650 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| Added Vol: | 0 | 2 | 13 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 3 | 353 | 93 | 137 | 694 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 3 | 374 | 99 | 145 | 736 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 3 | 374 | 99 | 145 | 736 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 3 | 374 | 99 | 145 | 736 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.93 | 0.93 | 0.96 | 0.96 | 0.93 | 0.87 | 0.87 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.93 | 0.07 | 1.00 | 0.87 | 0.13 | 1.00 | 0.25 | 0.75 |
| Final Sat.: | 1769 | 3538 | 1583 | 1769 | 3393 | 127 | 1769 | 1594 | 232 | 1769 | 420 | 1233 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.11 | 0.06 | 0.08 | 0.22 | 0.22 | 0.01 | 0.03 | 0.03 | 0.01 | 0.04 | 0.04 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.38 | 0.38 | 0.30 | 0.63 | 0.63 | 0.05 | 0.08 | 0.08 | 0.08 | 0.11 | 0.11 |
| Volume/Cap: | 0.04 | 0.28 | 0.16 | 0.28 | 0.34 | 0.34 | 0.28 | 0.40 | 0.40 | 0.08 | 0.34 | 0.34 |
| Delay/Veh: | 45.4 | 21.4 | 20.4 | 27.2 | 8.8 | 8.8 | 47.5 | 45.5 | 45.5 | 42.9 | 42.3 | 42.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 45.4 | 21.4 | 20.4 | 27.2 | 8.8 | 8.8 | 47.5 | 45.5 | 45.5 | 42.9 | 42.3 | 42.3 |
| LOS by Move: | D | C | C | C | A | A | D | D | D | D | D | D |
| HCM2kAvgQ: | 0 | 4 | 2 | 3 | 6 | 6 | 1 | 2 | 2 | 0 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
Unknown Method (Future Volume Alternative)

Intersection #7 28th Street/I-5 southbound ramp

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 2 | 0 | 0 | 0 0 1 | 1 | 0 | 0 0 0 | 0 | 1 | 0 0 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 415 | 0 | 0 | 303 | 0 | 0 | 0 | 508 | 0 | 0 | 0 |
| Growth Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Added Vol: | 0 | 2 | 0 | 0 | 24 | 0 | 0 | 0 | 20 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| PHF Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCE Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| MLF Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical Gap Module: >> Population:0 << >> Run Speed(N/S): 30 MPH << | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Level Of Service Module: | | | | | | | | | | | | |
| LOS by Move: | | | | | | | | | | | | |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 28th Street/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.781 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 33.7 |
| Optimal Cycle: | 82 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 1 | 0 | 0 | 0 1! | 0 0 | 1 | 0 1 | 1 0 | 1 | 0 0 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 146 | 537 | 86 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 146 | 537 | 86 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 170 | 537 | 86 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 176 | 556 | 89 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 176 | 556 | 89 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 176 | 556 | 89 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.68 | 0.68 | 0.68 | 0.85 | 0.85 | 0.85 | 0.93 | 0.91 | 0.91 | 0.93 | 0.96 | 0.96 |
| Lanes: | 0.55 | 0.97 | 0.48 | 0.13 | 0.37 | 0.50 | 1.00 | 1.75 | 0.25 | 1.00 | 0.86 | 0.14 |
| Final Sat.: | 712 | 1251 | 616 | 221 | 596 | 808 | 1769 | 3030 | 440 | 1769 | 1571 | 252 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.05 | 0.05 | 0.23 | 0.23 | 0.23 | 0.07 | 0.06 | 0.06 | 0.10 | 0.35 | 0.35 |
| Crit Moves: | | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.09 | 0.20 | 0.20 | 0.34 | 0.45 | 0.45 |
| Volume/Cap: | 0.18 | 0.18 | 0.18 | 0.78 | 0.78 | 0.78 | 0.78 | 0.29 | 0.29 | 0.29 | 0.78 | 0.78 |
| Delay/Veh: | 26.0 | 26.0 | 26.0 | 39.9 | 39.9 | 39.9 | 67.3 | 34.2 | 34.2 | 24.5 | 27.9 | 27.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.0 | 26.0 | 26.0 | 39.9 | 39.9 | 39.9 | 67.3 | 34.2 | 34.2 | 24.5 | 27.9 | 27.9 |
| LOS by Move: | C | C | C | D | D | D | E | C | C | C | C | C |
| HCM2kAvgQ: | 2 | 2 | 2 | 13 | 13 | 13 | 6 | 3 | 3 | 4 | 18 | 18 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 I-5 northbound ramps/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.509 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 19.1 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 0 1 | 0 0 | 0 | 0 0 | 0 0 | 1 | 0 1 | 0 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 304 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 304 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| Added Vol: | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 328 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.00 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 344 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 344 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 344 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 1769 | 0 | 1583 | 0 | 0 | 0 | 0 | 1862 | 1900 | 0 | 1862 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.19 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.25 | 0.00 |
| Crit Moves: | **** | | | | | | | | | | **** | |
| Green/Cycle: | 0.38 | 0.00 | 0.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 | 0.00 | 0.50 | 0.00 |
| Volume/Cap: | 0.51 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.27 | 0.00 | 0.00 | 0.51 | 0.00 |
| Delay/Veh: | 24.3 | 0.0 | 20.3 | 0.0 | 0.0 | 0.0 | 0.0 | 14.7 | 0.0 | 0.0 | 17.3 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 24.3 | 0.0 | 20.3 | 0.0 | 0.0 | 0.0 | 0.0 | 14.7 | 0.0 | 0.0 | 17.3 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | B | A | A | B | A |
| HCM2kAvgQ: | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 10 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 I-5 southbound ramp/Boston Avenue

Average Delay (sec/veh): 6.3 Worst Case Level Of Service: C[ 15.6]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 1 0 0 | 1 0 | | 0 0 0 | 0 0 | | 1 0 0 | 1 0 | | 0 1 0 | 0 1 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 9 | 23 | 5 | 0 | 0 | 0 | 255 | 26 | 8 | 2 | 50 | 43 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 9 | 23 | 5 | 0 | 0 | 0 | 255 | 26 | 8 | 2 | 50 | 43 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 9 | 23 | 5 | 0 | 0 | 0 | 268 | 26 | 8 | 2 | 50 | 43 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 9 | 23 | 5 | 0 | 0 | 0 | 268 | 26 | 8 | 2 | 50 | 43 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 9 | 23 | 5 | 0 | 0 | 0 | 268 | 26 | 8 | 2 | 50 | 43 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 642 | 663 | 30 | xxxx | xxxx | xxxxx | 93 | xxxx | xxxxx | 34 | xxxx | xxxxx |
| Potent Cap.: | 439 | 382 | 1044 | xxxx | xxxx | xxxxx | 1501 | xxxx | xxxxx | 1578 | xxxx | xxxxx |
| Move Cap.: | 378 | 313 | 1044 | xxxx | xxxx | xxxxx | 1501 | xxxx | xxxxx | 1578 | xxxx | xxxxx |
| Volume/Cap: | 0.02 | 0.07 | 0.00 | xxxx | xxxx | xxxx | 0.18 | xxxx | xxxx | 0.00 | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | 0.1 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.6 | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Control Del: | 14.8 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.9 | xxxx | xxxxx | 7.3 | xxxx | xxxxx |
| LOS by Move: | B | * | * | * | * | * | A | * | * | A | * | * |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | xxxx | xxxx | 358 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | 0.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | 15.9 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.3 | xxxx | xxxxx |
| Shared LOS: | * | * | C | * | * | * | * | * | * | A | * | * |
| ApproachDel: | 15.6 | | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | C | | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Park Boulevard/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.425 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 13.9 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.90 | 1.00 | 0.90 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.48 | 0.00 | 0.52 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 2529 | 0 | 888 | 0 | 0 | 0 | 1769 | 3538 | 1583 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.06 | 0.03 | 0.11 | 0.00 |
| Crit Moves: | | | **** | | | | | **** | | **** | | |
| Green/Cycle: | 0.10 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.23 | 0.66 | 0.66 | 0.07 | 0.50 | 0.00 |
| Volume/Cap: | 0.41 | 0.00 | 0.42 | 0.00 | 0.00 | 0.00 | 0.02 | 0.42 | 0.09 | 0.42 | 0.22 | 0.00 |
| Delay/Veh: | 43.0 | 0.0 | 39.4 | 0.0 | 0.0 | 0.0 | 29.8 | 8.2 | 6.3 | 46.7 | 14.0 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 43.0 | 0.0 | 39.4 | 0.0 | 0.0 | 0.0 | 29.8 | 8.2 | 6.3 | 46.7 | 14.0 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | C | A | A | D | B | A |
| HCM2kAvgQ: | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 8 | 1 | 2 | 3 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Cesar Chavez Parkway/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.457 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 26.4 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 0 1 | 0 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| Added Vol: | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 21 | 77 | 78 | 46 | 36 | 158 | 346 | 670 | 10 | 26 | 118 | 20 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 23 | 85 | 86 | 51 | 40 | 175 | 383 | 741 | 11 | 29 | 131 | 22 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 23 | 85 | 86 | 51 | 40 | 175 | 383 | 741 | 11 | 29 | 131 | 22 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 23 | 85 | 86 | 51 | 40 | 175 | 383 | 741 | 11 | 29 | 131 | 22 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.91 | 0.91 | 0.95 | 0.95 | 0.83 | 0.93 | 0.93 | 0.93 | 0.93 | 0.91 | 0.91 |
| Lanes: | 1.00 | 0.50 | 0.50 | 0.56 | 0.44 | 1.00 | 1.00 | 1.97 | 0.03 | 1.00 | 1.71 | 0.29 |
| Final Sat.: | 1769 | 856 | 867 | 1016 | 795 | 1583 | 1769 | 3479 | 52 | 1769 | 2959 | 501 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.10 | 0.10 | 0.05 | 0.05 | 0.11 | 0.22 | 0.21 | 0.21 | 0.02 | 0.04 | 0.04 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.19 | 0.19 | 0.10 | 0.24 | 0.24 | 0.46 | 0.45 | 0.45 | 0.11 | 0.09 | 0.09 |
| Volume/Cap: | 0.26 | 0.52 | 0.52 | 0.52 | 0.21 | 0.47 | 0.47 | 0.47 | 0.47 | 0.15 | 0.47 | 0.47 |
| Delay/Veh: | 47.3 | 38.0 | 38.0 | 46.0 | 31.0 | 33.8 | 19.0 | 19.5 | 19.5 | 41.1 | 44.0 | 44.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 47.3 | 38.0 | 38.0 | 46.0 | 31.0 | 33.8 | 19.0 | 19.5 | 19.5 | 41.1 | 44.0 | 44.0 |
| LOS by Move: | D | D | D | D | C | C | B | B | B | D | D | D |
| HCM2kAvgQ: | 1 | 5 | 5 | 3 | 2 | 5 | 8 | 8 | 8 | 1 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Sampson Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.339 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 17.0 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 622 | 5 | 20 | 145 | 5 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 622 | 5 | 20 | 145 | 5 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 15 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 666 | 5 | 20 | 160 | 5 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 738 | 6 | 22 | 177 | 6 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 738 | 6 | 22 | 177 | 6 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 738 | 6 | 22 | 177 | 6 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 0.87 | 0.87 | 0.87 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.18 | 0.33 | 0.49 | 0.24 | 0.43 | 0.33 | 1.00 | 1.99 | 0.01 | 1.00 | 1.94 | 0.06 |
| Final Sat.: | 303 | 535 | 803 | 404 | 706 | 538 | 1769 | 3508 | 26 | 1769 | 3417 | 107 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.06 | 0.06 | 0.03 | 0.03 | 0.03 | 0.05 | 0.21 | 0.21 | 0.01 | 0.05 | 0.05 |
| Crit Moves: | | **** | | | | | | **** | | **** | | |
| Green/Cycle: | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.32 | 0.61 | 0.61 | 0.05 | 0.34 | 0.34 |
| Volume/Cap: | 0.34 | 0.34 | 0.34 | 0.18 | 0.18 | 0.18 | 0.14 | 0.34 | 0.34 | 0.25 | 0.15 | 0.15 |
| Delay/Veh: | 36.5 | 36.5 | 36.5 | 35.1 | 35.1 | 35.1 | 24.1 | 9.7 | 9.7 | 47.2 | 23.3 | 23.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 36.5 | 36.5 | 36.5 | 35.1 | 35.1 | 35.1 | 24.1 | 9.7 | 9.7 | 47.2 | 23.3 | 23.3 |
| LOS by Move: | D | D | D | D | D | D | C | A | A | D | C | C |
| HCM2kAvgQ: | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 6 | 6 | 1 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 28th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.384 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 23.3 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 12 | 3 | 158 | 2 | 19 | 94 | 648 | 0 | 11 | 121 | 174 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 12 | 3 | 158 | 2 | 19 | 94 | 648 | 0 | 11 | 121 | 174 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 15 | 44 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 3 | 12 | 3 | 158 | 2 | 34 | 138 | 648 | 0 | 11 | 121 | 174 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| PHF Volume: | 3 | 13 | 3 | 177 | 2 | 38 | 154 | 725 | 0 | 12 | 135 | 195 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 3 | 13 | 3 | 177 | 2 | 38 | 154 | 725 | 0 | 12 | 135 | 195 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 3 | 13 | 3 | 177 | 2 | 38 | 154 | 725 | 0 | 12 | 135 | 195 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.95 | 0.93 | 0.80 | 0.80 | 0.93 | 0.93 | 0.95 | 0.93 | 0.93 | 0.83 |
| Lanes: | 0.16 | 0.67 | 0.17 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 0.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 301 | 1203 | 301 | 1769 | 1518 | 1518 | 1769 | 3538 | 0 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.01 | 0.01 | 0.10 | 0.00 | 0.03 | 0.09 | 0.20 | 0.00 | 0.01 | 0.04 | 0.12 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.15 | 0.05 | 0.05 | 0.24 | 0.15 | 0.15 | 0.23 | 0.50 | 0.00 | 0.05 | 0.32 | 0.32 |
| Volume/Cap: | 0.08 | 0.22 | 0.22 | 0.41 | 0.01 | 0.17 | 0.38 | 0.41 | 0.00 | 0.14 | 0.12 | 0.38 |
| Delay/Veh: | 37.0 | 46.9 | 46.9 | 32.5 | 36.5 | 37.7 | 33.3 | 16.0 | 0.0 | 46.2 | 24.1 | 26.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 37.0 | 46.9 | 46.9 | 32.5 | 36.5 | 37.7 | 33.3 | 16.0 | 0.0 | 46.2 | 24.1 | 26.8 |
| LOS by Move: | D | D | D | C | D | D | C | B | A | D | C | C |
| HCM2kAvgQ: | 1 | 1 | 1 | 5 | 0 | 1 | 4 | 7 | 0 | 0 | 2 | 5 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 28th Street/Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.638 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 33.3 |
| Optimal Cycle: | 61 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 20 | 438 | 112 | 295 | 312 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 20 | 438 | 112 | 295 | 312 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| Added Vol: | 0 | 44 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 20 | 482 | 112 | 295 | 327 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 21 | 516 | 120 | 316 | 350 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 21 | 516 | 120 | 316 | 350 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 21 | 516 | 120 | 316 | 350 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.93 | 0.92 | 0.92 | 0.93 | 0.91 | 0.91 | 0.93 | 0.84 | 0.84 |
| Lanes: | 1.00 | 1.62 | 0.38 | 1.00 | 1.77 | 0.23 | 1.00 | 1.69 | 0.31 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1769 | 2790 | 648 | 1769 | 3073 | 404 | 1769 | 2927 | 529 | 1769 | 1596 | 1596 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.18 | 0.18 | 0.18 | 0.11 | 0.11 | 0.06 | 0.06 | 0.06 | 0.03 | 0.06 | 0.11 |
| Crit Moves: | | **** | | **** | | | **** | | | | | **** |
| Green/Cycle: | 0.17 | 0.29 | 0.29 | 0.28 | 0.40 | 0.40 | 0.09 | 0.15 | 0.15 | 0.12 | 0.18 | 0.18 |
| Volume/Cap: | 0.07 | 0.64 | 0.64 | 0.64 | 0.29 | 0.29 | 0.64 | 0.42 | 0.42 | 0.22 | 0.33 | 0.64 |
| Delay/Veh: | 34.6 | 32.3 | 32.3 | 34.3 | 20.7 | 20.7 | 52.1 | 39.0 | 39.0 | 40.5 | 36.1 | 41.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 34.6 | 32.3 | 32.3 | 34.3 | 20.7 | 20.7 | 52.1 | 39.0 | 39.0 | 40.5 | 36.1 | 41.2 |
| LOS by Move: | C | C | C | C | C | C | D | D | D | D | D | D |
| HCM2kAvgQ: | 1 | 10 | 10 | 8 | 4 | 4 | 4 | 4 | 4 | 1 | 3 | 7 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 28th Street/Boston Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.485 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 25.9 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 2 | 0 1 | | 1 0 1 | 1 0 | | 1 0 | 0 1 0 | | 1 0 | 0 1 0 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 6 | 528 | 207 | 213 | 657 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 6 | 528 | 207 | 213 | 657 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| Added Vol: | 0 | 20 | 24 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 6 | 548 | 231 | 213 | 672 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 6 | 592 | 250 | 230 | 726 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 6 | 592 | 250 | 230 | 726 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 6 | 592 | 250 | 230 | 726 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.83 | 0.93 | 0.92 | 0.92 | 0.93 | 0.97 | 0.97 | 0.93 | 0.86 | 0.86 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.91 | 0.09 | 1.00 | 0.95 | 0.05 | 1.00 | 0.18 | 0.82 |
| Final Sat.: | 1769 | 3538 | 1583 | 1769 | 3349 | 164 | 1769 | 1757 | 92 | 1769 | 297 | 1336 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.17 | 0.16 | 0.13 | 0.22 | 0.22 | 0.02 | 0.11 | 0.11 | 0.00 | 0.02 | 0.02 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.11 | 0.33 | 0.33 | 0.26 | 0.47 | 0.47 | 0.13 | 0.21 | 0.21 | 0.05 | 0.13 | 0.13 |
| Volume/Cap: | 0.03 | 0.51 | 0.48 | 0.51 | 0.46 | 0.46 | 0.17 | 0.51 | 0.51 | 0.09 | 0.17 | 0.17 |
| Delay/Veh: | 39.9 | 27.5 | 27.5 | 32.9 | 17.8 | 17.8 | 39.2 | 36.3 | 36.3 | 45.7 | 39.2 | 39.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 39.9 | 27.5 | 27.5 | 32.9 | 17.8 | 17.8 | 39.2 | 36.3 | 36.3 | 45.7 | 39.2 | 39.2 |
| LOS by Move: | D | C | C | C | B | B | D | D | D | D | D | D |
| HCM2kAvgQ: | 0 | 7 | 6 | 6 | 8 | 8 | 1 | 6 | 6 | 0 | 1 | 1 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
Unknown Method (Future Volume Alternative)

Intersection #7 28th Street/I-5 southbound ramp

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 2 | 0 | 0 | 0 0 1 | 1 | 0 | 0 0 0 | 0 | 1 | 0 0 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 587 | 0 | 0 | 381 | 0 | 0 | 0 | 526 | 0 | 0 | 0 |
| Growth Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Added Vol: | 0 | 20 | 0 | 0 | 13 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| PHF Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCE Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| MLF Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical Gap Module: >> Population:0 << >> Run Speed(N/S): 30 MPH << | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Level Of Service Module: | | | | | | | | | | | | |
| LOS by Move: | | | | | | | | | | | | |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 28th Street/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.731 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 31.6 |
| Optimal Cycle: | 74 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 1 | 0 | 0 | 0 1! | 0 0 | 1 | 0 1 | 1 0 | 1 | 0 0 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 127 | 347 | 179 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 127 | 347 | 179 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 140 | 347 | 179 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 145 | 359 | 185 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 145 | 359 | 185 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 145 | 359 | 185 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.73 | 0.73 | 0.73 | 0.84 | 0.84 | 0.84 | 0.93 | 0.91 | 0.91 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.45 | 1.03 | 0.52 | 0.21 | 0.49 | 0.30 | 1.00 | 1.67 | 0.33 | 1.00 | 0.66 | 0.34 |
| Final Sat.: | 619 | 1426 | 713 | 338 | 781 | 479 | 1769 | 2877 | 573 | 1769 | 1166 | 601 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.06 | 0.06 | 0.23 | 0.23 | 0.23 | 0.08 | 0.15 | 0.15 | 0.08 | 0.31 | 0.31 |
| Crit Moves: | | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.11 | 0.34 | 0.34 | 0.19 | 0.42 | 0.42 |
| Volume/Cap: | 0.18 | 0.18 | 0.18 | 0.73 | 0.73 | 0.73 | 0.73 | 0.43 | 0.43 | 0.43 | 0.73 | 0.73 |
| Delay/Veh: | 25.3 | 25.3 | 25.3 | 36.3 | 36.3 | 36.3 | 56.5 | 25.7 | 25.7 | 36.8 | 27.9 | 27.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.3 | 25.3 | 25.3 | 36.3 | 36.3 | 36.3 | 56.5 | 25.7 | 25.7 | 36.8 | 27.9 | 27.9 |
| LOS by Move: | C | C | C | D | D | D | E | C | C | D | C | C |
| HCM2kAvgQ: | 2 | 2 | 2 | 11 | 11 | 11 | 6 | 7 | 7 | 4 | 15 | 15 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 I-5 northbound ramps/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.535 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 19.1 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 0 1 | 0 0 | 0 | 0 0 | 0 0 | 0 | 1 0 1 | 0 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 313 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 313 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| Added Vol: | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 326 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.00 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 345 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 345 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 345 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 1769 | 0 | 1583 | 0 | 0 | 0 | 0 | 1862 | 1900 | 0 | 1862 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.19 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.00 | 0.00 | 0.18 | 0.00 |
| Crit Moves: | **** | | | | | | | **** | | | | |
| Green/Cycle: | 0.36 | 0.00 | 0.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.52 | 0.00 | 0.00 | 0.52 | 0.00 |
| Volume/Cap: | 0.53 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.53 | 0.00 | 0.00 | 0.35 | 0.00 |
| Delay/Veh: | 26.0 | 0.0 | 22.2 | 0.0 | 0.0 | 0.0 | 0.0 | 16.8 | 0.0 | 0.0 | 14.6 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.0 | 0.0 | 22.2 | 0.0 | 0.0 | 0.0 | 0.0 | 16.8 | 0.0 | 0.0 | 14.6 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | B | A | A | B | A |
| HCM2kAvgQ: | 9 | 0 | 3 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 6 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 I-5 southbound ramp/Boston Avenue

Average Delay (sec/veh): 11.3 Worst Case Level Of Service: F[ 56.3]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 1 0 0 | 1 0 | | 0 0 0 | 0 0 | | 1 0 0 | 1 0 | | 0 1 0 | 0 1 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 8 | 51 | 11 | 0 | 0 | 0 | 559 | 53 | 16 | 3 | 38 | 50 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 8 | 51 | 11 | 0 | 0 | 0 | 559 | 53 | 16 | 3 | 38 | 50 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 8 | 51 | 11 | 0 | 0 | 0 | 559 | 53 | 16 | 3 | 38 | 50 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 1248 | 1273 | 61 | xxxx | xxxx | xxxxx | 88 | xxxx | xxxxx | 69 | xxxx | xxxxx |
| Potent Cap.: | 191 | 167 | 1004 | xxxx | xxxx | xxxxx | 1508 | xxxx | xxxxx | 1532 | xxxx | xxxxx |
| Move Cap.: | 136 | 105 | 1004 | xxxx | xxxx | xxxxx | 1508 | xxxx | xxxxx | 1532 | xxxx | xxxxx |
| Volume/Cap: | 0.06 | 0.49 | 0.01 | xxxx | xxxx | xxxx | 0.37 | xxxx | xxxx | 0.00 | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | 0.2 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1.7 | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Control Del: | 33.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 8.8 | xxxx | xxxxx | 7.4 | xxxx | xxxxx |
| LOS by Move: | D | * | * | * | * | * | A | * | * | A | * | * |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | xxxx | xxxx | 125 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | 2.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | 59.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.4 | xxxx | xxxxx |
| Shared LOS: | * | * | F | * | * | * | * | * | * | A | * | * |
| ApproachDel: | 56.3 | | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | F | | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

# ATTACHMENT E

# EXISTING WITH PROJECT TRAFFIC LOS WORKSHEETS (STAGING AREA 3)

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Park Boulevard/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.509 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 15.0 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| PHF Volume: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.91 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.62 | 0.00 | 0.38 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 2800 | 0 | 660 | 0 | 0 | 0 | 1769 | 3538 | 1583 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.03 | 0.09 | 0.31 | 0.09 | 0.19 | 0.00 |
| Crit Moves: | | | **** | | | | | | **** | **** | | |
| Green/Cycle: | 0.07 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.16 | 0.62 | 0.62 | 0.18 | 0.63 | 0.00 |
| Volume/Cap: | 0.49 | 0.00 | 0.51 | 0.00 | 0.00 | 0.00 | 0.17 | 0.15 | 0.51 | 0.51 | 0.30 | 0.00 |
| Delay/Veh: | 46.5 | 0.0 | 45.6 | 0.0 | 0.0 | 0.0 | 36.2 | 8.1 | 11.1 | 38.5 | 8.5 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 46.5 | 0.0 | 45.6 | 0.0 | 0.0 | 0.0 | 36.2 | 8.1 | 11.1 | 38.5 | 8.5 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | D | A | B | D | A | A |
| HCM2kAvgQ: | 2 | 0 | 3 | 0 | 0 | 0 | 1 | 2 | 9 | 4 | 5 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Cesar Chavez Parkway/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.512 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 31.4 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 0 1 | 0 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 4 | 28 | 16 | 41 | 82 | 312 | 156 | 143 | 21 | 44 | 430 | 63 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 28 | 16 | 41 | 82 | 312 | 156 | 143 | 21 | 44 | 430 | 63 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 28 | 16 | 41 | 82 | 312 | 156 | 143 | 21 | 44 | 430 | 63 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.96 | 0.96 | 0.83 | 0.93 | 0.91 | 0.91 | 0.93 | 0.91 | 0.91 |
| Lanes: | 1.00 | 0.64 | 0.36 | 0.34 | 0.66 | 1.00 | 1.00 | 1.74 | 0.26 | 1.00 | 1.75 | 0.25 |
| Final Sat.: | 1769 | 1129 | 632 | 616 | 1215 | 1583 | 1769 | 3022 | 449 | 1769 | 3030 | 441 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.02 | 0.02 | 0.07 | 0.07 | 0.20 | 0.09 | 0.05 | 0.05 | 0.02 | 0.14 | 0.14 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.18 | 0.18 | 0.24 | 0.36 | 0.36 | 0.16 | 0.21 | 0.21 | 0.21 | 0.26 | 0.26 |
| Volume/Cap: | 0.05 | 0.14 | 0.14 | 0.28 | 0.18 | 0.54 | 0.54 | 0.22 | 0.22 | 0.12 | 0.54 | 0.54 |
| Delay/Veh: | 45.5 | 35.0 | 35.0 | 31.5 | 21.8 | 26.2 | 40.5 | 32.7 | 32.7 | 31.9 | 32.4 | 32.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 45.5 | 35.0 | 35.0 | 31.5 | 21.8 | 26.2 | 40.5 | 32.7 | 32.7 | 31.9 | 32.4 | 32.4 |
| LOS by Move: | D | C | C | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 0 | 1 | 1 | 3 | 3 | 8 | 4 | 2 | 2 | 1 | 7 | 7 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Sampson Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.276 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 21.7 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 | 0 | 1! 0 | 0 | 0 | 1! 0 | 1 | 0 | 1 1 | 0 | 1 | 0 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 135 | 31 | 87 | 477 | 6 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 135 | 31 | 87 | 477 | 6 |
| Added Vol: | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 19 | 33 | 71 | 7 | 50 | 22 | 15 | 135 | 31 | 131 | 477 | 6 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 20 | 35 | 75 | 7 | 53 | 23 | 16 | 142 | 33 | 138 | 502 | 6 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 20 | 35 | 75 | 7 | 53 | 23 | 16 | 142 | 33 | 138 | 502 | 6 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 20 | 35 | 75 | 7 | 53 | 23 | 16 | 142 | 33 | 138 | 502 | 6 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 0.92 | 0.92 | 0.92 | 0.93 | 0.90 | 0.90 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.15 | 0.27 | 0.58 | 0.09 | 0.63 | 0.28 | 1.00 | 1.63 | 0.37 | 1.00 | 1.98 | 0.02 |
| Final Sat.: | 253 | 439 | 945 | 155 | 1110 | 488 | 1769 | 2797 | 642 | 1769 | 3487 | 44 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.08 | 0.08 | 0.08 | 0.05 | 0.05 | 0.05 | 0.01 | 0.05 | 0.05 | 0.08 | 0.14 | 0.14 |
| Crit Moves: | | **** | | | | | **** | | | | **** | |
| Green/Cycle: | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.05 | 0.22 | 0.22 | 0.34 | 0.51 | 0.51 |
| Volume/Cap: | 0.28 | 0.28 | 0.28 | 0.17 | 0.17 | 0.17 | 0.18 | 0.23 | 0.23 | 0.23 | 0.28 | 0.28 |
| Delay/Veh: | 28.5 | 28.5 | 28.5 | 27.4 | 27.4 | 27.4 | 46.5 | 32.1 | 32.1 | 23.9 | 14.1 | 14.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 28.5 | 28.5 | 28.5 | 27.4 | 27.4 | 27.4 | 46.5 | 32.1 | 32.1 | 23.9 | 14.1 | 14.1 |
| LOS by Move: | C | C | C | C | C | C | D | C | C | C | B | B |
| HCM2kAvgQ: | 3 | 3 | 3 | 2 | 2 | 2 | 0 | 2 | 2 | 3 | 5 | 5 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 28th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.433 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 28.6 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 4 | 7 | 5 | 315 | 9 | 28 | 36 | 186 | 7 | 12 | 448 | 142 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 4 | 7 | 5 | 315 | 9 | 28 | 36 | 186 | 7 | 12 | 448 | 142 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 44 | 15 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 4 | 7 | 5 | 315 | 9 | 72 | 51 | 186 | 7 | 12 | 448 | 142 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 4 | 7 | 5 | 335 | 10 | 77 | 54 | 198 | 7 | 13 | 476 | 151 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 7 | 5 | 335 | 10 | 77 | 54 | 198 | 7 | 13 | 476 | 151 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 7 | 5 | 335 | 10 | 77 | 54 | 198 | 7 | 13 | 476 | 151 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.93 | 0.81 | 0.81 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.83 |
| Lanes: | 0.25 | 0.44 | 0.31 | 1.00 | 1.00 | 1.00 | 1.00 | 1.93 | 0.07 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 441 | 771 | 551 | 1769 | 1534 | 1534 | 1769 | 3392 | 128 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.01 | 0.01 | 0.19 | 0.01 | 0.05 | 0.03 | 0.06 | 0.06 | 0.01 | 0.13 | 0.10 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.24 | 0.05 | 0.05 | 0.42 | 0.24 | 0.24 | 0.07 | 0.20 | 0.20 | 0.17 | 0.30 | 0.30 |
| Volume/Cap: | 0.04 | 0.19 | 0.19 | 0.45 | 0.03 | 0.21 | 0.45 | 0.29 | 0.29 | 0.04 | 0.45 | 0.32 |
| Delay/Veh: | 29.5 | 46.6 | 46.6 | 21.1 | 29.4 | 31.0 | 47.4 | 34.4 | 34.4 | 34.7 | 28.6 | 27.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 29.5 | 46.6 | 46.6 | 21.1 | 29.4 | 31.0 | 47.4 | 34.4 | 34.4 | 34.7 | 28.6 | 27.5 |
| LOS by Move: | C | D | D | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 0 | 1 | 1 | 7 | 0 | 2 | 2 | 3 | 3 | 0 | 6 | 4 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 28th Street/Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.403 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 29.8 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 35 | 191 | 58 | 163 | 413 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 35 | 191 | 58 | 163 | 413 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| Added Vol: | 0 | 15 | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 35 | 206 | 58 | 163 | 457 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 37 | 218 | 61 | 172 | 483 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 37 | 218 | 61 | 172 | 483 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 37 | 218 | 61 | 172 | 483 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.93 | 0.92 | 0.92 | 0.93 | 0.89 | 0.89 | 0.93 | 0.87 | 0.87 |
| Lanes: | 1.00 | 1.56 | 0.44 | 1.00 | 1.84 | 0.16 | 1.00 | 1.34 | 0.66 | 1.00 | 1.06 | 0.94 |
| Final Sat.: | 1769 | 2669 | 752 | 1769 | 3208 | 288 | 1769 | 2260 | 1104 | 1769 | 1744 | 1546 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.08 | 0.08 | 0.10 | 0.15 | 0.15 | 0.04 | 0.04 | 0.04 | 0.03 | 0.13 | 0.13 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.19 | 0.19 | 0.23 | 0.37 | 0.37 | 0.10 | 0.21 | 0.21 | 0.21 | 0.32 | 0.32 |
| Volume/Cap: | 0.40 | 0.42 | 0.42 | 0.42 | 0.40 | 0.40 | 0.40 | 0.20 | 0.20 | 0.15 | 0.40 | 0.40 |
| Delay/Veh: | 48.8 | 35.8 | 35.8 | 33.4 | 23.3 | 23.3 | 43.9 | 32.9 | 32.9 | 32.6 | 27.0 | 27.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 48.8 | 35.8 | 35.8 | 33.4 | 23.3 | 23.3 | 43.9 | 32.9 | 32.9 | 32.6 | 27.0 | 27.0 |
| LOS by Move: | D | D | D | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 2 | 4 | 4 | 4 | 6 | 6 | 2 | 2 | 2 | 1 | 5 | 5 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 28th Street/Boston Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.322 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 18.0 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 351 | 80 | 137 | 650 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 351 | 80 | 137 | 650 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| Added Vol: | 0 | 2 | 13 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 3 | 353 | 93 | 137 | 694 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 3 | 374 | 99 | 145 | 736 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 3 | 374 | 99 | 145 | 736 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 3 | 374 | 99 | 145 | 736 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.93 | 0.93 | 0.96 | 0.96 | 0.93 | 0.87 | 0.87 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.93 | 0.07 | 1.00 | 0.87 | 0.13 | 1.00 | 0.25 | 0.75 |
| Final Sat.: | 1769 | 3538 | 1583 | 1769 | 3393 | 127 | 1769 | 1594 | 232 | 1769 | 420 | 1233 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.11 | 0.06 | 0.08 | 0.22 | 0.22 | 0.01 | 0.03 | 0.03 | 0.01 | 0.04 | 0.04 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.38 | 0.38 | 0.30 | 0.63 | 0.63 | 0.05 | 0.08 | 0.08 | 0.08 | 0.11 | 0.11 |
| Volume/Cap: | 0.04 | 0.28 | 0.16 | 0.28 | 0.34 | 0.34 | 0.28 | 0.40 | 0.40 | 0.08 | 0.34 | 0.34 |
| Delay/Veh: | 45.4 | 21.4 | 20.4 | 27.2 | 8.8 | 8.8 | 47.5 | 45.5 | 45.5 | 42.9 | 42.3 | 42.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 45.4 | 21.4 | 20.4 | 27.2 | 8.8 | 8.8 | 47.5 | 45.5 | 45.5 | 42.9 | 42.3 | 42.3 |
| LOS by Move: | D | C | C | C | A | A | D | D | D | D | D | D |
| HCM2kAvgQ: | 0 | 4 | 2 | 3 | 6 | 6 | 1 | 2 | 2 | 0 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
Unknown Method (Future Volume Alternative)

Intersection #7 28th Street/I-5 southbound ramp

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 2 | 0 | 0 | 0 0 1 | 1 | 0 | 0 0 0 | 0 | 1 | 0 0 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 415 | 0 | 0 | 303 | 0 | 0 | 0 | 508 | 0 | 0 | 0 |
| Growth Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Added Vol: | 0 | 2 | 0 | 0 | 24 | 0 | 0 | 0 | 20 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCE Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MLF Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical Gap Module: >> Population:0 << >> Run Speed(N/S): 30 MPH << | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Level Of Service Module: | | | | | | | | | | | | |
| LOS by Move: | | | | | | | | | | | | |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 28th Street/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.781 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 33.7 |
| Optimal Cycle: | 82 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 1 | 0 | 0 | 0 1! | 0 0 | 1 | 0 1 | 1 0 | 1 | 0 0 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 146 | 537 | 86 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 146 | 537 | 86 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 170 | 537 | 86 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 176 | 556 | 89 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 176 | 556 | 89 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 176 | 556 | 89 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.68 | 0.68 | 0.68 | 0.85 | 0.85 | 0.85 | 0.93 | 0.91 | 0.91 | 0.93 | 0.96 | 0.96 |
| Lanes: | 0.55 | 0.97 | 0.48 | 0.13 | 0.37 | 0.50 | 1.00 | 1.75 | 0.25 | 1.00 | 0.86 | 0.14 |
| Final Sat.: | 712 | 1251 | 616 | 221 | 596 | 808 | 1769 | 3030 | 440 | 1769 | 1571 | 252 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.05 | 0.05 | 0.23 | 0.23 | 0.23 | 0.07 | 0.06 | 0.06 | 0.10 | 0.35 | 0.35 |
| Crit Moves: | | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.09 | 0.20 | 0.20 | 0.34 | 0.45 | 0.45 |
| Volume/Cap: | 0.18 | 0.18 | 0.18 | 0.78 | 0.78 | 0.78 | 0.78 | 0.29 | 0.29 | 0.29 | 0.78 | 0.78 |
| Delay/Veh: | 26.0 | 26.0 | 26.0 | 39.9 | 39.9 | 39.9 | 67.3 | 34.2 | 34.2 | 24.5 | 27.9 | 27.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.0 | 26.0 | 26.0 | 39.9 | 39.9 | 39.9 | 67.3 | 34.2 | 34.2 | 24.5 | 27.9 | 27.9 |
| LOS by Move: | C | C | C | D | D | D | E | C | C | C | C | C |
| HCM2kAvgQ: | 2 | 2 | 2 | 13 | 13 | 13 | 6 | 3 | 3 | 4 | 18 | 18 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 I-5 northbound ramps/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.509 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 19.1 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 0 1 | 0 0 | 0 | 0 0 | 0 0 | 1 | 0 1 | 0 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 304 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 304 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| Added Vol: | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 328 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.00 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 344 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 344 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 344 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 1769 | 0 | 1583 | 0 | 0 | 0 | 0 | 1862 | 1900 | 0 | 1862 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.19 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.25 | 0.00 |
| Crit Moves: | **** | | | | | | | | | | **** | |
| Green/Cycle: | 0.38 | 0.00 | 0.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 | 0.00 | 0.50 | 0.00 |
| Volume/Cap: | 0.51 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.27 | 0.00 | 0.00 | 0.51 | 0.00 |
| Delay/Veh: | 24.3 | 0.0 | 20.3 | 0.0 | 0.0 | 0.0 | 0.0 | 14.7 | 0.0 | 0.0 | 17.3 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 24.3 | 0.0 | 20.3 | 0.0 | 0.0 | 0.0 | 0.0 | 14.7 | 0.0 | 0.0 | 17.3 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | B | A | A | B | A |
| HCM2kAvgQ: | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 10 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 I-5 southbound ramp/Boston Avenue

Average Delay (sec/veh): 6.3 Worst Case Level Of Service: C[ 15.6]

| Approach: | North Bound | | | | | | South Bound | | | | | | East Bound | | | | | | West Bound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | | L | - | T | - | R | |
| Control: | Stop Sign | | | | | | Stop Sign | | | | | | Uncontrolled | | | | | | Uncontrolled | | | | | |
| Rights: | Include | | | | | | Include | | | | | | Include | | | | | | Include | | | | | |
| Lanes: | 1 | 0 | 0 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | | 1 | 0 | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 1 | |
| Volume Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 9 | 23 | 5 | | | | 0 | 0 | 0 | | | | 255 | 26 | 8 | | | | 2 | 50 | 43 | | | |
| Growth Adj: | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | |
| Initial Bse: | 9 | 23 | 5 | | | | 0 | 0 | 0 | | | | 255 | 26 | 8 | | | | 2 | 50 | 43 | | | |
| Added Vol: | 0 | 0 | 0 | | | | 0 | 0 | 0 | | | | 13 | 0 | 0 | | | | 0 | 0 | 0 | | | |
| PasserByVol: | 0 | 0 | 0 | | | | 0 | 0 | 0 | | | | 0 | 0 | 0 | | | | 0 | 0 | 0 | | | |
| Initial Fut: | 9 | 23 | 5 | | | | 0 | 0 | 0 | | | | 268 | 26 | 8 | | | | 2 | 50 | 43 | | | |
| User Adj: | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | |
| PHF Adj: | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | | 1.00 | 1.00 | 1.00 | | | |
| PHF Volume: | 9 | 23 | 5 | | | | 0 | 0 | 0 | | | | 268 | 26 | 8 | | | | 2 | 50 | 43 | | | |
| Reduct Vol: | 0 | 0 | 0 | | | | 0 | 0 | 0 | | | | 0 | 0 | 0 | | | | 0 | 0 | 0 | | | |
| FinalVolume: | 9 | 23 | 5 | | | | 0 | 0 | 0 | | | | 268 | 26 | 8 | | | | 2 | 50 | 43 | | | |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | | | | | | | 4.1 | xxxx | xxxxx | | | | 4.1 | xxxx | xxxxx | | | |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | | | | | | | 2.2 | xxxx | xxxxx | | | | 2.2 | xxxx | xxxxx | | | |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 642 | 663 | 30 | xxxx | xxxx | xxxxx | | | | | | | 93 | xxxx | xxxxx | | | | 34 | xxxx | xxxxx | | | |
| Potent Cap.: | 439 | 382 | 1044 | xxxx | xxxx | xxxxx | | | | | | | 1501 | xxxx | xxxxx | | | | 1578 | xxxx | xxxxx | | | |
| Move Cap.: | 378 | 313 | 1044 | xxxx | xxxx | xxxxx | | | | | | | 1501 | xxxx | xxxxx | | | | 1578 | xxxx | xxxxx | | | |
| Volume/Cap: | 0.02 | 0.07 | 0.00 | xxxx | xxxx | xxxx | | | | | | | 0.18 | xxxx | xxxx | | | | 0.00 | xxxx | xxxx | | | |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.1 | xxxx | xxxxx | xxxx | xxxx | xxxxx | | | | | | | 0.6 | xxxx | xxxxx | | | | 0.0 | xxxx | xxxxx | | | |
| Control Del: | 14.8 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | | | | | | | 7.9 | xxxx | xxxxx | | | | 7.3 | xxxx | xxxxx | | | |
| LOS by Move: | B | * | * | * | * | * | | | | | | | A | * | * | | | | A | * | * | | | |
| Movement: | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | | LT | - | LTR | - | RT | |
| Shared Cap.: | xxxx | xxxx | 358 | xxxx | xxxx | xxxxx | | | | | | | xxxx | xxxx | xxxxx | | | | xxxx | xxxx | xxxxx | | | |
| SharedQueue: | xxxxx | xxxx | 0.3 | xxxxx | xxxx | xxxxx | | | | | | | xxxxx | xxxx | xxxxx | | | | 0.0 | xxxx | xxxxx | | | |
| Shrd ConDel: | xxxxx | xxxx | 15.9 | xxxxx | xxxx | xxxxx | | | | | | | xxxxx | xxxx | xxxxx | | | | 7.3 | xxxx | xxxxx | | | |
| Shared LOS: | * | * | C | * | * | * | | | | | | | * | * | * | | | | A | * | * | | | |
| ApproachDel: | 15.6 | | | xxxxxx | | | | | | | | | xxxxxx | | | | | | xxxxxx | | | | | |
| ApproachLOS: | C | | | * | | | | | | | | | * | | | | | | * | | | | | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Park Boulevard/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.425 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 13.9 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.90 | 1.00 | 0.90 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.48 | 0.00 | 0.52 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 2529 | 0 | 888 | 0 | 0 | 0 | 1769 | 3538 | 1583 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.06 | 0.03 | 0.11 | 0.00 |
| Crit Moves: | | | **** | | | | | **** | | **** | | |
| Green/Cycle: | 0.10 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.23 | 0.66 | 0.66 | 0.07 | 0.50 | 0.00 |
| Volume/Cap: | 0.41 | 0.00 | 0.42 | 0.00 | 0.00 | 0.00 | 0.02 | 0.42 | 0.09 | 0.42 | 0.22 | 0.00 |
| Delay/Veh: | 43.0 | 0.0 | 39.4 | 0.0 | 0.0 | 0.0 | 29.8 | 8.2 | 6.3 | 46.7 | 14.0 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 43.0 | 0.0 | 39.4 | 0.0 | 0.0 | 0.0 | 29.8 | 8.2 | 6.3 | 46.7 | 14.0 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | C | A | A | D | B | A |
| HCM2kAvgQ: | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 8 | 1 | 2 | 3 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Cesar Chavez Parkway/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.457 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 25.8 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 0 1 | 0 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 23 | 85 | 38 | 51 | 40 | 175 | 383 | 741 | 11 | 12 | 131 | 22 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 23 | 85 | 38 | 51 | 40 | 175 | 383 | 741 | 11 | 12 | 131 | 22 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 23 | 85 | 38 | 51 | 40 | 175 | 383 | 741 | 11 | 12 | 131 | 22 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.95 | 0.95 | 0.83 | 0.93 | 0.93 | 0.93 | 0.93 | 0.91 | 0.91 |
| Lanes: | 1.00 | 0.69 | 0.31 | 0.56 | 0.44 | 1.00 | 1.00 | 1.97 | 0.03 | 1.00 | 1.71 | 0.29 |
| Final Sat.: | 1769 | 1232 | 544 | 1016 | 795 | 1583 | 1769 | 3479 | 52 | 1769 | 2959 | 501 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.07 | 0.07 | 0.05 | 0.05 | 0.11 | 0.22 | 0.21 | 0.21 | 0.01 | 0.04 | 0.04 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.17 | 0.17 | 0.12 | 0.24 | 0.24 | 0.46 | 0.45 | 0.45 | 0.11 | 0.09 | 0.09 |
| Volume/Cap: | 0.26 | 0.42 | 0.42 | 0.42 | 0.21 | 0.47 | 0.47 | 0.47 | 0.47 | 0.07 | 0.47 | 0.47 |
| Delay/Veh: | 47.3 | 38.4 | 38.4 | 42.1 | 31.0 | 33.8 | 19.0 | 19.5 | 19.5 | 40.4 | 44.0 | 44.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 47.3 | 38.4 | 38.4 | 42.1 | 31.0 | 33.8 | 19.0 | 19.5 | 19.5 | 40.4 | 44.0 | 44.0 |
| LOS by Move: | D | D | D | D | C | C | B | B | B | D | D | D |
| HCM2kAvgQ: | 1 | 4 | 4 | 3 | 2 | 5 | 8 | 8 | 8 | 0 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Sampson Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.369 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 20.4 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 622 | 5 | 20 | 145 | 5 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 622 | 5 | 20 | 145 | 5 |
| Added Vol: | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 17 | 30 | 89 | 12 | 21 | 16 | 75 | 622 | 5 | 35 | 145 | 5 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 19 | 33 | 99 | 13 | 23 | 18 | 83 | 689 | 6 | 39 | 161 | 6 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 19 | 33 | 99 | 13 | 23 | 18 | 83 | 689 | 6 | 39 | 161 | 6 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 19 | 33 | 99 | 13 | 23 | 18 | 83 | 689 | 6 | 39 | 161 | 6 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 0.87 | 0.87 | 0.87 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.13 | 0.22 | 0.65 | 0.24 | 0.43 | 0.33 | 1.00 | 1.98 | 0.02 | 1.00 | 1.93 | 0.07 |
| Final Sat.: | 205 | 361 | 1072 | 404 | 707 | 539 | 1769 | 3506 | 28 | 1769 | 3403 | 117 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.09 | 0.09 | 0.09 | 0.03 | 0.03 | 0.03 | 0.05 | 0.20 | 0.20 | 0.02 | 0.05 | 0.05 |
| Crit Moves: | **** | | | | | | **** | | | **** | | |
| Green/Cycle: | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.30 | 0.53 | 0.53 | 0.06 | 0.30 | 0.30 |
| Volume/Cap: | 0.37 | 0.37 | 0.37 | 0.13 | 0.13 | 0.13 | 0.16 | 0.37 | 0.37 | 0.37 | 0.16 | 0.16 |
| Delay/Veh: | 31.6 | 31.6 | 31.6 | 29.3 | 29.3 | 29.3 | 26.2 | 13.8 | 13.8 | 47.4 | 26.1 | 26.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 31.6 | 31.6 | 31.6 | 29.3 | 29.3 | 29.3 | 26.2 | 13.8 | 13.8 | 47.4 | 26.1 | 26.1 |
| LOS by Move: | C | C | C | C | C | C | C | B | B | D | C | C |
| HCM2kAvgQ: | 4 | 4 | 4 | 1 | 1 | 1 | 2 | 6 | 6 | 1 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 28th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.384 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 23.3 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 | 0 | 1! 0 | 0 | 1 | 0 1 | 1 0 | 1 | 0 1 | 1 | 0 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 12 | 3 | 158 | 2 | 19 | 94 | 648 | 0 | 11 | 121 | 174 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 12 | 3 | 158 | 2 | 19 | 94 | 648 | 0 | 11 | 121 | 174 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 15 | 44 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 3 | 12 | 3 | 158 | 2 | 34 | 138 | 648 | 0 | 11 | 121 | 174 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| PHF Volume: | 3 | 13 | 3 | 177 | 2 | 38 | 154 | 725 | 0 | 12 | 135 | 195 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 3 | 13 | 3 | 177 | 2 | 38 | 154 | 725 | 0 | 12 | 135 | 195 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 3 | 13 | 3 | 177 | 2 | 38 | 154 | 725 | 0 | 12 | 135 | 195 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.95 | 0.93 | 0.80 | 0.80 | 0.93 | 0.93 | 0.95 | 0.93 | 0.93 | 0.83 |
| Lanes: | 0.16 | 0.67 | 0.17 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 0.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 301 | 1203 | 301 | 1769 | 1518 | 1518 | 1769 | 3538 | 0 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.01 | 0.01 | 0.10 | 0.00 | 0.03 | 0.09 | 0.20 | 0.00 | 0.01 | 0.04 | 0.12 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.15 | 0.05 | 0.05 | 0.24 | 0.15 | 0.15 | 0.23 | 0.50 | 0.00 | 0.05 | 0.32 | 0.32 |
| Volume/Cap: | 0.08 | 0.22 | 0.22 | 0.41 | 0.01 | 0.17 | 0.38 | 0.41 | 0.00 | 0.14 | 0.12 | 0.38 |
| Delay/Veh: | 37.0 | 46.9 | 46.9 | 32.5 | 36.5 | 37.7 | 33.3 | 16.0 | 0.0 | 46.2 | 24.1 | 26.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 37.0 | 46.9 | 46.9 | 32.5 | 36.5 | 37.7 | 33.3 | 16.0 | 0.0 | 46.2 | 24.1 | 26.8 |
| LOS by Move: | D | D | D | C | D | D | C | B | A | D | C | C |
| HCM2kAvgQ: | 1 | 1 | 1 | 5 | 0 | 1 | 4 | 7 | 0 | 0 | 2 | 5 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 28th Street/Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.638 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 33.3 |
| Optimal Cycle: | 61 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 20 | 438 | 112 | 295 | 312 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 20 | 438 | 112 | 295 | 312 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| Added Vol: | 0 | 44 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 20 | 482 | 112 | 295 | 327 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 21 | 516 | 120 | 316 | 350 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 21 | 516 | 120 | 316 | 350 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 21 | 516 | 120 | 316 | 350 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.93 | 0.92 | 0.92 | 0.93 | 0.91 | 0.91 | 0.93 | 0.84 | 0.84 |
| Lanes: | 1.00 | 1.62 | 0.38 | 1.00 | 1.77 | 0.23 | 1.00 | 1.69 | 0.31 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1769 | 2790 | 648 | 1769 | 3073 | 404 | 1769 | 2927 | 529 | 1769 | 1596 | 1596 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.18 | 0.18 | 0.18 | 0.11 | 0.11 | 0.06 | 0.06 | 0.06 | 0.03 | 0.06 | 0.11 |
| Crit Moves: | | **** | | **** | | | **** | | | | | **** |
| Green/Cycle: | 0.17 | 0.29 | 0.29 | 0.28 | 0.40 | 0.40 | 0.09 | 0.15 | 0.15 | 0.12 | 0.18 | 0.18 |
| Volume/Cap: | 0.07 | 0.64 | 0.64 | 0.64 | 0.29 | 0.29 | 0.64 | 0.42 | 0.42 | 0.22 | 0.33 | 0.64 |
| Delay/Veh: | 34.6 | 32.3 | 32.3 | 34.3 | 20.7 | 20.7 | 52.1 | 39.0 | 39.0 | 40.5 | 36.1 | 41.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 34.6 | 32.3 | 32.3 | 34.3 | 20.7 | 20.7 | 52.1 | 39.0 | 39.0 | 40.5 | 36.1 | 41.2 |
| LOS by Move: | C | C | C | C | C | C | D | D | D | D | D | D |
| HCM2kAvgQ: | 1 | 10 | 10 | 8 | 4 | 4 | 4 | 4 | 4 | 1 | 3 | 7 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 28th Street/Boston Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.485 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 25.9 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 2 | 0 1 | | 1 0 1 | 1 0 | | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 6 | 528 | 207 | 213 | 657 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 6 | 528 | 207 | 213 | 657 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| Added Vol: | 0 | 20 | 24 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 6 | 548 | 231 | 213 | 672 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 6 | 592 | 250 | 230 | 726 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 6 | 592 | 250 | 230 | 726 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 6 | 592 | 250 | 230 | 726 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.83 | 0.93 | 0.92 | 0.92 | 0.93 | 0.97 | 0.97 | 0.93 | 0.86 | 0.86 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.91 | 0.09 | 1.00 | 0.95 | 0.05 | 1.00 | 0.18 | 0.82 |
| Final Sat.: | 1769 | 3538 | 1583 | 1769 | 3349 | 164 | 1769 | 1757 | 92 | 1769 | 297 | 1336 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.17 | 0.16 | 0.13 | 0.22 | 0.22 | 0.02 | 0.11 | 0.11 | 0.00 | 0.02 | 0.02 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.11 | 0.33 | 0.33 | 0.26 | 0.47 | 0.47 | 0.13 | 0.21 | 0.21 | 0.05 | 0.13 | 0.13 |
| Volume/Cap: | 0.03 | 0.51 | 0.48 | 0.51 | 0.46 | 0.46 | 0.17 | 0.51 | 0.51 | 0.09 | 0.17 | 0.17 |
| Delay/Veh: | 39.9 | 27.5 | 27.5 | 32.9 | 17.8 | 17.8 | 39.2 | 36.3 | 36.3 | 45.7 | 39.2 | 39.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 39.9 | 27.5 | 27.5 | 32.9 | 17.8 | 17.8 | 39.2 | 36.3 | 36.3 | 45.7 | 39.2 | 39.2 |
| LOS by Move: | D | C | C | C | B | B | D | D | D | D | D | D |
| HCM2kAvgQ: | 0 | 7 | 6 | 6 | 8 | 8 | 1 | 6 | 6 | 0 | 1 | 1 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
Unknown Method (Future Volume Alternative)

Intersection #7 28th Street/I-5 southbound ramp

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 2 | 0 | 0 | 0 0 1 | 1 | 0 | 0 0 0 | 0 | 1 | 0 0 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 587 | 0 | 0 | 381 | 0 | 0 | 0 | 526 | 0 | 0 | 0 |
| Growth Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Added Vol: | 0 | 20 | 0 | 0 | 13 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| PHF Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCE Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| MLF Adj: | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 | 0.00 0.00 | 0.00 | 0.00 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical Gap Module: >> Population:0 << >> Run Speed(N/S): 30 MPH << | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Level Of Service Module: | | | | | | | | | | | | |
| LOS by Move: | | | | | | | | | | | | |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 28th Street/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.731 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 31.6 |
| Optimal Cycle: | 74 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 1 | 0 | 0 | 0 1! | 0 0 | 1 | 0 1 | 1 0 | 1 | 0 0 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 127 | 347 | 179 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 127 | 347 | 179 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 140 | 347 | 179 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 145 | 359 | 185 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 145 | 359 | 185 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 145 | 359 | 185 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.73 | 0.73 | 0.73 | 0.84 | 0.84 | 0.84 | 0.93 | 0.91 | 0.91 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.45 | 1.03 | 0.52 | 0.21 | 0.49 | 0.30 | 1.00 | 1.67 | 0.33 | 1.00 | 0.66 | 0.34 |
| Final Sat.: | 619 | 1426 | 713 | 338 | 781 | 479 | 1769 | 2877 | 573 | 1769 | 1166 | 601 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.06 | 0.06 | 0.23 | 0.23 | 0.23 | 0.08 | 0.15 | 0.15 | 0.08 | 0.31 | 0.31 |
| Crit Moves: | | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.11 | 0.34 | 0.34 | 0.19 | 0.42 | 0.42 |
| Volume/Cap: | 0.18 | 0.18 | 0.18 | 0.73 | 0.73 | 0.73 | 0.73 | 0.43 | 0.43 | 0.43 | 0.73 | 0.73 |
| Delay/Veh: | 25.3 | 25.3 | 25.3 | 36.3 | 36.3 | 36.3 | 56.5 | 25.7 | 25.7 | 36.8 | 27.9 | 27.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.3 | 25.3 | 25.3 | 36.3 | 36.3 | 36.3 | 56.5 | 25.7 | 25.7 | 36.8 | 27.9 | 27.9 |
| LOS by Move: | C | C | C | D | D | D | E | C | C | D | C | C |
| HCM2kAvgQ: | 2 | 2 | 2 | 11 | 11 | 11 | 6 | 7 | 7 | 4 | 15 | 15 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 I-5 northbound ramps/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.535 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 19.1 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 0 1 | 0 0 | 0 | 0 0 | 0 0 | 0 | 1 0 1 | 0 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 313 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 313 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| Added Vol: | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 326 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.00 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 345 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 345 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 345 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 1769 | 0 | 1583 | 0 | 0 | 0 | 0 | 1862 | 1900 | 0 | 1862 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.19 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.00 | 0.00 | 0.18 | 0.00 |
| Crit Moves: | **** | | | | | | | **** | | | | |
| Green/Cycle: | 0.36 | 0.00 | 0.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.52 | 0.00 | 0.00 | 0.52 | 0.00 |
| Volume/Cap: | 0.53 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.53 | 0.00 | 0.00 | 0.35 | 0.00 |
| Delay/Veh: | 26.0 | 0.0 | 22.2 | 0.0 | 0.0 | 0.0 | 0.0 | 16.8 | 0.0 | 0.0 | 14.6 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.0 | 0.0 | 22.2 | 0.0 | 0.0 | 0.0 | 0.0 | 16.8 | 0.0 | 0.0 | 14.6 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | B | A | A | B | A |
| HCM2kAvgQ: | 9 | 0 | 3 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 6 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 I-5 southbound ramp/Boston Avenue

Average Delay (sec/veh): 11.3 Worst Case Level Of Service: F[ 56.3]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 1 0 0 | 1 0 | | 0 0 0 | 0 0 | | 1 0 0 | 1 0 | | 0 1 0 | 0 1 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 8 | 51 | 11 | 0 | 0 | 0 | 559 | 53 | 16 | 3 | 38 | 50 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 8 | 51 | 11 | 0 | 0 | 0 | 559 | 53 | 16 | 3 | 38 | 50 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 8 | 51 | 11 | 0 | 0 | 0 | 559 | 53 | 16 | 3 | 38 | 50 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 1248 | 1273 | 61 | xxxx | xxxx | xxxxx | 88 | xxxx | xxxxx | 69 | xxxx | xxxxx |
| Potent Cap.: | 191 | 167 | 1004 | xxxx | xxxx | xxxxx | 1508 | xxxx | xxxxx | 1532 | xxxx | xxxxx |
| Move Cap.: | 136 | 105 | 1004 | xxxx | xxxx | xxxxx | 1508 | xxxx | xxxxx | 1532 | xxxx | xxxxx |
| Volume/Cap: | 0.06 | 0.49 | 0.01 | xxxx | xxxx | xxxx | 0.37 | xxxx | xxxx | 0.00 | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | 0.2 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1.7 | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Control Del: | 33.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 8.8 | xxxx | xxxxx | 7.4 | xxxx | xxxxx |
| LOS by Move: | D | * | * | * | * | * | A | * | * | A | * | * |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | xxxx | xxxx | 125 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | 2.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | 59.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.4 | xxxx | xxxxx |
| Shared LOS: | * | * | F | * | * | * | * | * | * | A | * | * |
| ApproachDel: | 56.3 | | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | F | | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

# ATTACHMENT F

# EXISTING WITH PROJECT TRAFFIC LOS WORKSHEETS (STAGING AREA 4)

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Park Boulevard/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.509 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 15.0 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| PHF Volume: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.91 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.62 | 0.00 | 0.38 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 2800 | 0 | 660 | 0 | 0 | 0 | 1769 | 3538 | 1583 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.03 | 0.09 | 0.31 | 0.09 | 0.19 | 0.00 |
| Crit Moves: | | | **** | | | | | | **** | **** | | |
| Green/Cycle: | 0.07 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.16 | 0.62 | 0.62 | 0.18 | 0.63 | 0.00 |
| Volume/Cap: | 0.49 | 0.00 | 0.51 | 0.00 | 0.00 | 0.00 | 0.17 | 0.15 | 0.51 | 0.51 | 0.30 | 0.00 |
| Delay/Veh: | 46.5 | 0.0 | 45.6 | 0.0 | 0.0 | 0.0 | 36.2 | 8.1 | 11.1 | 38.5 | 8.5 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 46.5 | 0.0 | 45.6 | 0.0 | 0.0 | 0.0 | 36.2 | 8.1 | 11.1 | 38.5 | 8.5 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | D | A | B | D | A | A |
| HCM2kAvgQ: | 2 | 0 | 3 | 0 | 0 | 0 | 1 | 2 | 9 | 4 | 5 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Cesar Chavez Parkway/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.512 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 31.4 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 0 1 | 0 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 4 | 28 | 16 | 41 | 82 | 312 | 156 | 143 | 21 | 44 | 430 | 63 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 28 | 16 | 41 | 82 | 312 | 156 | 143 | 21 | 44 | 430 | 63 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 28 | 16 | 41 | 82 | 312 | 156 | 143 | 21 | 44 | 430 | 63 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.96 | 0.96 | 0.83 | 0.93 | 0.91 | 0.91 | 0.93 | 0.91 | 0.91 |
| Lanes: | 1.00 | 0.64 | 0.36 | 0.34 | 0.66 | 1.00 | 1.00 | 1.74 | 0.26 | 1.00 | 1.75 | 0.25 |
| Final Sat.: | 1769 | 1129 | 632 | 616 | 1215 | 1583 | 1769 | 3022 | 449 | 1769 | 3030 | 441 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.02 | 0.02 | 0.07 | 0.07 | 0.20 | 0.09 | 0.05 | 0.05 | 0.02 | 0.14 | 0.14 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.18 | 0.18 | 0.24 | 0.36 | 0.36 | 0.16 | 0.21 | 0.21 | 0.21 | 0.26 | 0.26 |
| Volume/Cap: | 0.05 | 0.14 | 0.14 | 0.28 | 0.18 | 0.54 | 0.54 | 0.22 | 0.22 | 0.12 | 0.54 | 0.54 |
| Delay/Veh: | 45.5 | 35.0 | 35.0 | 31.5 | 21.8 | 26.2 | 40.5 | 32.7 | 32.7 | 31.9 | 32.4 | 32.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 45.5 | 35.0 | 35.0 | 31.5 | 21.8 | 26.2 | 40.5 | 32.7 | 32.7 | 31.9 | 32.4 | 32.4 |
| LOS by Move: | D | C | C | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 0 | 1 | 1 | 3 | 3 | 8 | 4 | 2 | 2 | 1 | 7 | 7 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Sampson Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.265 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 20.8 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 135 | 31 | 87 | 477 | 6 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 135 | 31 | 87 | 477 | 6 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 135 | 31 | 109 | 477 | 6 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 142 | 33 | 115 | 502 | 6 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 142 | 33 | 115 | 502 | 6 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 142 | 33 | 115 | 502 | 6 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 0.92 | 0.92 | 0.92 | 0.93 | 0.90 | 0.90 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.18 | 0.30 | 0.52 | 0.09 | 0.63 | 0.28 | 1.00 | 1.63 | 0.37 | 1.00 | 1.98 | 0.02 |
| Final Sat.: | 288 | 501 | 850 | 155 | 1110 | 488 | 1769 | 2797 | 642 | 1769 | 3487 | 44 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.07 | 0.07 | 0.05 | 0.05 | 0.05 | 0.01 | 0.05 | 0.05 | 0.06 | 0.14 | 0.14 |
| Crit Moves: | **** | | | | | | **** | | | | **** | |
| Green/Cycle: | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.05 | 0.26 | 0.26 | 0.33 | 0.53 | 0.53 |
| Volume/Cap: | 0.27 | 0.27 | 0.27 | 0.18 | 0.18 | 0.18 | 0.18 | 0.20 | 0.20 | 0.20 | 0.27 | 0.27 |
| Delay/Veh: | 30.0 | 30.0 | 30.0 | 29.2 | 29.2 | 29.2 | 46.5 | 29.3 | 29.3 | 24.4 | 12.8 | 12.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 30.0 | 30.0 | 30.0 | 29.2 | 29.2 | 29.2 | 46.5 | 29.3 | 29.3 | 24.4 | 12.8 | 12.8 |
| LOS by Move: | C | C | C | C | C | C | D | C | C | C | B | B |
| HCM2kAvgQ: | 3 | 3 | 3 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 4 | 4 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 28th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.433 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 28.6 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 | 0 | 1! 0 | 0 | 1 | 0 1 | 1 0 | 1 | 0 1 | 1 | 0 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 4 | 7 | 5 | 315 | 9 | 28 | 36 | 186 | 7 | 12 | 448 | 142 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 4 | 7 | 5 | 315 | 9 | 28 | 36 | 186 | 7 | 12 | 448 | 142 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 27 | 15 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 4 | 7 | 5 | 315 | 9 | 55 | 51 | 186 | 7 | 12 | 448 | 142 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 4 | 7 | 5 | 335 | 10 | 58 | 54 | 198 | 7 | 13 | 476 | 151 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 7 | 5 | 335 | 10 | 58 | 54 | 198 | 7 | 13 | 476 | 151 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 7 | 5 | 335 | 10 | 58 | 54 | 198 | 7 | 13 | 476 | 151 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.93 | 0.81 | 0.81 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.83 |
| Lanes: | 0.25 | 0.44 | 0.31 | 1.00 | 1.00 | 1.00 | 1.00 | 1.93 | 0.07 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 441 | 771 | 551 | 1769 | 1541 | 1541 | 1769 | 3392 | 128 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.01 | 0.01 | 0.19 | 0.01 | 0.04 | 0.03 | 0.06 | 0.06 | 0.01 | 0.13 | 0.10 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.24 | 0.05 | 0.05 | 0.42 | 0.24 | 0.24 | 0.07 | 0.20 | 0.20 | 0.17 | 0.30 | 0.30 |
| Volume/Cap: | 0.04 | 0.19 | 0.19 | 0.45 | 0.03 | 0.16 | 0.45 | 0.29 | 0.29 | 0.04 | 0.45 | 0.32 |
| Delay/Veh: | 29.5 | 46.6 | 46.6 | 21.1 | 29.4 | 30.5 | 47.4 | 34.4 | 34.4 | 34.7 | 28.6 | 27.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 29.5 | 46.6 | 46.6 | 21.1 | 29.4 | 30.5 | 47.4 | 34.4 | 34.4 | 34.7 | 28.6 | 27.5 |
| LOS by Move: | C | D | D | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 0 | 1 | 1 | 7 | 0 | 2 | 2 | 3 | 3 | 0 | 6 | 4 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 28th Street/Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.403 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 29.8 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 35 | 191 | 58 | 163 | 413 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 35 | 191 | 58 | 163 | 413 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| Added Vol: | 0 | 15 | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 35 | 206 | 58 | 163 | 457 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 37 | 218 | 61 | 172 | 483 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 37 | 218 | 61 | 172 | 483 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 37 | 218 | 61 | 172 | 483 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.93 | 0.92 | 0.92 | 0.93 | 0.89 | 0.89 | 0.93 | 0.87 | 0.87 |
| Lanes: | 1.00 | 1.56 | 0.44 | 1.00 | 1.84 | 0.16 | 1.00 | 1.34 | 0.66 | 1.00 | 1.06 | 0.94 |
| Final Sat.: | 1769 | 2669 | 752 | 1769 | 3208 | 288 | 1769 | 2260 | 1104 | 1769 | 1744 | 1546 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.08 | 0.08 | 0.10 | 0.15 | 0.15 | 0.04 | 0.04 | 0.04 | 0.03 | 0.13 | 0.13 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.19 | 0.19 | 0.23 | 0.37 | 0.37 | 0.10 | 0.21 | 0.21 | 0.21 | 0.32 | 0.32 |
| Volume/Cap: | 0.40 | 0.42 | 0.42 | 0.42 | 0.40 | 0.40 | 0.40 | 0.20 | 0.20 | 0.15 | 0.40 | 0.40 |
| Delay/Veh: | 48.8 | 35.8 | 35.8 | 33.4 | 23.3 | 23.3 | 43.9 | 32.9 | 32.9 | 32.6 | 27.0 | 27.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 48.8 | 35.8 | 35.8 | 33.4 | 23.3 | 23.3 | 43.9 | 32.9 | 32.9 | 32.6 | 27.0 | 27.0 |
| LOS by Move: | D | D | D | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 2 | 4 | 4 | 4 | 6 | 6 | 2 | 2 | 2 | 1 | 5 | 5 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 28th Street/Boston Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.322 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 18.0 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 351 | 80 | 137 | 650 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 351 | 80 | 137 | 650 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| Added Vol: | 0 | 2 | 13 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 3 | 353 | 93 | 137 | 694 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 3 | 374 | 99 | 145 | 736 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 3 | 374 | 99 | 145 | 736 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 3 | 374 | 99 | 145 | 736 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.93 | 0.93 | 0.96 | 0.96 | 0.93 | 0.87 | 0.87 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.93 | 0.07 | 1.00 | 0.87 | 0.13 | 1.00 | 0.25 | 0.75 |
| Final Sat.: | 1769 | 3538 | 1583 | 1769 | 3393 | 127 | 1769 | 1594 | 232 | 1769 | 420 | 1233 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.11 | 0.06 | 0.08 | 0.22 | 0.22 | 0.01 | 0.03 | 0.03 | 0.01 | 0.04 | 0.04 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.38 | 0.38 | 0.30 | 0.63 | 0.63 | 0.05 | 0.08 | 0.08 | 0.08 | 0.11 | 0.11 |
| Volume/Cap: | 0.04 | 0.28 | 0.16 | 0.28 | 0.34 | 0.34 | 0.28 | 0.40 | 0.40 | 0.08 | 0.34 | 0.34 |
| Delay/Veh: | 45.4 | 21.4 | 20.4 | 27.2 | 8.8 | 8.8 | 47.5 | 45.5 | 45.5 | 42.9 | 42.3 | 42.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 45.4 | 21.4 | 20.4 | 27.2 | 8.8 | 8.8 | 47.5 | 45.5 | 45.5 | 42.9 | 42.3 | 42.3 |
| LOS by Move: | D | C | C | C | A | A | D | D | D | D | D | D |
| HCM2kAvgQ: | 0 | 4 | 2 | 3 | 6 | 6 | 1 | 2 | 2 | 0 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
Unknown Method (Future Volume Alternative)

Intersection #7 28th Street/I-5 southbound ramp

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 2 | 0 | 0 | 0 0 1 | 1 | 0 | 0 0 0 | 0 | 1 | 0 0 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 415 | 0 | 0 | 303 | 0 | 0 | 0 | 508 | 0 | 0 | 0 |
| Growth Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Added Vol: | 0 | 2 | 0 | 0 | 24 | 0 | 0 | 0 | 20 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| PHF Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCE Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| MLF Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical Gap Module: >> Population:0 << >> Run Speed(N/S): 30 MPH << | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Level Of Service Module: | | | | | | | | | | | | |
| LOS by Move: | | | | | | | | | | | | |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 28th Street/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.781 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 33.7 |
| Optimal Cycle: | 82 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 1 | 0 | 0 | 0 1! | 0 0 | 1 | 0 1 | 1 0 | 1 | 0 0 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 146 | 537 | 86 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 146 | 537 | 86 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 170 | 537 | 86 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 176 | 556 | 89 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 176 | 556 | 89 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 176 | 556 | 89 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.68 | 0.68 | 0.68 | 0.85 | 0.85 | 0.85 | 0.93 | 0.91 | 0.91 | 0.93 | 0.96 | 0.96 |
| Lanes: | 0.55 | 0.97 | 0.48 | 0.13 | 0.37 | 0.50 | 1.00 | 1.75 | 0.25 | 1.00 | 0.86 | 0.14 |
| Final Sat.: | 712 | 1251 | 616 | 221 | 596 | 808 | 1769 | 3030 | 440 | 1769 | 1571 | 252 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.05 | 0.05 | 0.23 | 0.23 | 0.23 | 0.07 | 0.06 | 0.06 | 0.10 | 0.35 | 0.35 |
| Crit Moves: | | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.09 | 0.20 | 0.20 | 0.34 | 0.45 | 0.45 |
| Volume/Cap: | 0.18 | 0.18 | 0.18 | 0.78 | 0.78 | 0.78 | 0.78 | 0.29 | 0.29 | 0.29 | 0.78 | 0.78 |
| Delay/Veh: | 26.0 | 26.0 | 26.0 | 39.9 | 39.9 | 39.9 | 67.3 | 34.2 | 34.2 | 24.5 | 27.9 | 27.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.0 | 26.0 | 26.0 | 39.9 | 39.9 | 39.9 | 67.3 | 34.2 | 34.2 | 24.5 | 27.9 | 27.9 |
| LOS by Move: | C | C | C | D | D | D | E | C | C | C | C | C |
| HCM2kAvgQ: | 2 | 2 | 2 | 13 | 13 | 13 | 6 | 3 | 3 | 4 | 18 | 18 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 I-5 northbound ramps/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.509 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 19.1 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 0 1 | 0 0 | 0 | 0 0 | 0 0 | 1 | 0 1 | 0 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 304 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 304 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| Added Vol: | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 328 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.00 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 344 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 344 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 344 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 1769 | 0 | 1583 | 0 | 0 | 0 | 0 | 1862 | 1900 | 0 | 1862 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.19 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.25 | 0.00 |
| Crit Moves: | **** | | | | | | | | | | **** | |
| Green/Cycle: | 0.38 | 0.00 | 0.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.50 | 0.00 | 0.00 | 0.50 | 0.00 |
| Volume/Cap: | 0.51 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.27 | 0.00 | 0.00 | 0.51 | 0.00 |
| Delay/Veh: | 24.3 | 0.0 | 20.3 | 0.0 | 0.0 | 0.0 | 0.0 | 14.7 | 0.0 | 0.0 | 17.3 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 24.3 | 0.0 | 20.3 | 0.0 | 0.0 | 0.0 | 0.0 | 14.7 | 0.0 | 0.0 | 17.3 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | B | A | A | B | A |
| HCM2kAvgQ: | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 10 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

**********

Intersection #10 I-5 southbound ramp/Boston Avenue

**********

Average Delay (sec/veh): 6.3 Worst Case Level Of Service: C[ 15.6]

**********

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 1 0 0 | 1 0 | | 0 0 0 | 0 0 | | 1 0 0 | 1 0 | | 0 1 0 | 0 1 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 9 | 23 | 5 | 0 | 0 | 0 | 255 | 26 | 8 | 2 | 50 | 43 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 9 | 23 | 5 | 0 | 0 | 0 | 255 | 26 | 8 | 2 | 50 | 43 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 9 | 23 | 5 | 0 | 0 | 0 | 268 | 26 | 8 | 2 | 50 | 43 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 9 | 23 | 5 | 0 | 0 | 0 | 268 | 26 | 8 | 2 | 50 | 43 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 9 | 23 | 5 | 0 | 0 | 0 | 268 | 26 | 8 | 2 | 50 | 43 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 642 | 663 | 30 | xxxx | xxxx | xxxxx | 93 | xxxx | xxxxx | 34 | xxxx | xxxxx |
| Potent Cap.: | 439 | 382 | 1044 | xxxx | xxxx | xxxxx | 1501 | xxxx | xxxxx | 1578 | xxxx | xxxxx |
| Move Cap.: | 378 | 313 | 1044 | xxxx | xxxx | xxxxx | 1501 | xxxx | xxxxx | 1578 | xxxx | xxxxx |
| Volume/Cap: | 0.02 | 0.07 | 0.00 | xxxx | xxxx | xxxx | 0.18 | xxxx | xxxx | 0.00 | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | 0.1 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.6 | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Control Del: | 14.8 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.9 | xxxx | xxxxx | 7.3 | xxxx | xxxxx |
| LOS by Move: | B | * | * | * | * | * | A | * | * | A | * | * |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | xxxx | xxxx | 358 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | 0.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | 15.9 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.3 | xxxx | xxxxx |
| Shared LOS: | * | * | C | * | * | * | * | * | * | A | * | * |
| ApproachDel: | 15.6 | | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | C | | | * | | | * | | | * | | |

**********

Note: Queue reported is the number of cars per lane.

**********

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Park Boulevard/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.425 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 13.9 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.90 | 1.00 | 0.90 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.48 | 0.00 | 0.52 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 2529 | 0 | 888 | 0 | 0 | 0 | 1769 | 3538 | 1583 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.06 | 0.03 | 0.11 | 0.00 |
| Crit Moves: | | | **** | | | | | **** | | **** | | |
| Green/Cycle: | 0.10 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.23 | 0.66 | 0.66 | 0.07 | 0.50 | 0.00 |
| Volume/Cap: | 0.41 | 0.00 | 0.42 | 0.00 | 0.00 | 0.00 | 0.02 | 0.42 | 0.09 | 0.42 | 0.22 | 0.00 |
| Delay/Veh: | 43.0 | 0.0 | 39.4 | 0.0 | 0.0 | 0.0 | 29.8 | 8.2 | 6.3 | 46.7 | 14.0 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 43.0 | 0.0 | 39.4 | 0.0 | 0.0 | 0.0 | 29.8 | 8.2 | 6.3 | 46.7 | 14.0 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | C | A | A | D | B | A |
| HCM2kAvgQ: | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 8 | 1 | 2 | 3 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Cesar Chavez Parkway/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.457 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 25.8 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 0 1 | 0 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 23 | 85 | 38 | 51 | 40 | 175 | 383 | 741 | 11 | 12 | 131 | 22 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 23 | 85 | 38 | 51 | 40 | 175 | 383 | 741 | 11 | 12 | 131 | 22 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 23 | 85 | 38 | 51 | 40 | 175 | 383 | 741 | 11 | 12 | 131 | 22 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.95 | 0.95 | 0.83 | 0.93 | 0.93 | 0.93 | 0.93 | 0.91 | 0.91 |
| Lanes: | 1.00 | 0.69 | 0.31 | 0.56 | 0.44 | 1.00 | 1.00 | 1.97 | 0.03 | 1.00 | 1.71 | 0.29 |
| Final Sat.: | 1769 | 1232 | 544 | 1016 | 795 | 1583 | 1769 | 3479 | 52 | 1769 | 2959 | 501 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.07 | 0.07 | 0.05 | 0.05 | 0.11 | 0.22 | 0.21 | 0.21 | 0.01 | 0.04 | 0.04 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.17 | 0.17 | 0.12 | 0.24 | 0.24 | 0.46 | 0.45 | 0.45 | 0.11 | 0.09 | 0.09 |
| Volume/Cap: | 0.26 | 0.42 | 0.42 | 0.42 | 0.21 | 0.47 | 0.47 | 0.47 | 0.47 | 0.07 | 0.47 | 0.47 |
| Delay/Veh: | 47.3 | 38.4 | 38.4 | 42.1 | 31.0 | 33.8 | 19.0 | 19.5 | 19.5 | 40.4 | 44.0 | 44.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 47.3 | 38.4 | 38.4 | 42.1 | 31.0 | 33.8 | 19.0 | 19.5 | 19.5 | 40.4 | 44.0 | 44.0 |
| LOS by Move: | D | D | D | D | C | C | B | B | B | D | D | D |
| HCM2kAvgQ: | 1 | 4 | 4 | 3 | 2 | 5 | 8 | 8 | 8 | 0 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Sampson Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.350 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 19.5 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 1 0 | 1 | 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 622 | 5 | 20 | 145 | 5 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 622 | 5 | 20 | 145 | 5 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 622 | 5 | 57 | 145 | 5 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 689 | 6 | 63 | 161 | 6 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 689 | 6 | 63 | 161 | 6 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 689 | 6 | 63 | 161 | 6 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 0.87 | 0.87 | 0.87 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.18 | 0.33 | 0.49 | 0.24 | 0.43 | 0.33 | 1.00 | 1.98 | 0.02 | 1.00 | 1.93 | 0.07 |
| Final Sat.: | 303 | 535 | 802 | 404 | 706 | 538 | 1769 | 3506 | 28 | 1769 | 3403 | 117 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.06 | 0.06 | 0.03 | 0.03 | 0.03 | 0.05 | 0.20 | 0.20 | 0.04 | 0.05 | 0.05 |
| Crit Moves: | | **** | | | | | | **** | | **** | | |
| Green/Cycle: | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.33 | 0.56 | 0.56 | 0.10 | 0.33 | 0.33 |
| Volume/Cap: | 0.35 | 0.35 | 0.35 | 0.19 | 0.19 | 0.19 | 0.14 | 0.35 | 0.35 | 0.35 | 0.14 | 0.14 |
| Delay/Veh: | 36.8 | 36.8 | 36.8 | 35.3 | 35.3 | 35.3 | 23.6 | 12.1 | 12.1 | 43.0 | 23.5 | 23.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 36.8 | 36.8 | 36.8 | 35.3 | 35.3 | 35.3 | 23.6 | 12.1 | 12.1 | 43.0 | 23.5 | 23.5 |
| LOS by Move: | D | D | D | D | D | D | C | B | B | D | C | C |
| HCM2kAvgQ: | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 6 | 6 | 2 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 28th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.384 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 23.2 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 12 | 3 | 158 | 2 | 19 | 94 | 648 | 0 | 11 | 121 | 174 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 12 | 3 | 158 | 2 | 19 | 94 | 648 | 0 | 11 | 121 | 174 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 9 | 44 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 3 | 12 | 3 | 158 | 2 | 28 | 138 | 648 | 0 | 11 | 121 | 174 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| PHF Volume: | 3 | 13 | 3 | 177 | 2 | 31 | 154 | 725 | 0 | 12 | 135 | 195 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 3 | 13 | 3 | 177 | 2 | 31 | 154 | 725 | 0 | 12 | 135 | 195 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 3 | 13 | 3 | 177 | 2 | 31 | 154 | 725 | 0 | 12 | 135 | 195 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.95 | 0.93 | 0.80 | 0.80 | 0.93 | 0.93 | 0.95 | 0.93 | 0.93 | 0.83 |
| Lanes: | 0.16 | 0.67 | 0.17 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 0.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 301 | 1203 | 301 | 1769 | 1521 | 1521 | 1769 | 3538 | 0 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.01 | 0.01 | 0.10 | 0.00 | 0.02 | 0.09 | 0.20 | 0.00 | 0.01 | 0.04 | 0.12 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.15 | 0.05 | 0.05 | 0.24 | 0.15 | 0.15 | 0.23 | 0.50 | 0.00 | 0.05 | 0.32 | 0.32 |
| Volume/Cap: | 0.08 | 0.22 | 0.22 | 0.41 | 0.01 | 0.14 | 0.38 | 0.41 | 0.00 | 0.14 | 0.12 | 0.38 |
| Delay/Veh: | 37.0 | 46.9 | 46.9 | 32.5 | 36.5 | 37.5 | 33.3 | 16.0 | 0.0 | 46.2 | 24.1 | 26.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 37.0 | 46.9 | 46.9 | 32.5 | 36.5 | 37.5 | 33.3 | 16.0 | 0.0 | 46.2 | 24.1 | 26.8 |
| LOS by Move: | D | D | D | C | D | D | C | B | A | D | C | C |
| HCM2kAvgQ: | 1 | 1 | 1 | 5 | 0 | 1 | 4 | 7 | 0 | 0 | 2 | 5 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 28th Street/Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.638 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 33.3 |
| Optimal Cycle: | 61 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 20 | 438 | 112 | 295 | 312 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 20 | 438 | 112 | 295 | 312 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| Added Vol: | 0 | 44 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 20 | 482 | 112 | 295 | 327 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 21 | 516 | 120 | 316 | 350 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 21 | 516 | 120 | 316 | 350 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 21 | 516 | 120 | 316 | 350 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.93 | 0.92 | 0.92 | 0.93 | 0.91 | 0.91 | 0.93 | 0.84 | 0.84 |
| Lanes: | 1.00 | 1.62 | 0.38 | 1.00 | 1.77 | 0.23 | 1.00 | 1.69 | 0.31 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1769 | 2790 | 648 | 1769 | 3073 | 404 | 1769 | 2927 | 529 | 1769 | 1596 | 1596 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.18 | 0.18 | 0.18 | 0.11 | 0.11 | 0.06 | 0.06 | 0.06 | 0.03 | 0.06 | 0.11 |
| Crit Moves: | | **** | | **** | | | **** | | | | | **** |
| Green/Cycle: | 0.17 | 0.29 | 0.29 | 0.28 | 0.40 | 0.40 | 0.09 | 0.15 | 0.15 | 0.12 | 0.18 | 0.18 |
| Volume/Cap: | 0.07 | 0.64 | 0.64 | 0.64 | 0.29 | 0.29 | 0.64 | 0.42 | 0.42 | 0.22 | 0.33 | 0.64 |
| Delay/Veh: | 34.6 | 32.3 | 32.3 | 34.3 | 20.7 | 20.7 | 52.1 | 39.0 | 39.0 | 40.5 | 36.1 | 41.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 34.6 | 32.3 | 32.3 | 34.3 | 20.7 | 20.7 | 52.1 | 39.0 | 39.0 | 40.5 | 36.1 | 41.2 |
| LOS by Move: | C | C | C | C | C | C | D | D | D | D | D | D |
| HCM2kAvgQ: | 1 | 10 | 10 | 8 | 4 | 4 | 4 | 4 | 4 | 1 | 3 | 7 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 28th Street/Boston Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.485 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 25.9 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 6 | 528 | 207 | 213 | 657 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 6 | 528 | 207 | 213 | 657 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| Added Vol: | 0 | 20 | 24 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 6 | 548 | 231 | 213 | 672 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 6 | 592 | 250 | 230 | 726 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 6 | 592 | 250 | 230 | 726 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 6 | 592 | 250 | 230 | 726 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.83 | 0.93 | 0.92 | 0.92 | 0.93 | 0.97 | 0.97 | 0.93 | 0.86 | 0.86 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.91 | 0.09 | 1.00 | 0.95 | 0.05 | 1.00 | 0.18 | 0.82 |
| Final Sat.: | 1769 | 3538 | 1583 | 1769 | 3349 | 164 | 1769 | 1757 | 92 | 1769 | 297 | 1336 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.17 | 0.16 | 0.13 | 0.22 | 0.22 | 0.02 | 0.11 | 0.11 | 0.00 | 0.02 | 0.02 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.11 | 0.33 | 0.33 | 0.26 | 0.47 | 0.47 | 0.13 | 0.21 | 0.21 | 0.05 | 0.13 | 0.13 |
| Volume/Cap: | 0.03 | 0.51 | 0.48 | 0.51 | 0.46 | 0.46 | 0.17 | 0.51 | 0.51 | 0.09 | 0.17 | 0.17 |
| Delay/Veh: | 39.9 | 27.5 | 27.5 | 32.9 | 17.8 | 17.8 | 39.2 | 36.3 | 36.3 | 45.7 | 39.2 | 39.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 39.9 | 27.5 | 27.5 | 32.9 | 17.8 | 17.8 | 39.2 | 36.3 | 36.3 | 45.7 | 39.2 | 39.2 |
| LOS by Move: | D | C | C | C | B | B | D | D | D | D | D | D |
| HCM2kAvgQ: | 0 | 7 | 6 | 6 | 8 | 8 | 1 | 6 | 6 | 0 | 1 | 1 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
Unknown Method (Future Volume Alternative)

Intersection #7 28th Street/I-5 southbound ramp

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 2 | 0 | 0 | 0 0 1 | 1 | 0 | 0 0 0 | 0 | 1 | 0 0 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 587 | 0 | 0 | 381 | 0 | 0 | 0 | 526 | 0 | 0 | 0 |
| Growth Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Added Vol: | 0 | 20 | 0 | 0 | 13 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| PHF Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCE Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| MLF Adj: | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | | 0.00 0.00 | 0.00 | |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical Gap Module: >> Population:0 << >> Run Speed(N/S): 30 MPH << | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Level Of Service Module: | | | | | | | | | | | | |
| LOS by Move: | | | | | | | | | | | | |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 28th Street/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.731 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 31.6 |
| Optimal Cycle: | 74 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 1 | 0 | 0 | 0 1! | 0 0 | 1 | 0 1 | 1 0 | 1 | 0 0 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 127 | 347 | 179 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 127 | 347 | 179 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 140 | 347 | 179 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 145 | 359 | 185 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 145 | 359 | 185 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 145 | 359 | 185 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.73 | 0.73 | 0.73 | 0.84 | 0.84 | 0.84 | 0.93 | 0.91 | 0.91 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.45 | 1.03 | 0.52 | 0.21 | 0.49 | 0.30 | 1.00 | 1.67 | 0.33 | 1.00 | 0.66 | 0.34 |
| Final Sat.: | 619 | 1426 | 713 | 338 | 781 | 479 | 1769 | 2877 | 573 | 1769 | 1166 | 601 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.06 | 0.06 | 0.23 | 0.23 | 0.23 | 0.08 | 0.15 | 0.15 | 0.08 | 0.31 | 0.31 |
| Crit Moves: | | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.11 | 0.34 | 0.34 | 0.19 | 0.42 | 0.42 |
| Volume/Cap: | 0.18 | 0.18 | 0.18 | 0.73 | 0.73 | 0.73 | 0.73 | 0.43 | 0.43 | 0.43 | 0.73 | 0.73 |
| Delay/Veh: | 25.3 | 25.3 | 25.3 | 36.3 | 36.3 | 36.3 | 56.5 | 25.7 | 25.7 | 36.8 | 27.9 | 27.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.3 | 25.3 | 25.3 | 36.3 | 36.3 | 36.3 | 56.5 | 25.7 | 25.7 | 36.8 | 27.9 | 27.9 |
| LOS by Move: | C | C | C | D | D | D | E | C | C | D | C | C |
| HCM2kAvgQ: | 2 | 2 | 2 | 11 | 11 | 11 | 6 | 7 | 7 | 4 | 15 | 15 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 I-5 northbound ramps/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.535 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 19.1 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 0 1 | 0 0 | 0 | 0 0 | 0 0 | 0 | 1 0 1 | 0 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 313 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 313 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| Added Vol: | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 326 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.00 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 345 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 345 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 345 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 1769 | 0 | 1583 | 0 | 0 | 0 | 0 | 1862 | 1900 | 0 | 1862 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.19 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.00 | 0.00 | 0.18 | 0.00 |
| Crit Moves: | **** | | | | | | | **** | | | | |
| Green/Cycle: | 0.36 | 0.00 | 0.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.52 | 0.00 | 0.00 | 0.52 | 0.00 |
| Volume/Cap: | 0.53 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.53 | 0.00 | 0.00 | 0.35 | 0.00 |
| Delay/Veh: | 26.0 | 0.0 | 22.2 | 0.0 | 0.0 | 0.0 | 0.0 | 16.8 | 0.0 | 0.0 | 14.6 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.0 | 0.0 | 22.2 | 0.0 | 0.0 | 0.0 | 0.0 | 16.8 | 0.0 | 0.0 | 14.6 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | B | A | A | B | A |
| HCM2kAvgQ: | 9 | 0 | 3 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 6 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 I-5 southbound ramp/Boston Avenue

Average Delay (sec/veh): 11.3 Worst Case Level Of Service: F[ 56.3]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 1 0 0 | 1 0 | | 0 0 0 | 0 0 | | 1 0 0 | 1 0 | | 0 1 0 | 0 1 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 8 | 51 | 11 | 0 | 0 | 0 | 559 | 53 | 16 | 3 | 38 | 50 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 8 | 51 | 11 | 0 | 0 | 0 | 559 | 53 | 16 | 3 | 38 | 50 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 8 | 51 | 11 | 0 | 0 | 0 | 559 | 53 | 16 | 3 | 38 | 50 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 1248 | 1273 | 61 | xxxx | xxxx | xxxxx | 88 | xxxx | xxxxx | 69 | xxxx | xxxxx |
| Potent Cap.: | 191 | 167 | 1004 | xxxx | xxxx | xxxxx | 1508 | xxxx | xxxxx | 1532 | xxxx | xxxxx |
| Move Cap.: | 136 | 105 | 1004 | xxxx | xxxx | xxxxx | 1508 | xxxx | xxxxx | 1532 | xxxx | xxxxx |
| Volume/Cap: | 0.06 | 0.49 | 0.01 | xxxx | xxxx | xxxx | 0.37 | xxxx | xxxx | 0.00 | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | 0.2 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1.7 | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Control Del: | 33.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 8.8 | xxxx | xxxxx | 7.4 | xxxx | xxxxx |
| LOS by Move: | D | * | * | * | * | * | A | * | * | A | * | * |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | xxxx | xxxx | 125 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | 2.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | 59.3 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.4 | xxxx | xxxxx |
| Shared LOS: | * | * | F | * | * | * | * | * | * | A | * | * |
| ApproachDel: | 56.3 | | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | F | | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

# ATTACHMENT G

# EXISTING WITH PROJECT TRAFFIC LOS WORKSHEETS (STAGING AREA 5)

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 I-5 northbound ramps/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.733 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 25.5 |
| Optimal Cycle: | 64 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 1 | 0 0 | 0 0 | 0 | 1 0 | 2 0 | 0 | 0 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 236 | 145 | 400 | 0 | 0 | 0 | 53 | 350 | 0 | 0 | 280 | 371 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 236 | 145 | 400 | 0 | 0 | 0 | 53 | 350 | 0 | 0 | 280 | 371 |
| Added Vol: | 32 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 268 | 145 | 400 | 0 | 0 | 0 | 55 | 350 | 0 | 0 | 280 | 371 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| PHF Volume: | 313 | 169 | 467 | 0 | 0 | 0 | 64 | 408 | 0 | 0 | 327 | 433 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 313 | 169 | 467 | 0 | 0 | 0 | 64 | 408 | 0 | 0 | 327 | 433 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 313 | 169 | 467 | 0 | 0 | 0 | 64 | 408 | 0 | 0 | 327 | 433 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 1.00 | 1.00 | 0.85 | 0.85 |
| Lanes: | 1.28 | 0.30 | 1.42 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 0.00 | 0.00 | 1.00 | 1.00 |
| Final Sat.: | 2098 | 496 | 2324 | 0 | 0 | 0 | 1769 | 3538 | 0 | 0 | 1619 | 1619 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.15 | 0.34 | 0.20 | 0.00 | 0.00 | 0.00 | 0.04 | 0.12 | 0.00 | 0.00 | 0.20 | 0.27 |
| Crit Moves: | | **** | | | | | **** | | | | | **** |
| Green/Cycle: | 0.47 | 0.47 | 0.47 | 0.00 | 0.00 | 0.00 | 0.05 | 0.29 | 0.00 | 0.00 | 0.36 | 0.36 |
| Volume/Cap: | 0.32 | 0.73 | 0.43 | 0.00 | 0.00 | 0.00 | 0.73 | 0.40 | 0.00 | 0.00 | 0.55 | 0.73 |
| Delay/Veh: | 16.9 | 23.9 | 18.0 | 0.0 | 0.0 | 0.0 | 72.5 | 28.8 | 0.0 | 0.0 | 25.8 | 30.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 16.9 | 23.9 | 18.0 | 0.0 | 0.0 | 0.0 | 72.5 | 28.8 | 0.0 | 0.0 | 25.8 | 30.3 |
| LOS by Move: | B | C | B | A | A | A | E | C | A | A | C | C |
| HCM2kAvgQ: | 5 | 15 | 7 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 9 | 13 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 I-5 southbound ramps/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.289 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 23.4 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 0 0 | 0 | 1 1 | 0 0 | 1 | 0 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 362 | 0 | 122 | 0 | 67 | 79 | 181 | 324 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 0 | 362 | 0 | 122 | 0 | 67 | 79 | 181 | 324 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 2 | 13 | 0 | 32 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 362 | 0 | 134 | 0 | 69 | 92 | 181 | 356 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.00 | 0.88 | 0.88 | 0.88 |
| PHF Volume: | 0 | 0 | 0 | 411 | 0 | 152 | 0 | 78 | 0 | 205 | 404 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 411 | 0 | 152 | 0 | 78 | 0 | 205 | 404 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 0 | 411 | 0 | 152 | 0 | 78 | 0 | 205 | 404 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 0.93 | 1.00 | 0.83 | 1.00 | 0.93 | 1.00 | 0.93 | 0.93 | 1.00 |
| Lanes: | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 1.00 | 0.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 0 | 0 | 0 | 3545 | 0 | 1583 | 0 | 3538 | 1900 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.00 | 0.12 | 0.00 | 0.10 | 0.00 | 0.02 | 0.00 | 0.12 | 0.11 | 0.00 |
| Crit Moves: | | | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.00 | 0.00 | 0.00 | 0.40 | 0.00 | 0.40 | 0.00 | 0.08 | 0.00 | 0.40 | 0.33 | 0.00 |
| Volume/Cap: | 0.00 | 0.00 | 0.00 | 0.29 | 0.00 | 0.24 | 0.00 | 0.29 | 0.00 | 0.29 | 0.34 | 0.00 |
| Delay/Veh: | 0.0 | 0.0 | 0.0 | 20.4 | 0.0 | 20.0 | 0.0 | 44.2 | 0.0 | 20.4 | 25.3 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 0.0 | 0.0 | 20.4 | 0.0 | 20.0 | 0.0 | 44.2 | 0.0 | 20.4 | 25.3 | 0.0 |
| LOS by Move: | A | A | A | C | A | C | A | D | A | C | C | A |
| HCM2kAvgQ: | 0 | 0 | 0 | 4 | 0 | 3 | 0 | 1 | 0 | 4 | 5 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #13 Cleveland Street/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.339 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 9.2 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 44 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 105 | 4 | 10 | 301 | 184 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 105 | 4 | 10 | 301 | 184 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 105 | 4 | 10 | 301 | 184 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 105 | 4 | 10 | 301 | 184 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.29 | 0.71 | 1.00 | 1.00 | 1.00 | 0.17 | 1.76 | 0.07 | 0.04 | 1.22 | 0.74 |
| Final Sat.: | 524 | 175 | 438 | 514 | 552 | 619 | 113 | 1198 | 46 | 30 | 911 | 609 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.03 | 0.03 | 0.08 | 0.00 | 0.01 | 0.09 | 0.09 | 0.09 | 0.34 | 0.33 | 0.30 |
| Crit Moves: | | **** | | **** | | | **** | | | **** | | |
| Delay/Veh: | 9.1 | 8.3 | 8.3 | 9.7 | 8.7 | 8.1 | 8.5 | 8.4 | 8.3 | 10.0 | 9.8 | 8.9 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.1 | 8.3 | 8.3 | 9.7 | 8.7 | 8.1 | 8.5 | 8.4 | 8.3 | 10.0 | 9.8 | 8.9 |
| LOS by Move: | A | A | A | A | A | A | A | A | A | B | A | A |
| ApproachDel: | 8.4 | | | 9.4 | | | 8.4 | | | 9.4 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 8.4 | | | 9.4 | | | 8.4 | | | 9.4 | | |
| LOS by Appr: | A | | | A | | | A | | | A | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.5 | 0.4 | 0.4 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #14 W. 32nd Street/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.136 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 11.9 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 0 | 0 1 | | 0 0 0 | 0 0 | | 0 0 | 1 1 | 0 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 79 | 1 | 17 | 250 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 79 | 1 | 17 | 250 | 0 |
| Added Vol: | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 44 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 87 | 1 | 17 | 294 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| PHF Volume: | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 102 | 1 | 20 | 343 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 102 | 1 | 20 | 343 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 102 | 1 | 20 | 343 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 1.00 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.98 | 0.02 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 1900 | 0 | 1583 | 0 | 0 | 0 | 0 | 3491 | 40 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.03 | 0.01 | 0.10 | 0.00 |
| Crit Moves: | | | **** | | | | **** | | | | **** | |
| Green/Cycle: | 0.00 | 0.00 | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.36 | 0.36 | 0.36 | 0.67 | 0.00 |
| Volume/Cap: | 0.00 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 0.08 | 0.03 | 0.14 | 0.00 |
| Delay/Veh: | 0.0 | 0.0 | 36.5 | 0.0 | 0.0 | 0.0 | 0.0 | 21.1 | 21.1 | 20.7 | 6.0 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 0.0 | 36.5 | 0.0 | 0.0 | 0.0 | 0.0 | 21.1 | 21.1 | 20.7 | 6.0 | 0.0 |
| LOS by Move: | A | A | D | A | A | A | A | C | C | C | A | A |
| HCM2kAvgQ: | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #15 Tidelands Avenue/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.103 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 24.5 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 8 | 13 | 18 | 37 | 15 | 13 | 19 | 4 | 31 | 61 | 37 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 8 | 13 | 18 | 37 | 15 | 13 | 19 | 4 | 31 | 61 | 37 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 44 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 8 | 13 | 18 | 37 | 15 | 13 | 27 | 4 | 31 | 105 | 37 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 0 | 9 | 14 | 20 | 41 | 17 | 14 | 30 | 4 | 34 | 117 | 41 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 9 | 14 | 20 | 41 | 17 | 14 | 30 | 4 | 34 | 117 | 41 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 9 | 14 | 20 | 41 | 17 | 14 | 30 | 4 | 34 | 117 | 41 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 1.00 | 0.89 | 0.89 | 0.93 | 0.94 | 0.94 | 0.93 | 0.91 | 0.91 | 0.93 | 0.89 | 0.89 |
| Lanes: | 1.00 | 0.38 | 0.62 | 1.00 | 0.71 | 0.29 | 1.00 | 1.74 | 0.26 | 1.00 | 1.48 | 0.52 |
| Final Sat.: | 1900 | 643 | 1045 | 1769 | 1268 | 514 | 1769 | 3023 | 448 | 1769 | 2514 | 886 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.01 | 0.01 | 0.01 | 0.03 | 0.03 | 0.01 | 0.01 | 0.01 | 0.02 | 0.05 | 0.05 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.00 | 0.17 | 0.17 | 0.17 | 0.29 | 0.29 | 0.07 | 0.25 | 0.25 | 0.25 | 0.42 | 0.42 |
| Volume/Cap: | 0.00 | 0.08 | 0.08 | 0.07 | 0.11 | 0.11 | 0.11 | 0.04 | 0.04 | 0.08 | 0.11 | 0.11 |
| Delay/Veh: | 0.0 | 34.9 | 34.9 | 34.7 | 25.8 | 25.8 | 43.6 | 28.6 | 28.6 | 28.9 | 17.6 | 17.6 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 34.9 | 34.9 | 34.7 | 25.8 | 25.8 | 43.6 | 28.6 | 28.6 | 28.9 | 17.6 | 17.6 |
| LOS by Move: | A | C | C | C | C | C | D | C | C | C | B | B |
| HCM2kAvgQ: | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Tidelands Avenue/W. 32nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.066 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 7.3 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 | 1 | 0 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 1 0 | 1 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 9 | 0 | 0 | 0 | 1 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 9 | 0 | 0 | 0 | 1 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 9 | 0 | 0 | 0 | 1 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 9 | 0 | 0 | 0 | 1 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 1.00 | 0.00 | 1.00 | 0.15 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 0 | 765 | 0 | 700 | 136 | 754 | 682 | 753 | 883 | 672 | 741 | 867 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | xxxx | 0.01 | xxxx | 0.01 | 0.07 | 0.07 | 0.03 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crit Moves: | | **** | | | | **** | **** | | | | | **** |
| Delay/Veh: | 0.0 | 7.7 | 0.0 | 7.9 | 7.0 | 7.0 | 8.1 | 7.5 | 0.0 | 0.0 | 0.0 | 6.8 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 7.7 | 0.0 | 7.9 | 7.0 | 7.0 | 8.1 | 7.5 | 0.0 | 0.0 | 0.0 | 6.8 |
| LOS by Move: | * | A | * | A | A | A | A | A | * | * | * | A |
| ApproachDel: | | 7.7 | | | 7.1 | | | 7.9 | | | 6.8 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 7.7 | | | 7.1 | | | 7.9 | | | 6.8 | |
| LOS by Appr: | | A | | | A | | | A | | | A | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 I-5 northbound ramps/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.602 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 22.9 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 1 | 0 0 | 0 0 | 0 | 1 0 | 2 0 | 0 | 0 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 87 | 4 | 382 | 0 | 0 | 0 | 101 | 511 | 0 | 0 | 528 | 401 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 87 | 4 | 382 | 0 | 0 | 0 | 101 | 511 | 0 | 0 | 528 | 401 |
| Added Vol: | 13 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 100 | 4 | 382 | 0 | 0 | 0 | 113 | 511 | 0 | 0 | 528 | 401 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 106 | 4 | 406 | 0 | 0 | 0 | 120 | 543 | 0 | 0 | 561 | 426 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 106 | 4 | 406 | 0 | 0 | 0 | 120 | 543 | 0 | 0 | 561 | 426 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 106 | 4 | 406 | 0 | 0 | 0 | 120 | 543 | 0 | 0 | 561 | 426 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.84 | 0.84 | 0.84 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 1.00 | 1.00 | 0.87 | 0.87 |
| Lanes: | 1.20 | 0.02 | 1.78 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 0.00 | 0.00 | 1.14 | 0.86 |
| Final Sat.: | 1916 | 26 | 2832 | 0 | 0 | 0 | 1769 | 3538 | 0 | 0 | 1880 | 1428 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.16 | 0.14 | 0.00 | 0.00 | 0.00 | 0.07 | 0.15 | 0.00 | 0.00 | 0.30 | 0.30 |
| Crit Moves: | | **** | | | | | **** | | | | **** | |
| Green/Cycle: | 0.27 | 0.27 | 0.27 | 0.00 | 0.00 | 0.00 | 0.11 | 0.46 | 0.00 | 0.00 | 0.50 | 0.50 |
| Volume/Cap: | 0.20 | 0.60 | 0.53 | 0.00 | 0.00 | 0.00 | 0.60 | 0.33 | 0.00 | 0.00 | 0.60 | 0.60 |
| Delay/Veh: | 28.1 | 32.9 | 31.5 | 0.0 | 0.0 | 0.0 | 47.3 | 17.4 | 0.0 | 0.0 | 18.8 | 18.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 28.1 | 32.9 | 31.5 | 0.0 | 0.0 | 0.0 | 47.3 | 17.4 | 0.0 | 0.0 | 18.8 | 18.8 |
| LOS by Move: | C | C | C | A | A | A | D | B | A | A | B | B |
| HCM2kAvgQ: | 2 | 8 | 6 | 0 | 0 | 0 | 3 | 5 | 0 | 0 | 12 | 12 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 I-5 southbound ramps/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.593 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 28.0 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 0 | 0 0 | 1 1 | 0 | 0 1 | 0 0 | 2 | 0 1 | 1 0 | 2 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 441 | 0 | 43 | 0 | 159 | 367 | 490 | 118 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 0 | 441 | 0 | 43 | 0 | 159 | 367 | 490 | 118 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 12 | 32 | 0 | 13 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 441 | 0 | 45 | 0 | 171 | 399 | 490 | 131 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.00 | 0.86 | 0.86 | 0.86 |
| PHF Volume: | 0 | 0 | 0 | 512 | 0 | 52 | 0 | 198 | 0 | 568 | 152 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 512 | 0 | 52 | 0 | 198 | 0 | 568 | 152 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 0 | 512 | 0 | 52 | 0 | 198 | 0 | 568 | 152 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 1.00 | 1.00 | 1.00 | 0.93 | 1.00 | 0.83 | 1.00 | 0.93 | 1.00 | 0.93 | 0.93 | 1.00 |
| Lanes: | 0.00 | 0.00 | 0.00 | 2.00 | 0.00 | 1.00 | 0.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 0 | 0 | 0 | 3545 | 0 | 1583 | 0 | 3538 | 1900 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.00 | 0.14 | 0.00 | 0.03 | 0.00 | 0.06 | 0.00 | 0.32 | 0.04 | 0.00 |
| Crit Moves: | | | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.00 | 0.00 | 0.00 | 0.24 | 0.00 | 0.24 | 0.00 | 0.09 | 0.00 | 0.54 | 0.32 | 0.00 |
| Volume/Cap: | 0.00 | 0.00 | 0.00 | 0.59 | 0.00 | 0.14 | 0.00 | 0.59 | 0.00 | 0.59 | 0.13 | 0.00 |
| Delay/Veh: | 0.0 | 0.0 | 0.0 | 34.6 | 0.0 | 29.8 | 0.0 | 46.3 | 0.0 | 16.5 | 24.3 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 0.0 | 0.0 | 34.6 | 0.0 | 29.8 | 0.0 | 46.3 | 0.0 | 16.5 | 24.3 | 0.0 |
| LOS by Move: | A | A | A | C | A | C | A | D | A | B | C | A |
| HCM2kAvgQ: | 0 | 0 | 0 | 8 | 0 | 1 | 0 | 4 | 0 | 11 | 2 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #13 Cleveland Street/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.332 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 10.3 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 15 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 355 | 4 | 28 | 110 | 36 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 355 | 4 | 28 | 110 | 36 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 355 | 4 | 28 | 110 | 36 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 355 | 4 | 28 | 110 | 36 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.07 | 0.93 | 1.00 | 1.00 | 1.00 | 0.04 | 1.94 | 0.02 | 0.32 | 1.27 | 0.41 |
| Final Sat.: | 504 | 41 | 560 | 522 | 559 | 626 | 25 | 1254 | 14 | 193 | 785 | 268 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.05 | 0.05 | 0.33 | 0.01 | 0.01 | 0.28 | 0.28 | 0.28 | 0.15 | 0.14 | 0.13 |
| Crit Moves: | | | **** | **** | | | **** | | | **** | | |
| Delay/Veh: | 9.4 | 8.4 | 8.4 | 12.3 | 8.8 | 8.1 | 10.2 | 10.2 | 10.1 | 9.4 | 9.1 | 8.8 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.4 | 8.4 | 8.4 | 12.3 | 8.8 | 8.1 | 10.2 | 10.2 | 10.1 | 9.4 | 9.1 | 8.8 |
| LOS by Move: | A | A | A | B | A | A | B | B | B | A | A | A |
| ApproachDel: | 8.5 | | | 12.0 | | | 10.2 | | | 9.1 | | |
| Delay Adj: | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | | |
| ApprAdjDel: | 8.5 | | | 12.0 | | | 10.2 | | | 9.1 | | |
| LOS by Appr: | A | | | B | | | B | | | A | | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.4 | 0.4 | 0.4 | 0.2 | 0.1 | 0.1 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #14 W. 32nd Street/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.222 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 20.7 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 0 | 1 | 0 0 | 0 0 | 0 | 0 0 | 1 1 | 0 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 57 | 0 | 0 | 0 | 0 | 250 | 2 | 26 | 73 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 57 | 0 | 0 | 0 | 0 | 250 | 2 | 26 | 73 | 0 |
| Added Vol: | 0 | 0 | 22 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 15 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 79 | 0 | 0 | 0 | 0 | 272 | 2 | 26 | 88 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| PHF Volume: | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 373 | 3 | 36 | 121 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 373 | 3 | 36 | 121 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 373 | 3 | 36 | 121 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 1.00 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.99 | 0.01 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 1900 | 0 | 1583 | 0 | 0 | 0 | 0 | 3508 | 26 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.11 | 0.11 | 0.02 | 0.03 | 0.00 |
| Crit Moves: | | | **** | | | | | **** | | **** | | |
| Green/Cycle: | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 | 0.48 | 0.48 | 0.09 | 0.29 | 0.00 |
| Volume/Cap: | 0.00 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 | 0.22 | 0.22 | 0.12 | 0.00 |
| Delay/Veh: | 0.0 | 0.0 | 25.9 | 0.0 | 0.0 | 0.0 | 0.0 | 15.2 | 15.2 | 42.9 | 26.5 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 0.0 | 25.9 | 0.0 | 0.0 | 0.0 | 0.0 | 15.2 | 15.2 | 42.9 | 26.5 | 0.0 |
| LOS by Move: | A | A | C | A | A | A | A | B | B | D | C | A |
| HCM2kAvgQ: | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 3 | 1 | 1 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #15 Tidelands Avenue/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.128 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 28.7 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 5 | 31 | 20 | 3 | 8 | 5 | 86 | 1 | 24 | 18 | 14 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 5 | 31 | 20 | 3 | 8 | 5 | 86 | 1 | 24 | 18 | 14 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 15 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 3 | 5 | 31 | 20 | 3 | 8 | 5 | 108 | 1 | 24 | 33 | 14 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| PHF Volume: | 4 | 7 | 43 | 28 | 4 | 11 | 7 | 149 | 1 | 33 | 45 | 19 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 7 | 43 | 28 | 4 | 11 | 7 | 149 | 1 | 33 | 45 | 19 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 7 | 43 | 28 | 4 | 11 | 7 | 149 | 1 | 33 | 45 | 19 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.85 | 0.85 | 0.93 | 0.87 | 0.87 | 0.93 | 0.93 | 0.93 | 0.93 | 0.89 | 0.89 |
| Lanes: | 1.00 | 0.14 | 0.86 | 1.00 | 0.27 | 0.73 | 1.00 | 1.98 | 0.02 | 1.00 | 1.40 | 0.60 |
| Final Sat.: | 1769 | 225 | 1397 | 1769 | 452 | 1207 | 1769 | 3502 | 32 | 1769 | 2372 | 1006 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.03 | 0.03 | 0.02 | 0.01 | 0.01 | 0.00 | 0.04 | 0.04 | 0.02 | 0.02 | 0.02 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.18 | 0.24 | 0.24 | 0.12 | 0.18 | 0.18 | 0.24 | 0.33 | 0.33 | 0.15 | 0.24 | 0.24 |
| Volume/Cap: | 0.01 | 0.13 | 0.13 | 0.13 | 0.05 | 0.05 | 0.02 | 0.13 | 0.13 | 0.13 | 0.08 | 0.08 |
| Delay/Veh: | 33.7 | 30.0 | 30.0 | 39.4 | 33.9 | 33.9 | 29.1 | 23.3 | 23.3 | 37.4 | 29.5 | 29.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 33.7 | 30.0 | 30.0 | 39.4 | 33.9 | 33.9 | 29.1 | 23.3 | 23.3 | 37.4 | 29.5 | 29.5 |
| LOS by Move: | C | C | C | D | C | C | C | C | C | D | C | C |
| HCM2kAvgQ: | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 1 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC.  IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Tidelands Avenue/W. 32nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.096 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 7.9 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 1 | 0 | 0 | 1 0 | 0 | 1 0 | 1 0 | 1 | 0 1 | 1 0 | 1 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| Growth Adj: | 1.00 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 41 | 0 | 2 | 2 | 2 |
| User Adj: | 1.00 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 41 | 0 | 2 | 2 | 2 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 41 | 0 | 2 | 2 | 2 |
| PCE Adj: | 1.00 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 41 | 0 | 2 | 2 | 2 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 1.00 | 0.00 | 1.00 | 0.59 | 0.41 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 0 728 | 0 | 663 | 456 | 319 | 701 | 777 | 915 | 667 | 735 | 857 | |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | xxxx 0.01 | xxxx | 0.00 | 0.02 | 0.02 | 0.10 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | |
| Crit Moves: | **** | | | | **** | **** | | | **** | | | |
| Delay/Veh: | 0.0 7.9 | 0.0 | 8.0 | 7.3 | 7.3 | 8.3 | 7.6 | 0.0 | 8.0 | 7.5 | 6.8 | |
| Delay Adj: | 1.00 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| AdjDel/Veh: | 0.0 7.9 | 0.0 | 8.0 | 7.3 | 7.3 | 8.3 | 7.6 | 0.0 | 8.0 | 7.5 | 6.8 | |
| LOS by Move: | * A | * | A | A | A | A | A | * | A | A | A | |
| ApproachDel: | 7.9 | | 7.4 | | | 8.0 | | | 7.5 | | | |
| Delay Adj: | 1.00 | | 1.00 | | | 1.00 | | | 1.00 | | | |
| ApprAdjDel: | 7.9 | | 7.4 | | | 8.0 | | | 7.5 | | | |
| LOS by Appr: | A | | A | | | A | | | A | | | |
| AllWayAvgQ: | 0.0 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | |

Note: Queue reported is the number of cars per lane.

# ATTACHMENT H

# MITIGATION APPROACH MEASURES

# TRAFFIC MEMO

## SHIPYARD SEDIMENT REMEDIATION PROJECT – MITIGATION APPROACH ALTERNATIVE

LSA

LSA ASSOCIATES, INC.
703 PALOMAR AIRPORT ROAD, SUITE 260
CARLSBAD, CALIFORNIA 92011

760.931.5471 TEL
760.918.2458 FAX

BERKELEY
FORT COLLINS
FRESNO
IRVINE
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROCKLIN
SAN LUIS OBISPO
SOUTH SAN FRANCISCO

# MEMORANDUM

DATE: May 25, 2011

TO: Mona DeLeon, LSA Associates, Inc.

FROM: Joseph Jimenez, LSA Associates, Inc.

SUBJECT: Shipyard Sediment Remediation Project – Mitigation Approach Alternative

LSA Associates, Inc. (LSA) prepared a draft traffic impact analysis of the proposed Shipyard Sediment Remediation Project in May 2011. The draft traffic impact analysis showed significant impacts at the intersection of Interstate 5 (I-5) southbound ramp/Boston Avenue and at the roadway segment of Boston Avenue between 28th Street and the I-5 southbound ramp with implementation of the project for Staging Areas 1 through 4. Instead of having the project applicant contribute to capital improvements to mitigate the affected locations (such as signalization of the intersection or temporary roadway widening), an alternative option for Staging Areas 1 through 4 would be to reroute project traffic away from Boston Avenue. The project traffic can be rerouted south of Staging Areas 1 through 4 along Harbor Drive to the I-5 northbound and southbound ramps at Civic Center Drive.

LSA has prepared this technical memorandum to evaluate the mitigation approach to reroute project traffic away from Boston Avenue and onto Harbor Drive toward the northbound and southbound ramps at Civic Center Drive. The results are summarized below.

## METHODOLOGY

The following traffic analysis was conducted according to the methodologies and procedures outlined in the City of San Diego *Traffic Impact Study Guidelines*, San Diego Traffic Engineers' Council (SANTEC) *Traffic Impact Study Guidelines*, the Highway Capacity Manual (HCM) 2000 published by the Transportation Research Board, and applicable provisions from the California Environmental Quality Act (CEQA).

### Project Study Area

The study area analyzed in this report includes the following intersections and roadway segments.

**Intersections:**

1. Park Boulevard/Harbor Drive
2. Cesar Chavez Parkway/Harbor Drive
3. Sampson Street/Harbor Drive
4. 28th Street/Harbor Drive
5. 28th Street/Main Street

6. 28th Street/Boston Avenue
7. I-5 Southbound Off-Ramp/28th Street
8. 28th Street/National Avenue
9. I-5 Northbound Ramps/National Avenue
10. I-5 Southbound Ramps/Boston Avenue
17. 32nd Street/Harbor Drive (new location)
18. 8th Street/Harbor Drive (new location)
19. Civic Center Drive/Harbor Drive (new location)

**Roadway Segments:**

1. Harbor Drive between Park Boulevard and Cesar Chavez Parkway
2. Harbor Drive between Cesar Chavez Parkway and Sampson Street
3. Harbor Drive between Sampson Street and 28th Street
4. Harbor Drive between 28th Street and 32nd Street
5. 28th Street between Harbor Drive and Main Street
6. 28th Street between Main Street and Boston Avenue
7. 28th Street between Boston Avenue and National Avenue
8. National Avenue between 28th Street and I-5 Northbound Ramps
9. Boston Avenue between 28th Street and I-5 Southbound Ramp
16. Harbor Drive between 32nd Street and 8th Street (new location)
17. Harbor Drive between 8th Street and Civic Center Drive (new location)

Daily, a.m., and p.m. peak-hour (7:00 a.m.–9:00 a.m. and 4:00 p.m.–6:00 p.m.) turn volumes for the new study area intersections and roadway segments were collected by National Data and Surveying Services (NDS) in May 2011. New traffic count data is provided in Attachment A.

## HAUL TRUCK, DELIVERY TRUCK, AND EMPLOYEE TRAFFIC

### Project Trip Generation

The project trip generation was not changed for the purpose of this analysis.

### Project Trip Distribution

For the purpose of this project, it is assumed that 85 percent of the material will be transported from the staging area to Otay Landfill, which is located approximately 15 miles southeast of the Shipyard Sediment Site. Trucks departing from Staging Areas 1 through 4 would access I-5 south via East Harbor Drive and Civic Center Drive. The most direct freeway route to Otay Landfill is via I-5 south

to Highway 54 east, to I-805 south. Although the sediment is not known to be classified as California hazardous material, it will be tested upon removal and prior to disposal.

It is assumed for the purpose of this study that up to 15 percent of the material will require transport to a Class III facility, which will most likely be the Kettleman Hills Landfill in Kings County, California, near Bakersfield. Trucks departing from Staging Areas 1 through 4 would access I-5 north via East Harbor Drive and 28th Street.

The trip distribution for employees was determined based on existing counts at the northbound and southbound I-5 ramps. For Staging Areas 1 through 4, approximately 60 percent are destined toward the north and 40 percent are destined toward the south along I-5. Table A provides the trip distribution of the project traffic within the circulation system for each staging area.

**Table A: Project Trip Distribution Summary**

| Vehicle Type/Direction | Percentage |
|---|---|
| ***Delivery/Haul Trucks*** | |
| Northbound on the I-5 | 15% |
| Southbound on the I-5 | 85% |
| TOTAL | 100% |
| ***Employee Trips (Staging Areas 1–4)*** | |
| Northbound on the I-5 | 60% |
| Southbound on the I-5 | 40% |
| TOTAL | 100% |

I-5 = Interstate 5

## EXISTING CONDITIONS WITH PROJECT TRAFFIC

Traffic generated during the haul period was added to the existing traffic volumes at the study area intersections and roadway segments for the outlying staging area (i.e., Staging Areas 1 and 2). This would represent a worst-case scenario.

### Staging Areas 1 And 2

It is anticipated that Staging Areas 1 and 2 will utilize the same driveway to access the project site (i.e., Cesar Chavez Parkway/Harbor Boulevard). Therefore, the level of service (LOS) would be identical for both staging areas. Trucks departing from Staging Areas 1 and 2 would access I-5 north via Harbor Drive and 28th Street. Trucks would access I-5 south via Harbor Drive and Civic Center Drive. Table B summarizes the results of the existing plus project a.m. and p.m. peak-hour LOS analysis for all study area intersections. The LOS worksheets are provided as Attachment B. As Table B indicates, all study area intersections will continue to operate at an acceptable LOS (D or better) in the a.m. and p.m. peak hour, with the exception of I-5 southbound ramp/Boston Avenue (LOS E during p.m. peak hour). However, the addition of project traffic will not increase the vehicle delay greater than 1 second at this intersection. As such, the project traffic will not create a significant impact at this intersection in the existing plus project condition, based on the City's significance criteria.

Table C summarizes the daily traffic volumes and volume-to-capacity (v/c) ratios for the study area roadway segments in the existing condition with the addition of project traffic. Based on this analysis, the roadway segments are forecast to operate at an acceptable LOS (LOS D or better) with the exception of National Avenue between 28th Street and the I-5 northbound ramps (LOS F), and Boston Avenue between 28th Street and the I-5 southbound ramp (LOS F). However, the addition of project traffic will not increase the v/c ratio greater than 0.01 along both segments. As such, the project traffic will not create a significant impact at both locations, based on the City's significance criteria.

## CONCLUSION

Based on the results of this alternative traffic analysis, no significant impacts are forecast. The anticipated haul, delivery, and employee traffic to and from the project site can be accommodated without causing a significant impact for the Mitigation Alternative, based on the existing traffic conditions in the study area. Evaluation of the intersection and roadway LOS shows that the addition of the project's traffic to the existing traffic volumes will not cause a significant increase in delay at the study area intersections or an increase in v/c ratio on the roadway segments, according to the City's performance criteria. As a result, no improvements would be warranted during the haul period for this alternative analysis.

Attachments: A: New Traffic Count Data
B: Level of Service Worksheets

## Table B - Staging Areas 1 and 2 Existing Plus Project Peak Hour Intersection Level of Service Summary

| | Intersection | Control Type | Existing Condition | | | | Existing Plus Project Condition | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | AM Peak Hour | | PM Peak Hour | | AM Peak Hour | | △ | PM Peak Hour | | △ |
| | | | Delay (sec) | LOS | Delay (sec) | LOS | Delay (sec) | LOS | | Delay (sec) | LOS | |
| 1 | Park Boulevard/Harbor Drive | Signalized | 15.0 | B | 13.9 | B | 15.0 | B | 0.0 | 13.9 | B | 0.0 |
| 2 | Cesar Chavez Parkway/Harbor Drive | Signalized | 31.4 | C | 25.8 | C | 31.5 | C | 0.1 | 26.4 | C | 0.6 |
| 3 | Sampson Street/Harbor Drive | Signalized | 20.4 | C | 17.3 | B | 19.9 | B | -0.5 | 17.0 | B | -0.3 |
| 4 | 28th Street/Harbor Drive | Signalized | 27.9 | C | 22.2 | C | 27.8 | C | -0.1 | 22.4 | C | 0.2 |
| 5 | 28th Street/Main Street | Signalized | 30.0 | C | 33.3 | C | 29.9 | C | -0.1 | 33.3 | C | 0.0 |
| 6 | 28th Street/Boston Avenue | Signalized | 18.4 | B | 26.0 | C | 18.2 | B | -0.2 | 25.9 | C | -0.1 |
| 7 | 28th Street/I-5 Southbound Off-Ramp | No Control | - | - | - | - | - | - | - | - | - | - |
| 8 | 28th Street/National Avenue | Signalized | 33.7 | C | 31.3 | C | 33.7 | C | 0.0 | 31.3 | C | 0.0 |
| 9 | I-5 Northbound Ramps/National Avenue | Signalized | 18.6 | B | 18.8 | B | 18.6 | B | 0.0 | 18.8 | B | 0.0 |
| 10 | I-5 Southbound On-Ramp/Boston Avenue | Unsignalized | 15.2 | C | 49.2 | E | 15.2 | C | 0.0 | 49.2 | E | 0.0 |
| 17 | 32nd Street/Harbor Drive | Signalized | 28.1 | C | 34.6 | C | 28.3 | C | 0.2 | 34.4 | C | -0.2 |
| 18 | 8th Street/Harbor Drive | Signalized | 24.4 | C | 27.2 | C | 24.3 | C | -0.1 | 27.3 | C | 0.1 |
| 19 | Civic Center Drive/Harbor Drive | Signalized | 33.2 | C | 33.7 | C | 34.5 | C | 1.3 | 37.4 | D | 3.7 |

Source: LSA Associates, March 2011

Notes:

☐ Exceeds level of service criteria

▩ Significant Impact

## Table C - Staging Areas 1 and 2 Existing Plus Project Roadway Segment Level of Service Summary

| Roadway | Segment | Roadway Classification | Capacity at LOS E | Existing | | | Project ADT | Existing + Project | | | △ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Volume | LOS | V/C | | Volume | LOS | V/C | |
| Harbor Boulevard | Park Boulevard and Cesar Chavez Parkway | 4 Lane Major Arterial | 40,000 | 12,903 | A | 0.32 | 0 | 12,903 | A | 0.32 | 0.00 |
| | Cesar Chavez Parkway and Sampson Street | 4 Lane Major Arterial | 40,000 | 9,140 | A | 0.23 | 348 | 9,488 | A | 0.24 | 0.01 |
| | Sampson Street and 28th Street | 4 Lane Major Arterial | 40,000 | 10,085 | A | 0.25 | 348 | 10,433 | A | 0.26 | 0.01 |
| | 28th Street and 32nd Street | 4 Lane Major Arterial | 40,000 | 14,240 | B | 0.36 | 270 | 14,510 | B | 0.36 | 0.01 |
| | 32nd Street and 8th Street | 4 Lane Major Arterial | 40,000 | 16,055 | B | 0.40 | 270 | 16,325 | B | 0.41 | 0.01 |
| | 8th Street and Civic Center Drive | 4 Lane Major Arterial | 40,000 | 12,921 | A | 0.32 | 270 | 13,191 | A | 0.33 | 0.01 |
| 28th Street | Harbor Boulevard and Main Street | 4 Lane Major Arterial | 40,000 | 15,231 | B | 0.38 | 78 | 15,309 | B | 0.38 | 0.00 |
| | Main Street and Boston Avenue | 4 Lane Collector (with TWLT) | 30,000 | 18,454 | C | 0.62 | 78 | 18,532 | C | 0.62 | 0.00 |
| | Boston Avenue and National Avenue | 3 Lane Collector (with TWLT) | 22,500 | 14,616 | C | 0.65 | 78 | 14,694 | C | 0.65 | 0.00 |
| National Avenue | 28th Street and I-5 Northbound Ramps | 3 Lane Collector (no TWLT) | 11,250 | **17,691** | **F** | **1.57** | 0 | **17,691** | **F** | **1.57** | 0.00 |
| Boston Avenue | 28th Street and I-5 Southbound On-Ramp | 2 Lane Collector (no TWLT) | 8,000 | **8,188** | **F** | **1.02** | 0 | **8,188** | **F** | **1.02** | 0.00 |

Source: LSA Associates, March 2011

☐ Exceeds level of service criteria

▩ Significant Impact

# ATTACHMENT A

# NEW TRAFFIC COUNT DATA

Prepared by NDS/ATD

# VOLUME

## Harbor Dr between 32nd St & 8th St

**Day:** Thursday
**Date:** 5/5/2011

**City:** San Diego
**Project #:** CA11_4131_001

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 7,730 | 8,325 | 0 | 0 | 16,055 |

| AM Period | NB | | SB | | EB | WB | TOTAL | | PM Period | NB | | SB | | EB | WB | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | 5 | | 19 | | | | 24 | | 12:00 | 125 | | 111 | | | | 236 | |
| 00:15 | 4 | | 16 | | | | 20 | | 12:15 | 115 | | 90 | | | | 205 | |
| 00:30 | 4 | | 45 | | | | 49 | | 12:30 | 120 | | 131 | | | | 251 | |
| 00:45 | 11 | 24 | 18 | 98 | | | 29 | 122 | 12:45 | 119 | 479 | 115 | 447 | | | 234 | 926 |
| 01:00 | 3 | | 8 | | | | 11 | | 13:00 | 101 | | 118 | | | | 219 | |
| 01:15 | 8 | | 8 | | | | 16 | | 13:15 | 100 | | 105 | | | | 205 | |
| 01:30 | 8 | | 12 | | | | 20 | | 13:30 | 93 | | 122 | | | | 215 | |
| 01:45 | 5 | 24 | 6 | 34 | | | 11 | 58 | 13:45 | 109 | 403 | 128 | 473 | | | 237 | 876 |
| 02:00 | 6 | | 6 | | | | 12 | | 14:00 | 86 | | 161 | | | | 247 | |
| 02:15 | 5 | | 1 | | | | 6 | | 14:15 | 100 | | 193 | | | | 293 | |
| 02:30 | 5 | | 3 | | | | 8 | | 14:30 | 90 | | 235 | | | | 325 | |
| 02:45 | 7 | 23 | 5 | 15 | | | 12 | 38 | 14:45 | 112 | 388 | 309 | 898 | | | 421 | 1286 |
| 03:00 | 17 | | 5 | | | | 22 | | 15:00 | 106 | | 379 | | | | 485 | |
| 03:15 | 6 | | 1 | | | | 7 | | 15:15 | 108 | | 413 | | | | 521 | |
| 03:30 | 18 | | 3 | | | | 21 | | 15:30 | 85 | | 312 | | | | 397 | |
| 03:45 | 29 | 70 | 4 | 13 | | | 33 | 83 | 15:45 | 84 | 383 | 235 | 1339 | | | 319 | 1722 |
| 04:00 | 29 | | 7 | | | | 36 | | 16:00 | 73 | | 287 | | | | 360 | |
| 04:15 | 46 | | 11 | | | | 57 | | 16:15 | 69 | | 269 | | | | 338 | |
| 04:30 | 84 | | 9 | | | | 93 | | 16:30 | 62 | | 251 | | | | 313 | |
| 04:45 | 98 | 257 | 18 | 45 | | | 116 | 302 | 16:45 | 62 | 266 | 268 | 1075 | | | 330 | 1341 |
| 05:00 | 128 | | 14 | | | | 142 | | 17:00 | 52 | | 227 | | | | 279 | |
| 05:15 | 169 | | 35 | | | | 204 | | 17:15 | 50 | | 264 | | | | 314 | |
| 05:30 | 220 | | 41 | | | | 261 | | 17:30 | 42 | | 213 | | | | 255 | |
| 05:45 | 250 | 767 | 66 | 156 | | | 316 | 923 | 17:45 | 48 | 192 | 171 | 875 | | | 219 | 1067 |
| 06:00 | 286 | | 65 | | | | 351 | | 18:00 | 64 | | 109 | | | | 173 | |
| 06:15 | 249 | | 71 | | | | 320 | | 18:15 | 50 | | 72 | | | | 122 | |
| 06:30 | 252 | | 73 | | | | 325 | | 18:30 | 27 | | 82 | | | | 109 | |
| 06:45 | 263 | 1050 | 40 | 249 | | | 303 | 1299 | 18:45 | 43 | 184 | 61 | 324 | | | 104 | 508 |
| 07:00 | 278 | | 51 | | | | 329 | | 19:00 | 21 | | 52 | | | | 73 | |
| 07:15 | 256 | | 57 | | | | 313 | | 19:15 | 21 | | 55 | | | | 76 | |
| 07:30 | 254 | | 68 | | | | 322 | | 19:30 | 29 | | 41 | | | | 70 | |
| 07:45 | 217 | 1005 | 46 | 222 | | | 263 | 1227 | 19:45 | 48 | 119 | 55 | 203 | | | 103 | 322 |
| 08:00 | 144 | | 55 | | | | 199 | | 20:00 | 29 | | 45 | | | | 74 | |
| 08:15 | 121 | | 66 | | | | 187 | | 20:15 | 24 | | 55 | | | | 79 | |
| 08:30 | 101 | | 55 | | | | 156 | | 20:30 | 18 | | 33 | | | | 51 | |
| 08:45 | 116 | 482 | 65 | 241 | | | 181 | 723 | 20:45 | 16 | 87 | 31 | 164 | | | 47 | 251 |
| 09:00 | 115 | | 73 | | | | 188 | | 21:00 | 10 | | 24 | | | | 34 | |
| 09:15 | 126 | | 75 | | | | 201 | | 21:15 | 16 | | 20 | | | | 36 | |
| 09:30 | 106 | | 69 | | | | 175 | | 21:30 | 10 | | 24 | | | | 34 | |
| 09:45 | 113 | 460 | 69 | 286 | | | 182 | 746 | 21:45 | 12 | 48 | 40 | 108 | | | 52 | 156 |
| 10:00 | 102 | | 76 | | | | 178 | | 22:00 | 17 | | 29 | | | | 46 | |
| 10:15 | 100 | | 79 | | | | 179 | | 22:15 | 10 | | 15 | | | | 25 | |
| 10:30 | 119 | | 93 | | | | 212 | | 22:30 | 15 | | 24 | | | | 39 | |
| 10:45 | 117 | 438 | 111 | 359 | | | 228 | 797 | 22:45 | 14 | 56 | 14 | 82 | | | 28 | 138 |
| 11:00 | 136 | | 137 | | | | 273 | | 23:00 | 8 | | 20 | | | | 28 | |
| 11:15 | 114 | | 142 | | | | 256 | | 23:15 | 6 | | 22 | | | | 28 | |
| 11:30 | 127 | | 132 | | | | 259 | | 23:30 | 11 | | 41 | | | | 52 | |
| 11:45 | 117 | 494 | 113 | 524 | | | 230 | 1018 | 23:45 | 6 | 31 | 12 | 95 | | | 18 | 126 |
| TOTALS | 5094 | | 2242 | | | | | 7336 | TOTALS | 2636 | | 6083 | | | | | 8719 |
| SPLIT % | 69.4% | | 30.6% | | | | | 45.7% | SPLIT % | 30.2% | | 69.8% | | | | | 54.3% |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 7,730 | 8,325 | 0 | 0 | 16,055 |

| | | | | | | |
|---|---|---|---|---|---|---|
| AM Peak Hour | 06:45 | 11:00 | 05:45 | PM Peak Hour | 12:00 | 14:45 | 14:45 |
| AM Pk Volume | 1051 | 524 | 1312 | PM Pk Volume | 479 | 1413 | 1824 |
| Pk Hr Factor | 0.945 | 0.923 | 0.934 | Pk Hr Factor | 0.958 | 0.855 | 0.875 |
| 7 - 9 Volume | 1487 | 463 | 1950 | 4 - 6 Volume | 458 | 1950 | 2408 |
| 7 - 9 Peak Hour | 07:00 | 08:00 | 07:00 | 4 - 6 Peak Hour | 16:00 | 16:00 | 16:00 |
| 7 - 9 Pk Volume | 1005 | 241 | 1227 | 4 - 6 Pk Volume | 266 | 1075 | 1341 |
| Pk Hr Factor | 0.904 | 0.913 | 0.932 | Pk Hr Factor | 0.911 | 0.936 | 0.931 |

Prepared by NDS/ATD

# VOLUME

## Harbor Dr between 8th St & Civic Center Dr

**Day:** Thursday
**Date:** 5/5/2011

**City:** San Diego
**Project #:** CA11_4131_002

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 6,093 | 6,828 | 0 | 0 | 12,921 |

| AM Period | NB | | SB | | EB | WB | TOTAL | | PM Period | NB | | SB | | EB | WB | TOTAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00:00 | 5 | | 15 | | | | 20 | | 12:00 | 93 | | 86 | | | | 179 | |
| 00:15 | 1 | | 8 | | | | 9 | | 12:15 | 99 | | 83 | | | | 182 | |
| 00:30 | 4 | | 34 | | | | 38 | | 12:30 | 98 | | 107 | | | | 205 | |
| 00:45 | 5 | 15 | 15 | 72 | | | 20 | 87 | 12:45 | 80 | 370 | 86 | 362 | | | 166 | 732 |
| 01:00 | 3 | | 6 | | | | 9 | | 13:00 | 65 | | 91 | | | | 156 | |
| 01:15 | 5 | | 6 | | | | 11 | | 13:15 | 64 | | 78 | | | | 142 | |
| 01:30 | 2 | | 8 | | | | 10 | | 13:30 | 76 | | 128 | | | | 204 | |
| 01:45 | 2 | 12 | 2 | 22 | | | 4 | 34 | 13:45 | 73 | 278 | 94 | 391 | | | 167 | 669 |
| 02:00 | 3 | | 6 | | | | 9 | | 14:00 | 60 | | 151 | | | | 211 | |
| 02:15 | 3 | | 2 | | | | 5 | | 14:15 | 64 | | 174 | | | | 238 | |
| 02:30 | 4 | | 2 | | | | 6 | | 14:30 | 63 | | 229 | | | | 292 | |
| 02:45 | 6 | 16 | 5 | 15 | | | 11 | 31 | 14:45 | 82 | 269 | 279 | 833 | | | 361 | 1102 |
| 03:00 | 12 | | 4 | | | | 16 | | 15:00 | 71 | | 329 | | | | 400 | |
| 03:15 | 5 | | 2 | | | | 7 | | 15:15 | 78 | | 369 | | | | 447 | |
| 03:30 | 15 | | 3 | | | | 18 | | 15:30 | 51 | | 273 | | | | 324 | |
| 03:45 | 20 | 52 | 7 | 16 | | | 27 | 68 | 15:45 | 56 | 256 | 250 | 1221 | | | 306 | 1477 |
| 04:00 | 29 | | 5 | | | | 34 | | 16:00 | 48 | | 238 | | | | 286 | |
| 04:15 | 32 | | 12 | | | | 44 | | 16:15 | 41 | | 241 | | | | 282 | |
| 04:30 | 69 | | 10 | | | | 79 | | 16:30 | 42 | | 237 | | | | 279 | |
| 04:45 | 81 | 211 | 18 | 45 | | | 99 | 256 | 16:45 | 39 | 170 | 216 | 932 | | | 255 | 1102 |
| 05:00 | 106 | | 11 | | | | 117 | | 17:00 | 35 | | 199 | | | | 234 | |
| 05:15 | 179 | | 27 | | | | 206 | | 17:15 | 40 | | 244 | | | | 284 | |
| 05:30 | 228 | | 33 | | | | 261 | | 17:30 | 29 | | 171 | | | | 200 | |
| 05:45 | 271 | 784 | 31 | 102 | | | 302 | 886 | 17:45 | 31 | 135 | 154 | 768 | | | 185 | 903 |
| 06:00 | 272 | | 32 | | | | 304 | | 18:00 | 40 | | 95 | | | | 135 | |
| 06:15 | 257 | | 25 | | | | 282 | | 18:15 | 27 | | 66 | | | | 93 | |
| 06:30 | 239 | | 43 | | | | 282 | | 18:30 | 20 | | 79 | | | | 99 | |
| 06:45 | 243 | 1011 | 37 | 137 | | | 280 | 1148 | 18:45 | 28 | 115 | 55 | 295 | | | 83 | 410 |
| 07:00 | 256 | | 28 | | | | 284 | | 19:00 | 11 | | 42 | | | | 53 | |
| 07:15 | 221 | | 31 | | | | 252 | | 19:15 | 19 | | 49 | | | | 68 | |
| 07:30 | 212 | | 44 | | | | 256 | | 19:30 | 25 | | 34 | | | | 59 | |
| 07:45 | 200 | 889 | 27 | 130 | | | 227 | 1019 | 19:45 | 33 | 88 | 39 | 164 | | | 72 | 252 |
| 08:00 | 136 | | 44 | | | | 180 | | 20:00 | 12 | | 36 | | | | 48 | |
| 08:15 | 77 | | 45 | | | | 122 | | 20:15 | 16 | | 47 | | | | 63 | |
| 08:30 | 85 | | 39 | | | | 124 | | 20:30 | 10 | | 24 | | | | 34 | |
| 08:45 | 75 | 373 | 42 | 170 | | | 117 | 543 | 20:45 | 13 | 51 | 29 | 136 | | | 42 | 187 |
| 09:00 | 74 | | 33 | | | | 107 | | 21:00 | 9 | | 14 | | | | 23 | |
| 09:15 | 73 | | 40 | | | | 113 | | 21:15 | 13 | | 15 | | | | 28 | |
| 09:30 | 70 | | 52 | | | | 122 | | 21:30 | 7 | | 18 | | | | 25 | |
| 09:45 | 66 | 283 | 47 | 172 | | | 113 | 455 | 21:45 | 6 | 35 | 33 | 80 | | | 39 | 115 |
| 10:00 | 65 | | 61 | | | | 126 | | 22:00 | 10 | | 23 | | | | 33 | |
| 10:15 | 68 | | 59 | | | | 127 | | 22:15 | 8 | | 14 | | | | 22 | |
| 10:30 | 83 | | 74 | | | | 157 | | 22:30 | 12 | | 9 | | | | 21 | |
| 10:45 | 74 | 290 | 88 | 282 | | | 162 | 572 | 22:45 | 9 | 39 | 11 | 57 | | | 20 | 96 |
| 11:00 | 81 | | 117 | | | | 198 | | 23:00 | 6 | | 10 | | | | 16 | |
| 11:15 | 84 | | 95 | | | | 179 | | 23:15 | 8 | | 14 | | | | 22 | |
| 11:30 | 87 | | 74 | | | | 161 | | 23:30 | 9 | | 28 | | | | 37 | |
| 11:45 | 71 | 323 | 79 | 365 | | | 150 | 688 | 23:45 | 5 | 28 | 9 | 61 | | | 14 | 89 |
| TOTALS | | 4259 | | 1528 | | | | 5787 | TOTALS | | 1834 | | 5300 | | | | 7134 |
| SPLIT % | | 73.6% | | 26.4% | | | | 44.8% | SPLIT % | | 25.7% | | 74.3% | | | | 55.2% |

| DAILY TOTALS | NB | SB | EB | WB | Total |
|---|---|---|---|---|---|
| | 6,093 | 6,828 | 0 | 0 | 12,921 |

| | | | | | | |
|---|---|---|---|---|---|---|
| AM Peak Hour | 05:45 | 10:30 | 05:45 | PM Peak Hour | 12:00 | 14:45 | 14:45 |
| AM Pk Volume | 1039 | 374 | 1170 | PM Pk Volume | 370 | 1250 | 1532 |
| Pk Hr Factor | 0.955 | 0.799 | 0.962 | Pk Hr Factor | 0.934 | 0.847 | 0.857 |
| 7 - 9 Volume | 1262 | 300 | 1562 | 4 - 6 Volume | 305 | 1700 | 2005 |
| 7 - 9 Peak Hour | 07:00 | 08:00 | 07:00 | 4 - 6 Peak Hour | 16:00 | 16:00 | 16:00 |
| 7 - 9 Pk Volume | 889 | 170 | 1019 | 4 - 6 Pk Volume | 170 | 932 | 1102 |
| Pk Hr Factor | 0.868 | 0.944 | 0.897 | Pk Hr Factor | 0.885 | 0.967 | 0.963 |

# ITM Peak Hour Summary

Prepared by:

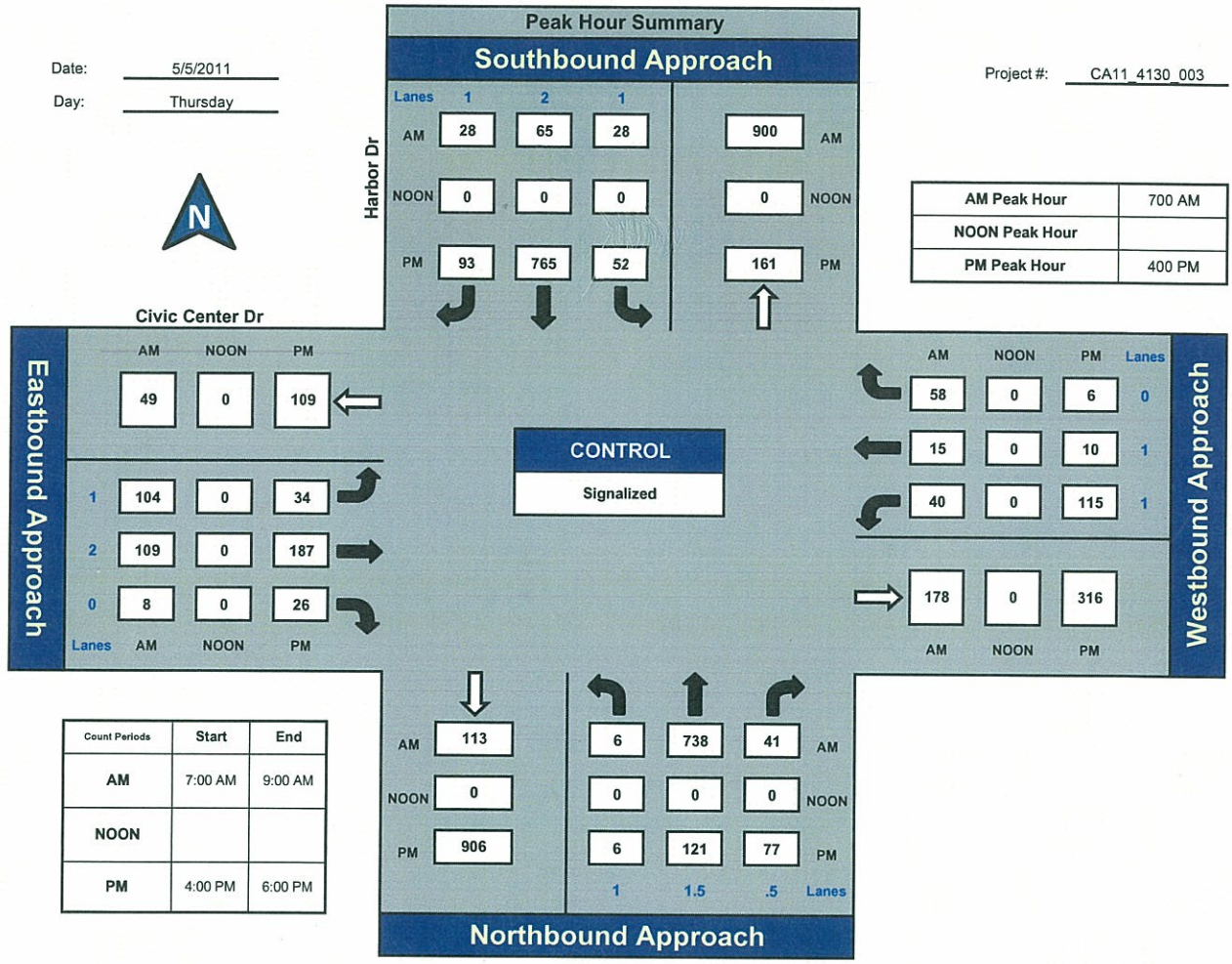
National Data & Surveying Services

## *Harbor Dr and Civic Center Dr , City of San Diego*

Date: 5/5/2011

Day: Thursday

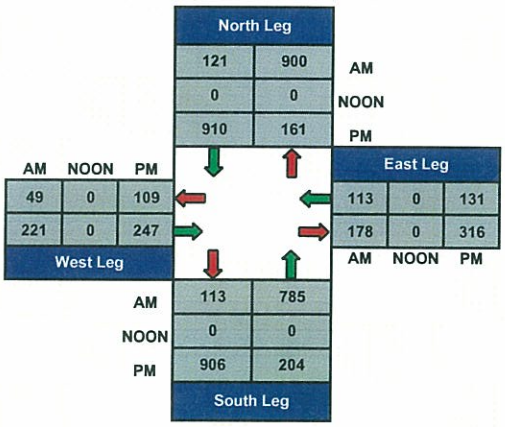
Project #: CA11_4130_003



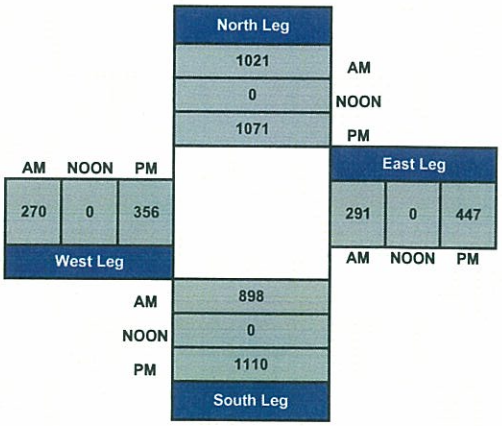

| AM Peak Hour | 700 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Total Ins & Outs




### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

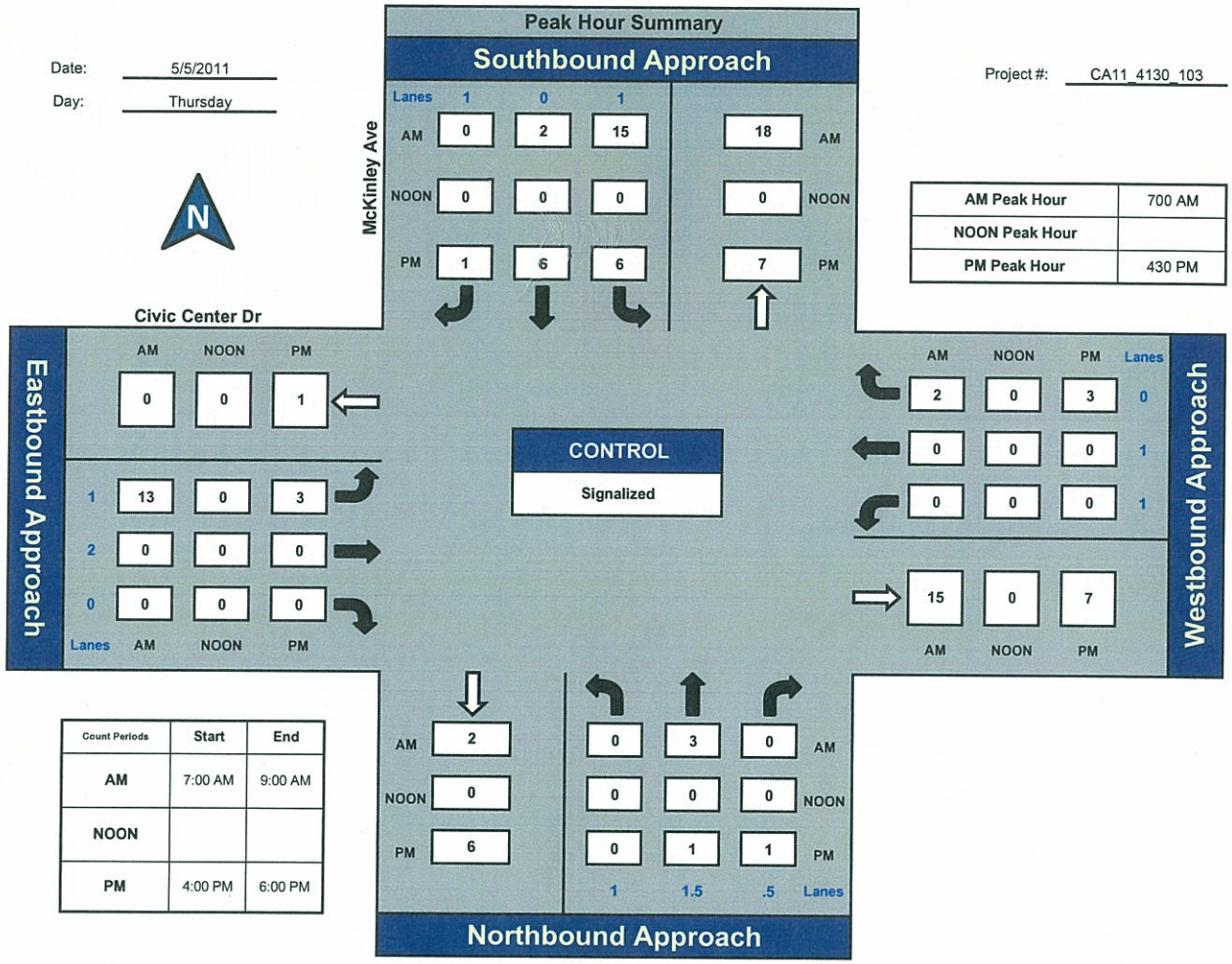
National Data & Surveying Services

## *McKinley Ave and Civic Center Dr , City of San Diego*

Date: 5/5/2011

Day: Thursday

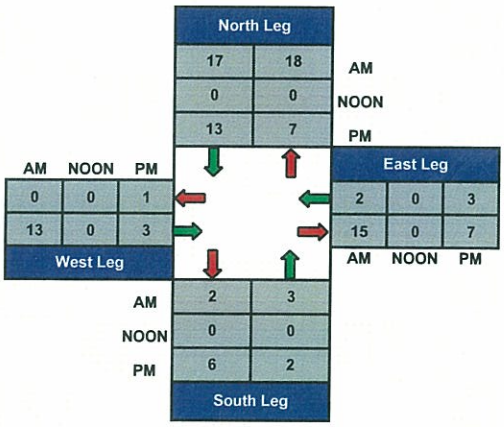
Project #: CA11_4130_103



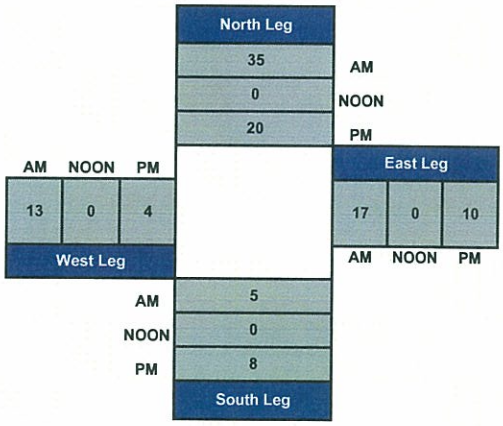

| AM Peak Hour | 700 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 430 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Total Ins & Outs




### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

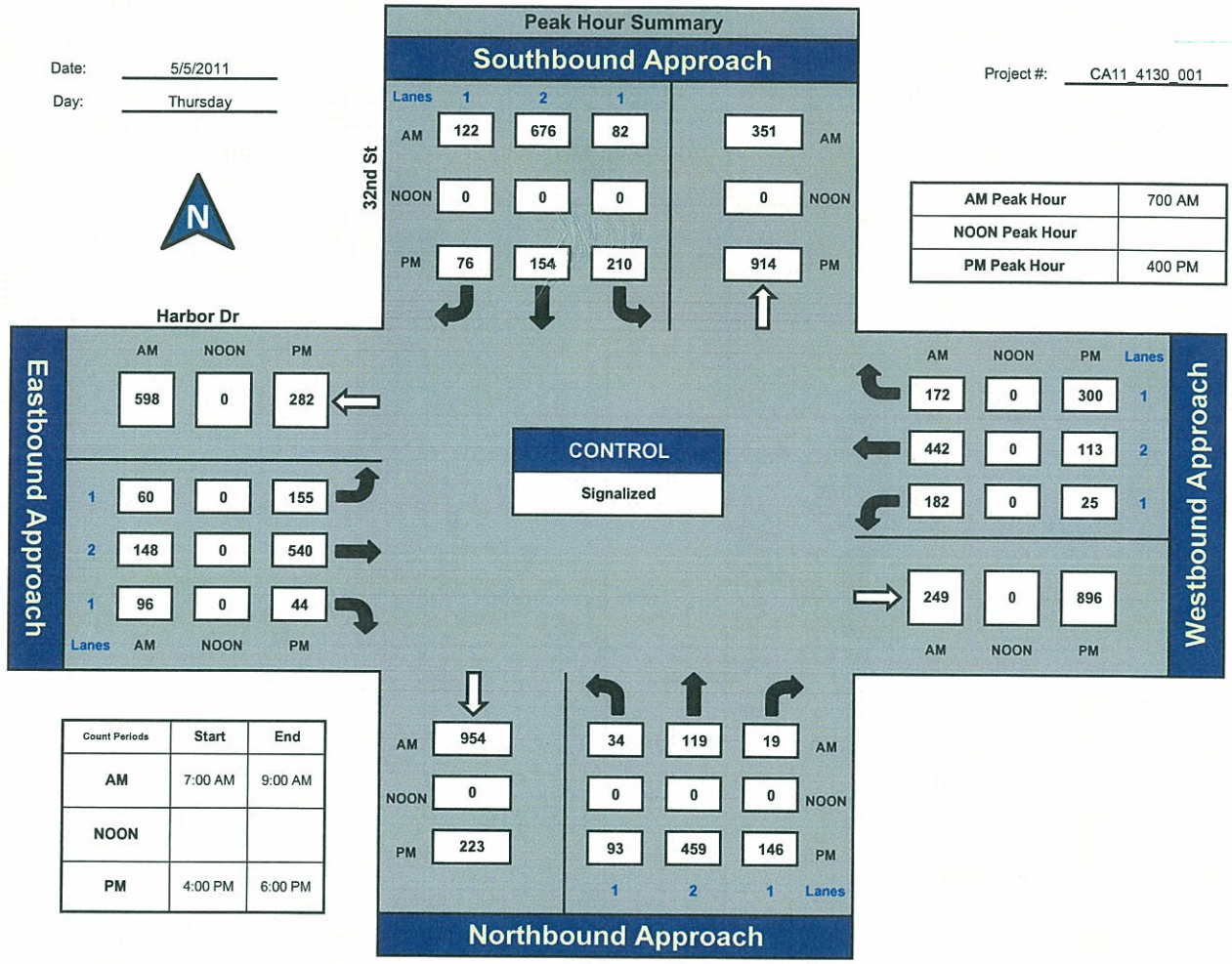
National Data & Surveying Services

## *32nd St and Harbor Dr , City of San Diego*

Date: 5/5/2011

Day: Thursday

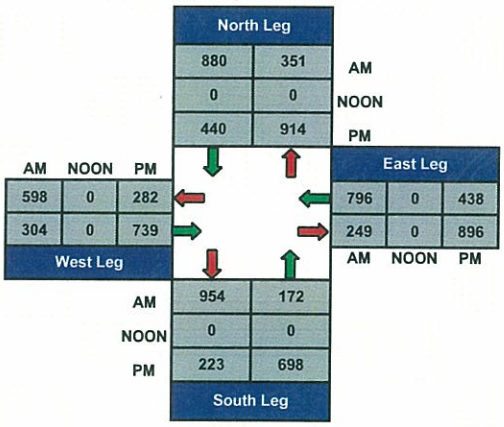
Project #: CA11_4130_001



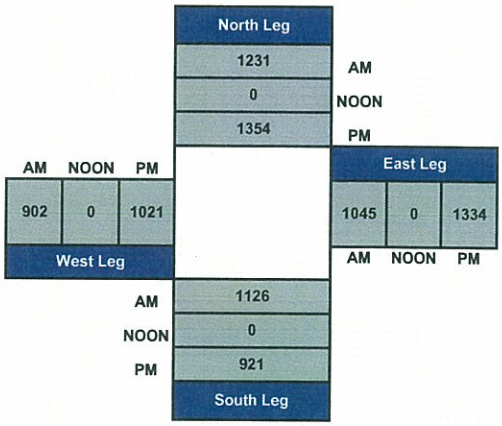

| AM Peak Hour | 700 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Total Ins & Outs




### Total Volume Per Leg



# ITM Peak Hour Summary

Prepared by:

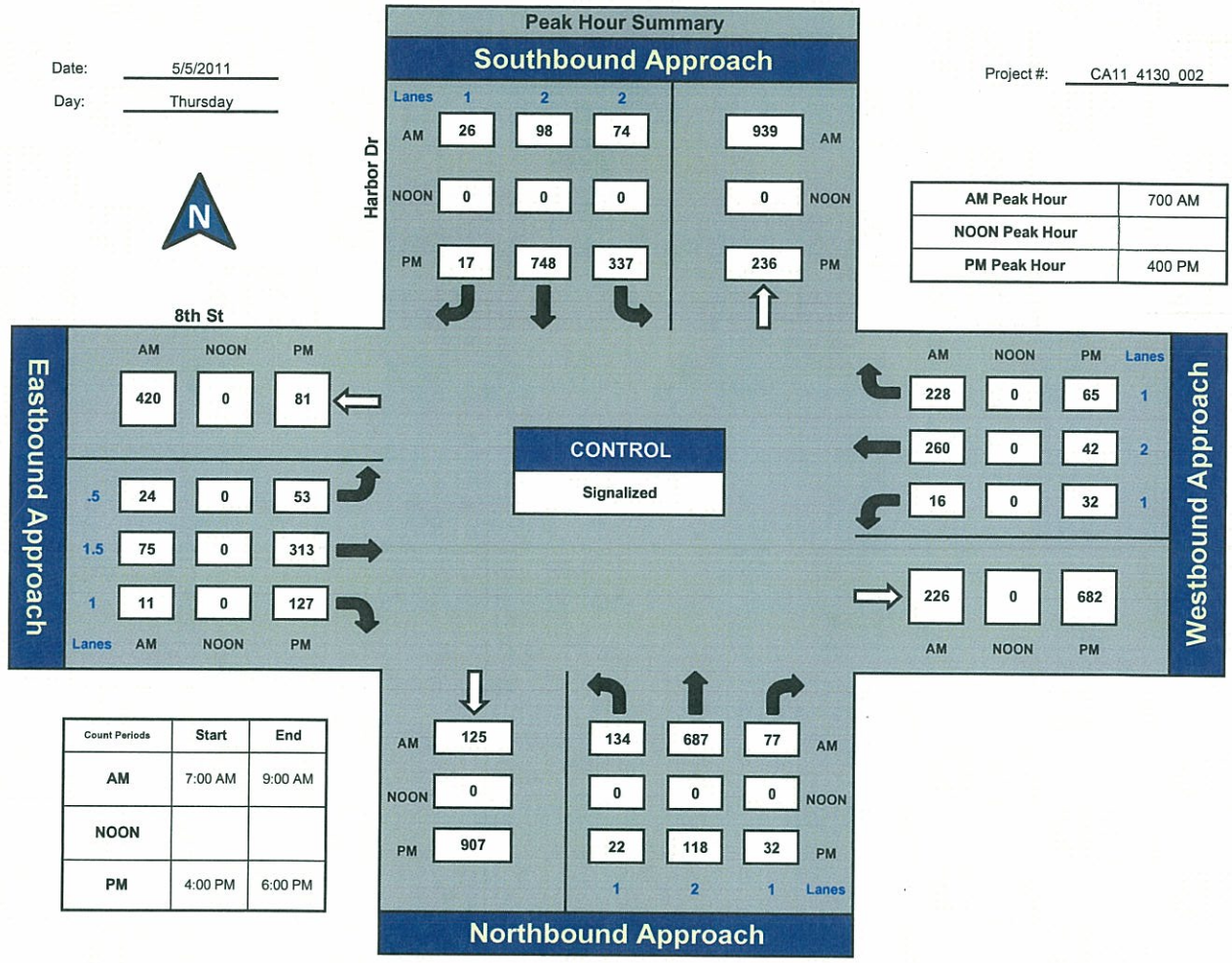
National Data & Surveying Services

## *Harbor Dr and 8th St , City of San Diego*

Date: 5/5/2011

Day: Thursday

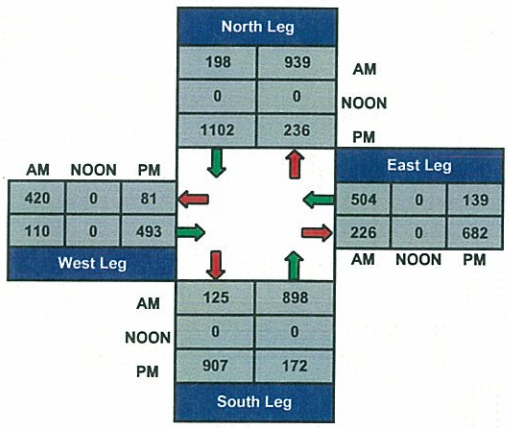
Project #: CA11_4130_002



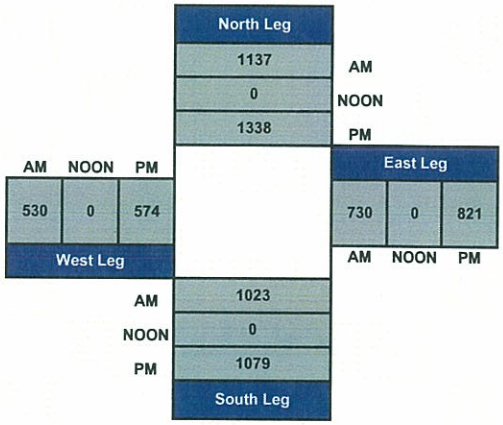

| AM Peak Hour | 700 AM |
|---|---|
| NOON Peak Hour | |
| PM Peak Hour | 400 PM |

| Count Periods | Start | End |
|---|---|---|
| AM | 7:00 AM | 9:00 AM |
| NOON | | |
| PM | 4:00 PM | 6:00 PM |

### Total Ins & Outs




### Total Volume Per Leg



# ATTACHMENT B

# LEVEL OF SERVICE WORKSHEETS

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Park Boulevard/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.509 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 15.0 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 0 | 0 0 | 0 | 0 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| PHF Volume: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.91 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.62 | 0.00 | 0.38 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 2800 | 0 | 660 | 0 | 0 | 0 | 1769 | 3538 | 1583 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.03 | 0.09 | 0.31 | 0.09 | 0.19 | 0.00 |
| Crit Moves: | | | **** | | | | | | **** | **** | | |
| Green/Cycle: | 0.07 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.16 | 0.62 | 0.62 | 0.18 | 0.63 | 0.00 |
| Volume/Cap: | 0.49 | 0.00 | 0.51 | 0.00 | 0.00 | 0.00 | 0.17 | 0.15 | 0.51 | 0.51 | 0.30 | 0.00 |
| Delay/Veh: | 46.5 | 0.0 | 45.6 | 0.0 | 0.0 | 0.0 | 36.2 | 8.1 | 11.1 | 38.5 | 8.5 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 46.5 | 0.0 | 45.6 | 0.0 | 0.0 | 0.0 | 36.2 | 8.1 | 11.1 | 38.5 | 8.5 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | D | A | B | D | A | A |
| HCM2kAvgQ: | 2 | 0 | 3 | 0 | 0 | 0 | 1 | 2 | 9 | 4 | 5 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

**********

Intersection #2 Cesar Chavez Parkway/Harbor Drive

**********

| | | | | |
|---|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.512 | |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 31.4 | |
| Optimal Cycle: | 60 | Level Of Service: | C | |

**********

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 1 | 0 | 0 1 | 0 | 0 1 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 4 | 28 | 16 | 41 | 82 | 312 | 156 | 143 | 21 | 44 | 430 | 63 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 28 | 16 | 41 | 82 | 312 | 156 | 143 | 21 | 44 | 430 | 63 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 28 | 16 | 41 | 82 | 312 | 156 | 143 | 21 | 44 | 430 | 63 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.96 | 0.96 | 0.83 | 0.93 | 0.91 | 0.91 | 0.93 | 0.91 | 0.91 |
| Lanes: | 1.00 | 0.64 | 0.36 | 0.34 | 0.66 | 1.00 | 1.00 | 1.74 | 0.26 | 1.00 | 1.75 | 0.25 |
| Final Sat.: | 1769 | 1129 | 632 | 616 | 1215 | 1583 | 1769 | 3022 | 449 | 1769 | 3030 | 441 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.02 | 0.02 | 0.07 | 0.07 | 0.20 | 0.09 | 0.05 | 0.05 | 0.02 | 0.14 | 0.14 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.18 | 0.18 | 0.24 | 0.36 | 0.36 | 0.16 | 0.21 | 0.21 | 0.21 | 0.26 | 0.26 |
| Volume/Cap: | 0.05 | 0.14 | 0.14 | 0.28 | 0.18 | 0.54 | 0.54 | 0.22 | 0.22 | 0.12 | 0.54 | 0.54 |
| Delay/Veh: | 45.5 | 35.0 | 35.0 | 31.5 | 21.8 | 26.2 | 40.5 | 32.7 | 32.7 | 31.9 | 32.4 | 32.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 45.5 | 35.0 | 35.0 | 31.5 | 21.8 | 26.2 | 40.5 | 32.7 | 32.7 | 31.9 | 32.4 | 32.4 |
| LOS by Move: | D | C | C | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 0 | 1 | 1 | 3 | 3 | 8 | 4 | 2 | 2 | 1 | 7 | 7 |

**********

Note: Queue reported is the number of cars per lane.

**********

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Sampson Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.265 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 20.4 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 | 0 | 1! 0 | 0 | 0 | 1! 0 | 1 | 0 | 1 1 | 0 | 1 | 0 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 135 | 31 | 87 | 477 | 6 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 135 | 31 | 87 | 477 | 6 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 142 | 33 | 92 | 502 | 6 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 142 | 33 | 92 | 502 | 6 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 142 | 33 | 92 | 502 | 6 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 0.92 | 0.92 | 0.92 | 0.93 | 0.90 | 0.90 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.18 | 0.30 | 0.52 | 0.09 | 0.63 | 0.28 | 1.00 | 1.63 | 0.37 | 1.00 | 1.98 | 0.02 |
| Final Sat.: | 288 | 501 | 850 | 155 | 1110 | 488 | 1769 | 2797 | 642 | 1769 | 3487 | 44 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.07 | 0.07 | 0.05 | 0.05 | 0.05 | 0.01 | 0.05 | 0.05 | 0.05 | 0.14 | 0.14 |
| Crit Moves: | | **** | | | | | **** | | | | **** | |
| Green/Cycle: | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.05 | 0.29 | 0.29 | 0.29 | 0.53 | 0.53 |
| Volume/Cap: | 0.27 | 0.27 | 0.27 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.27 | 0.27 |
| Delay/Veh: | 30.0 | 30.0 | 30.0 | 29.2 | 29.2 | 29.2 | 46.5 | 26.7 | 26.7 | 26.4 | 12.8 | 12.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 30.0 | 30.0 | 30.0 | 29.2 | 29.2 | 29.2 | 46.5 | 26.7 | 26.7 | 26.4 | 12.8 | 12.8 |
| LOS by Move: | C | C | C | C | C | C | D | C | C | C | B | B |
| HCM2kAvgQ: | 3 | 3 | 3 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 4 | 4 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 28th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.423 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 27.9 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 4 | 7 | 5 | 315 | 9 | 28 | 36 | 186 | 7 | 12 | 448 | 142 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 4 | 7 | 5 | 315 | 9 | 28 | 36 | 186 | 7 | 12 | 448 | 142 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 4 | 7 | 5 | 335 | 10 | 30 | 38 | 198 | 7 | 13 | 476 | 151 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 7 | 5 | 335 | 10 | 30 | 38 | 198 | 7 | 13 | 476 | 151 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 7 | 5 | 335 | 10 | 30 | 38 | 198 | 7 | 13 | 476 | 151 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.93 | 0.82 | 0.82 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.83 |
| Lanes: | 0.25 | 0.44 | 0.31 | 1.00 | 1.00 | 1.00 | 1.00 | 1.93 | 0.07 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 441 | 771 | 551 | 1769 | 1567 | 1567 | 1769 | 3392 | 128 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.01 | 0.01 | 0.19 | 0.01 | 0.02 | 0.02 | 0.06 | 0.06 | 0.01 | 0.13 | 0.10 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.24 | 0.05 | 0.05 | 0.43 | 0.24 | 0.24 | 0.05 | 0.19 | 0.19 | 0.17 | 0.31 | 0.31 |
| Volume/Cap: | 0.04 | 0.19 | 0.19 | 0.44 | 0.03 | 0.08 | 0.43 | 0.30 | 0.30 | 0.04 | 0.44 | 0.31 |
| Delay/Veh: | 29.1 | 46.6 | 46.6 | 20.3 | 29.0 | 29.4 | 49.5 | 34.9 | 34.9 | 35.2 | 28.0 | 26.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 29.1 | 46.6 | 46.6 | 20.3 | 29.0 | 29.4 | 49.5 | 34.9 | 34.9 | 35.2 | 28.0 | 26.9 |
| LOS by Move: | C | D | D | C | C | C | D | C | C | D | C | C |
| HCM2kAvgQ: | 0 | 1 | 1 | 7 | 0 | 1 | 1 | 3 | 3 | 0 | 6 | 3 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 28th Street/Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.388 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 30.0 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 35 | 191 | 58 | 163 | 413 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 35 | 191 | 58 | 163 | 413 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 37 | 202 | 61 | 172 | 437 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 37 | 202 | 61 | 172 | 437 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 37 | 202 | 61 | 172 | 437 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.93 | 0.92 | 0.92 | 0.93 | 0.89 | 0.89 | 0.93 | 0.87 | 0.87 |
| Lanes: | 1.00 | 1.53 | 0.47 | 1.00 | 1.82 | 0.18 | 1.00 | 1.34 | 0.66 | 1.00 | 1.06 | 0.94 |
| Final Sat.: | 1769 | 2619 | 795 | 1769 | 3176 | 315 | 1769 | 2260 | 1104 | 1769 | 1744 | 1546 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.08 | 0.08 | 0.10 | 0.14 | 0.14 | 0.04 | 0.04 | 0.04 | 0.03 | 0.13 | 0.13 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.18 | 0.18 | 0.23 | 0.35 | 0.35 | 0.10 | 0.22 | 0.22 | 0.22 | 0.33 | 0.33 |
| Volume/Cap: | 0.39 | 0.43 | 0.43 | 0.43 | 0.39 | 0.39 | 0.39 | 0.19 | 0.19 | 0.15 | 0.39 | 0.39 |
| Delay/Veh: | 48.3 | 36.9 | 36.9 | 33.7 | 24.4 | 24.4 | 43.4 | 32.2 | 32.2 | 31.9 | 26.0 | 26.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 48.3 | 36.9 | 36.9 | 33.7 | 24.4 | 24.4 | 43.4 | 32.2 | 32.2 | 31.9 | 26.0 | 26.0 |
| LOS by Move: | D | D | D | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 2 | 4 | 4 | 4 | 6 | 6 | 2 | 2 | 2 | 1 | 5 | 5 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 28th Street/Boston Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.306 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 18.4 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 351 | 80 | 137 | 650 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 351 | 80 | 137 | 650 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 3 | 372 | 85 | 145 | 689 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 3 | 372 | 85 | 145 | 689 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 3 | 372 | 85 | 145 | 689 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.93 | 0.93 | 0.96 | 0.96 | 0.93 | 0.87 | 0.87 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.92 | 0.08 | 1.00 | 0.87 | 0.13 | 1.00 | 0.25 | 0.75 |
| Final Sat.: | 1769 | 3538 | 1583 | 1769 | 3381 | 135 | 1769 | 1594 | 232 | 1769 | 420 | 1233 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.11 | 0.05 | 0.08 | 0.20 | 0.20 | 0.01 | 0.03 | 0.03 | 0.01 | 0.04 | 0.04 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.38 | 0.38 | 0.30 | 0.62 | 0.62 | 0.05 | 0.08 | 0.08 | 0.08 | 0.12 | 0.12 |
| Volume/Cap: | 0.04 | 0.28 | 0.14 | 0.28 | 0.33 | 0.33 | 0.28 | 0.39 | 0.39 | 0.08 | 0.33 | 0.33 |
| Delay/Veh: | 45.4 | 21.7 | 20.5 | 27.3 | 9.0 | 9.0 | 47.5 | 45.1 | 45.1 | 42.6 | 41.6 | 41.6 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 45.4 | 21.7 | 20.5 | 27.3 | 9.0 | 9.0 | 47.5 | 45.1 | 45.1 | 42.6 | 41.6 | 41.6 |
| LOS by Move: | D | C | C | C | A | A | D | D | D | D | D | D |
| HCM2kAvgQ: | 0 | 4 | 2 | 3 | 5 | 5 | 1 | 2 | 2 | 0 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
Unknown Method (Base Volume Alternative)

Intersection #7 28th Street/I-5 southbound ramp

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 2 | 0 | 0 | 0 0 1 | 1 | 0 | 0 0 0 | 0 | 1 | 0 0 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 415 | 0 | 0 | 303 | 0 | 0 | 0 | 508 | 0 | 0 | 0 |
| Growth Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCE Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MLF Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical Gap Module: >> Population:0 << >> Run Speed(N/S): 30 MPH << | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Level Of Service Module:
LOS by Move:

| Movement: | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 28th Street/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.781 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 33.7 |
| Optimal Cycle: | 82 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 | 1 0 | 1 0 | 0 | 0 | 1! 0 0 | 1 | 0 | 1 1 0 | 1 | 0 | 0 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 146 | 537 | 86 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 146 | 537 | 86 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 151 | 556 | 89 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 151 | 556 | 89 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 151 | 556 | 89 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.68 | 0.68 | 0.68 | 0.85 | 0.85 | 0.85 | 0.93 | 0.91 | 0.91 | 0.93 | 0.96 | 0.96 |
| Lanes: | 0.55 | 0.97 | 0.48 | 0.13 | 0.37 | 0.50 | 1.00 | 1.75 | 0.25 | 1.00 | 0.86 | 0.14 |
| Final Sat.: | 712 | 1251 | 616 | 221 | 596 | 808 | 1769 | 3030 | 440 | 1769 | 1571 | 252 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.05 | 0.05 | 0.23 | 0.23 | 0.23 | 0.07 | 0.06 | 0.06 | 0.09 | 0.35 | 0.35 |
| Crit Moves: | | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.09 | 0.22 | 0.22 | 0.32 | 0.45 | 0.45 |
| Volume/Cap: | 0.18 | 0.18 | 0.18 | 0.78 | 0.78 | 0.78 | 0.78 | 0.27 | 0.27 | 0.27 | 0.78 | 0.78 |
| Delay/Veh: | 26.0 | 26.0 | 26.0 | 39.9 | 39.9 | 39.9 | 67.3 | 32.5 | 32.5 | 25.6 | 27.9 | 27.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.0 | 26.0 | 26.0 | 39.9 | 39.9 | 39.9 | 67.3 | 32.5 | 32.5 | 25.6 | 27.9 | 27.9 |
| LOS by Move: | C | C | C | D | D | D | E | C | C | C | C | C |
| HCM2kAvgQ: | 2 | 2 | 2 | 13 | 13 | 13 | 6 | 3 | 3 | 3 | 18 | 18 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #9 I-5 northbound ramps/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.493 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 18.6 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 0 1 | 0 | 0 0 | 0 | 0 | 0 1 | 0 1 | 0 | 0 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 304 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 304 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.00 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 319 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 319 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 319 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 1769 | 0 | 1583 | 0 | 0 | 0 | 0 | 1862 | 1900 | 0 | 1862 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.18 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.25 | 0.00 |
| Crit Moves: | **** | | | | | | | | | | **** | |
| Green/Cycle: | 0.37 | 0.00 | 0.37 | 0.00 | 0.00 | 0.00 | 0.00 | 0.51 | 0.00 | 0.00 | 0.51 | 0.00 |
| Volume/Cap: | 0.49 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.26 | 0.00 | 0.00 | 0.49 | 0.00 |
| Delay/Veh: | 25.1 | 0.0 | 21.3 | 0.0 | 0.0 | 0.0 | 0.0 | 13.7 | 0.0 | 0.0 | 16.2 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.1 | 0.0 | 21.3 | 0.0 | 0.0 | 0.0 | 0.0 | 13.7 | 0.0 | 0.0 | 16.2 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | B | A | A | B | A |
| HCM2kAvgQ: | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 9 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

**********

Intersection #10 I-5 southbound ramp/Boston Avenue

**********

Average Delay (sec/veh): 6.1 Worst Case Level Of Service: C[ 15.2]

**********

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 1 0 0 1 0 | | | 0 0 0 0 0 | | | 1 0 0 1 0 | | | 0 1 0 0 1 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 9 | 23 | 5 | 0 | 0 | 0 | 255 | 26 | 8 | 2 | 50 | 43 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 9 | 23 | 5 | 0 | 0 | 0 | 255 | 26 | 8 | 2 | 50 | 43 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 9 | 23 | 5 | 0 | 0 | 0 | 255 | 26 | 8 | 2 | 50 | 43 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 9 | 23 | 5 | 0 | 0 | 0 | 255 | 26 | 8 | 2 | 50 | 43 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 616 | 637 | 30 | xxxx | xxxx | xxxxx | 93 | xxxx | xxxxx | 34 | xxxx | xxxxx |
| Potent Cap.: | 454 | 395 | 1044 | xxxx | xxxx | xxxxx | 1501 | xxxx | xxxxx | 1578 | xxxx | xxxxx |
| Move Cap.: | 395 | 327 | 1044 | xxxx | xxxx | xxxxx | 1501 | xxxx | xxxxx | 1578 | xxxx | xxxxx |
| Volume/Cap: | 0.02 | 0.07 | 0.00 | xxxx | xxxx | xxxx | 0.17 | xxxx | xxxx | 0.00 | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | 0.1 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.6 | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Control Del: | 14.3 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.9 | xxxx | xxxxx | 7.3 | xxxx | xxxxx |
| LOS by Move: | B | * | * | * | * | * | A | * | * | A | * | * |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | xxxx | xxxx | 373 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | 0.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | 15.4 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.3 | xxxx | xxxxx |
| Shared LOS: | * | * | C | * | * | * | * | * | * | A | * | * |
| ApproachDel: | 15.2 | | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | C | | | * | | | * | | | * | | |

**********

Note: Queue reported is the number of cars per lane.

**********

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #13 Cleveland Street/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.308 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.9 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.29 | 0.71 | 1.00 | 1.00 | 1.00 | 0.19 | 1.73 | 0.08 | 0.04 | 1.14 | 0.82 |
| Final Sat.: | 536 | 180 | 450 | 526 | 567 | 637 | 130 | 1186 | 53 | 32 | 853 | 679 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.03 | 0.03 | 0.08 | 0.00 | 0.01 | 0.08 | 0.08 | 0.07 | 0.31 | 0.30 | 0.27 |
| Crit Moves: | | **** | | **** | | | **** | | | **** | | |
| Delay/Veh: | 9.0 | 8.2 | 8.2 | 9.6 | 8.6 | 8.0 | 8.3 | 8.2 | 8.2 | 9.7 | 9.5 | 8.5 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.0 | 8.2 | 8.2 | 9.6 | 8.6 | 8.0 | 8.3 | 8.2 | 8.2 | 9.7 | 9.5 | 8.5 |
| LOS by Move: | A | A | A | A | A | A | A | A | A | A | A | A |
| ApproachDel: | | 8.2 | | | 9.3 | | | 8.3 | | | 9.1 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 8.2 | | | 9.3 | | | 8.3 | | | 9.1 | |
| LOS by Appr: | | A | | | A | | | A | | | A | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.4 | 0.4 | 0.4 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Tidelands Avenue/W. 32nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.066 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 7.3 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 | 1 0 | 0 0 | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 1.00 | 0.00 | 1.00 | 0.15 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 0 | 770 | 0 | 704 | 137 | 759 | 682 | 753 | 883 | 676 | 745 | 871 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | xxxx | 0.01 | xxxx | 0.01 | 0.07 | 0.07 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crit Moves: | | **** | | | | **** | **** | | | | | **** |
| Delay/Veh: | 0.0 | 7.7 | 0.0 | 7.8 | 7.0 | 7.0 | 8.1 | 7.4 | 0.0 | 0.0 | 0.0 | 6.8 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 7.7 | 0.0 | 7.8 | 7.0 | 7.0 | 8.1 | 7.4 | 0.0 | 0.0 | 0.0 | 6.8 |
| LOS by Move: | * | A | * | A | A | A | A | A | * | * | * | A |
| ApproachDel: | | 7.7 | | | 7.1 | | | 8.0 | | | 6.8 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 7.7 | | | 7.1 | | | 8.0 | | | 6.8 | |
| LOS by Appr: | | A | | | A | | | A | | | A | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #29

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: [ 0.0]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 0 | 0 | 0 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Growth Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FollowUpTim: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Move Cap.: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Volume/Cap: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Del: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| LOS by Move: | | | | | | | | | | | | |
| Movement: | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT |
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SharedQueue: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Shrd ConDel: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Shared LOS: | | | | | | | | | | | | |
| ApproachDel: | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| ApproachLOS: | | | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #30

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: [ 0.0]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 0 | 0 | 0 0 |
| **Volume Module:** | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Growth Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Critical Gap Module:** | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| FollowUpTim: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Capacity Module:** | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Move Cap.: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Volume/Cap: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Level Of Service Module:** | | | | | | | | | | | | |
| 2Way95thQ: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Control Del: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| LOS by Move: | | | | | | | | | | | | |
| Movement: | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT |
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SharedQueue: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Shrd ConDel: | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Shared LOS: | | | | | | | | | | | | |
| ApproachDel: | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| ApproachLOS: | | | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #48 32nd Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.454 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 28.1 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Ignore | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 34 | 459 | 146 | 82 | 676 | 122 | 60 | 148 | 96 | 185 | 442 | 172 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 34 | 459 | 146 | 82 | 676 | 122 | 60 | 148 | 96 | 185 | 442 | 172 |
| User Adj: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.00 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 35 | 474 | 0 | 85 | 698 | 126 | 62 | 153 | 99 | 191 | 457 | 178 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 35 | 474 | 0 | 85 | 698 | 126 | 62 | 153 | 99 | 191 | 457 | 178 |
| PCE Adj: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 35 | 474 | 0 | 85 | 698 | 126 | 62 | 153 | 99 | 191 | 457 | 178 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.83 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1769 | 3538 | 1900 | 1769 | 3538 | 1583 | 1769 | 3538 | 1583 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.13 | 0.00 | 0.05 | 0.20 | 0.08 | 0.04 | 0.04 | 0.06 | 0.11 | 0.13 | 0.11 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.35 | 0.00 | 0.13 | 0.43 | 0.43 | 0.08 | 0.13 | 0.13 | 0.23 | 0.28 | 0.28 |
| Volume/Cap: | 0.40 | 0.38 | 0.00 | 0.37 | 0.46 | 0.18 | 0.46 | 0.33 | 0.48 | 0.48 | 0.46 | 0.40 |
| Delay/Veh: | 49.0 | 24.5 | 0.0 | 40.7 | 20.4 | 17.7 | 46.6 | 39.8 | 41.9 | 34.4 | 29.9 | 29.6 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 49.0 | 24.5 | 0.0 | 40.7 | 20.4 | 17.7 | 46.6 | 39.8 | 41.9 | 34.4 | 29.9 | 29.6 |
| LOS by Move: | D | C | A | D | C | B | D | D | D | C | C | C |
| HCM2kAvgQ: | 2 | 6 | 0 | 3 | 8 | 2 | 2 | 2 | 3 | 5 | 6 | 4 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

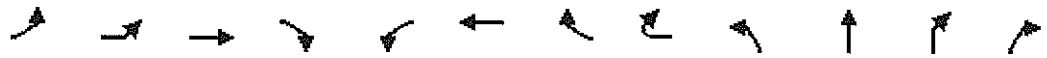
Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #49 8th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.399 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 24.4 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Ignore | | | Ignore | | | Ignore | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 0 | 1 | 1 0 | 2 0 | 1 | 2 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 24 | 75 | 11 | 16 | 260 | 228 | 74 | 98 | 26 | 134 | 687 | 77 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 24 | 75 | 11 | 16 | 260 | 228 | 74 | 98 | 26 | 134 | 687 | 77 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.00 | 0.90 | 0.90 | 0.00 | 0.90 | 0.90 | 0.00 |
| PHF Volume: | 27 | 83 | 12 | 18 | 288 | 0 | 82 | 108 | 0 | 148 | 760 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 27 | 83 | 12 | 18 | 288 | 0 | 82 | 108 | 0 | 148 | 760 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| FinalVolume: | 27 | 83 | 12 | 18 | 288 | 0 | 82 | 108 | 0 | 148 | 760 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.98 | 0.83 | 0.93 | 0.93 | 1.00 | 0.90 | 0.93 | 1.00 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1769 | 1862 | 1583 | 1769 | 3538 | 1900 | 3432 | 3538 | 1900 | 1769 | 3538 | 1900 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.04 | 0.01 | 0.01 | 0.08 | 0.00 | 0.02 | 0.03 | 0.00 | 0.08 | 0.21 | 0.00 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.13 | 0.13 | 0.13 | 0.20 | 0.00 | 0.06 | 0.22 | 0.00 | 0.37 | 0.53 | 0.00 |
| Volume/Cap: | 0.30 | 0.36 | 0.06 | 0.08 | 0.41 | 0.00 | 0.41 | 0.14 | 0.00 | 0.23 | 0.41 | 0.00 |
| Delay/Veh: | 47.7 | 41.0 | 38.7 | 38.8 | 35.1 | 0.0 | 46.7 | 31.4 | 0.0 | 21.9 | 14.2 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 47.7 | 41.0 | 38.7 | 38.8 | 35.1 | 0.0 | 46.7 | 31.4 | 0.0 | 21.9 | 14.2 | 0.0 |
| LOS by Move: | D | D | D | D | D | A | D | C | A | C | B | A |
| HCM2kAvgQ: | 1 | 3 | 0 | 1 | 4 | 0 | 1 | 1 | 0 | 3 | 7 | 0 |

Note: Queue reported is the number of cars per lane.



| Movement | EBL2 | EBL | EBT | EBR | WBL | WBT | WBR | WBR2 | NBL | NBT | NBR | NBR2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 104 | 13 | 109 | 8 | 40 | 15 | 58 | 2 | 6 | 738 | 3 | 41 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 1.00 | | 0.95 | | 1.00 | 1.00 | | | 1.00 | 0.95 | | 0.95 |
| Frt | 1.00 | | 0.99 | | 1.00 | 0.88 | | | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 0.95 | | 1.00 | | 0.95 | 1.00 | | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 1770 | | 3488 | | 1770 | 1639 | | | 1770 | 1767 | | 1504 |
| Flt Permitted | 0.51 | | 0.92 | | 0.66 | 1.00 | | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 957 | | 3240 | | 1235 | 1639 | | | 1770 | 1767 | | 1504 |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 112 | 14 | 117 | 9 | 43 | 16 | 62 | 2 | 6 | 794 | 3 | 44 |
| RTOR Reduction (vph) | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 10 |
| Lane Group Flow (vph) | 112 | 0 | 136 | 0 | 43 | 79 | 0 | 0 | 6 | 801 | 0 | 30 |
| Turn Type | pm+pt | Perm | | | pm+pt | | | | Split | | | Perm |
| Protected Phases | 7 | | 4 | | 3 | 8 | | | 2 | 2 | | |
| Permitted Phases | 4 | 4 | | | 8 | | | | | | | 2 |
| Actuated Green, G (s) | 17.0 | | 12.1 | | 11.6 | 9.4 | | | 60.0 | 60.0 | | 60.0 |
| Effective Green, g (s) | 17.0 | | 12.1 | | 11.6 | 9.4 | | | 60.0 | 60.0 | | 60.0 |
| Actuated g/C Ratio | 0.16 | | 0.11 | | 0.11 | 0.09 | | | 0.56 | 0.56 | | 0.56 |
| Clearance Time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 188 | | 363 | | 144 | 143 | | | 984 | 983 | | 836 |
| v/s Ratio Prot | c0.03 | | | | 0.01 | 0.05 | | | 0.00 | c0.45 | | |
| v/s Ratio Perm | c0.07 | | 0.04 | | 0.03 | | | | | | | 0.02 |
| v/c Ratio | 0.60 | | 0.38 | | 0.30 | 0.55 | | | 0.01 | 0.81 | | 0.04 |
| Uniform Delay, d1 | 41.6 | | 44.4 | | 44.0 | 47.2 | | | 10.7 | 19.4 | | 10.9 |
| Progression Factor | 1.00 | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 5.0 | | 0.7 | | 1.2 | 4.6 | | | 0.0 | 5.3 | | 0.0 |
| Delay (s) | 46.6 | | 45.1 | | 45.2 | 51.8 | | | 10.7 | 24.7 | | 10.9 |
| Level of Service | D | | D | | D | D | | | B | C | | B |
| Approach Delay (s) | | | 45.7 | | | 49.5 | | | | 24.0 | | |
| Approach LOS | | | D | | | D | | | | C | | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 33.2 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.74 | | |
| Actuated Cycle Length (s) | 107.9 | Sum of lost time (s) | 24.0 |
| Intersection Capacity Utilization | 65.6% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | SBL | SBT | SBR | SWL2 | SWR |
|---|---|---|---|---|---|
| Lane Configurations | | | | | |
| Volume (vph) | 28 | 65 | 28 | 15 | 2 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 30 | 70 | 30 | 16 | 2 |
| RTOR Reduction (vph) | 0 | 0 | 28 | 0 | 0 |
| Lane Group Flow (vph) | 30 | 70 | 2 | 16 | 2 |
| Turn Type | Split | | Perm | Prot | custom |
| Protected Phases | 6 | 6 | | 1 | |
| Permitted Phases | | | 6 | | 5 |
| Actuated Green, G (s) | 6.0 | 6.0 | 6.0 | 2.6 | 1.0 |
| Effective Green, g (s) | 6.0 | 6.0 | 6.0 | 2.6 | 1.0 |
| Actuated g/C Ratio | 0.06 | 0.06 | 0.06 | 0.02 | 0.01 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 98 | 197 | 88 | 43 | 15 |
| v/s Ratio Prot | 0.02 | c0.02 | | c0.01 | |
| v/s Ratio Perm | | | 0.00 | | c0.00 |
| v/c Ratio | 0.31 | 0.36 | 0.02 | 0.37 | 0.13 |
| Uniform Delay, d1 | 49.0 | 49.1 | 48.2 | 51.8 | 53.0 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.8 | 1.1 | 0.1 | 5.4 | 4.0 |
| Delay (s) | 50.7 | 50.2 | 48.3 | 57.2 | 57.0 |
| Level of Service | D | D | D | E | E |
| Approach Delay (s) | | 49.9 | | | |
| Approach LOS | | D | | | |

| Intersection Summary |
|---|

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Park Boulevard/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.425 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 13.9 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 | 0 | 1! 0 | 0 | 0 | 0 | 1 | 0 | 2 0 | 1 | 0 | 2 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.90 | 1.00 | 0.90 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.48 | 0.00 | 0.52 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 2529 | 0 | 888 | 0 | 0 | 0 | 1769 | 3538 | 1583 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.06 | 0.03 | 0.11 | 0.00 |
| Crit Moves: | | | **** | | | | | **** | | **** | | |
| Green/Cycle: | 0.10 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.23 | 0.66 | 0.66 | 0.07 | 0.50 | 0.00 |
| Volume/Cap: | 0.41 | 0.00 | 0.42 | 0.00 | 0.00 | 0.00 | 0.02 | 0.42 | 0.09 | 0.42 | 0.22 | 0.00 |
| Delay/Veh: | 43.0 | 0.0 | 39.4 | 0.0 | 0.0 | 0.0 | 29.8 | 8.2 | 6.3 | 46.7 | 14.0 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 43.0 | 0.0 | 39.4 | 0.0 | 0.0 | 0.0 | 29.8 | 8.2 | 6.3 | 46.7 | 14.0 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | C | A | A | D | B | A |
| HCM2kAvgQ: | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 8 | 1 | 2 | 3 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #2 Cesar Chavez Parkway/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.457 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 25.8 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 1 0 | 0 1 | 0 | 0 1 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 23 | 85 | 38 | 51 | 40 | 175 | 383 | 741 | 11 | 12 | 131 | 22 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 23 | 85 | 38 | 51 | 40 | 175 | 383 | 741 | 11 | 12 | 131 | 22 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 23 | 85 | 38 | 51 | 40 | 175 | 383 | 741 | 11 | 12 | 131 | 22 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.95 | 0.95 | 0.83 | 0.93 | 0.93 | 0.93 | 0.93 | 0.91 | 0.91 |
| Lanes: | 1.00 | 0.69 | 0.31 | 0.56 | 0.44 | 1.00 | 1.00 | 1.97 | 0.03 | 1.00 | 1.71 | 0.29 |
| Final Sat.: | 1769 | 1232 | 544 | 1016 | 795 | 1583 | 1769 | 3479 | 52 | 1769 | 2959 | 501 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.07 | 0.07 | 0.05 | 0.05 | 0.11 | 0.22 | 0.21 | 0.21 | 0.01 | 0.04 | 0.04 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.17 | 0.17 | 0.12 | 0.24 | 0.24 | 0.46 | 0.45 | 0.45 | 0.11 | 0.09 | 0.09 |
| Volume/Cap: | 0.26 | 0.42 | 0.42 | 0.42 | 0.21 | 0.47 | 0.47 | 0.47 | 0.47 | 0.07 | 0.47 | 0.47 |
| Delay/Veh: | 47.3 | 38.4 | 38.4 | 42.1 | 31.0 | 33.8 | 19.0 | 19.5 | 19.5 | 40.4 | 44.0 | 44.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 47.3 | 38.4 | 38.4 | 42.1 | 31.0 | 33.8 | 19.0 | 19.5 | 19.5 | 40.4 | 44.0 | 44.0 |
| LOS by Move: | D | D | D | D | C | C | B | B | B | D | D | D |
| HCM2kAvgQ: | 1 | 4 | 4 | 3 | 2 | 5 | 8 | 8 | 8 | 0 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #3 Sampson Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.323 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 17.3 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 622 | 5 | 20 | 145 | 5 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 622 | 5 | 20 | 145 | 5 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 689 | 6 | 22 | 161 | 6 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 689 | 6 | 22 | 161 | 6 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 689 | 6 | 22 | 161 | 6 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 0.87 | 0.87 | 0.87 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.18 | 0.33 | 0.49 | 0.24 | 0.43 | 0.33 | 1.00 | 1.98 | 0.02 | 1.00 | 1.93 | 0.07 |
| Final Sat.: | 304 | 536 | 804 | 405 | 708 | 539 | 1769 | 3506 | 28 | 1769 | 3403 | 117 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.06 | 0.06 | 0.03 | 0.03 | 0.03 | 0.05 | 0.20 | 0.20 | 0.01 | 0.05 | 0.05 |
| Crit Moves: | | **** | | | | | | **** | | **** | | |
| Green/Cycle: | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.33 | 0.60 | 0.60 | 0.05 | 0.33 | 0.33 |
| Volume/Cap: | 0.33 | 0.33 | 0.33 | 0.17 | 0.17 | 0.17 | 0.14 | 0.33 | 0.33 | 0.25 | 0.15 | 0.15 |
| Delay/Veh: | 35.6 | 35.6 | 35.6 | 34.2 | 34.2 | 34.2 | 24.0 | 10.0 | 10.0 | 47.2 | 24.0 | 24.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 35.6 | 35.6 | 35.6 | 34.2 | 34.2 | 34.2 | 24.0 | 10.0 | 10.0 | 47.2 | 24.0 | 24.0 |
| LOS by Move: | D | D | D | C | C | C | C | B | B | D | C | C |
| HCM2kAvgQ: | 3 | 3 | 3 | 1 | 1 | 1 | 2 | 5 | 5 | 1 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #4 28th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.384 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 22.2 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 12 | 3 | 158 | 2 | 19 | 94 | 648 | 0 | 11 | 121 | 174 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 12 | 3 | 158 | 2 | 19 | 94 | 648 | 0 | 11 | 121 | 174 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| PHF Volume: | 3 | 13 | 3 | 177 | 2 | 21 | 105 | 725 | 0 | 12 | 135 | 195 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 3 | 13 | 3 | 177 | 2 | 21 | 105 | 725 | 0 | 12 | 135 | 195 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 3 | 13 | 3 | 177 | 2 | 21 | 105 | 725 | 0 | 12 | 135 | 195 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.95 | 0.93 | 0.80 | 0.80 | 0.93 | 0.93 | 0.95 | 0.93 | 0.93 | 0.83 |
| Lanes: | 0.16 | 0.67 | 0.17 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 0.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 301 | 1203 | 301 | 1769 | 1528 | 1528 | 1769 | 3538 | 0 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.01 | 0.01 | 0.10 | 0.00 | 0.01 | 0.06 | 0.20 | 0.00 | 0.01 | 0.04 | 0.12 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.15 | 0.05 | 0.05 | 0.24 | 0.15 | 0.15 | 0.18 | 0.50 | 0.00 | 0.05 | 0.37 | 0.37 |
| Volume/Cap: | 0.08 | 0.22 | 0.22 | 0.41 | 0.01 | 0.10 | 0.33 | 0.41 | 0.00 | 0.14 | 0.10 | 0.33 |
| Delay/Veh: | 37.0 | 46.9 | 46.9 | 32.5 | 36.5 | 37.1 | 36.5 | 16.0 | 0.0 | 46.2 | 20.7 | 23.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 37.0 | 46.9 | 46.9 | 32.5 | 36.5 | 37.1 | 36.5 | 16.0 | 0.0 | 46.2 | 20.7 | 23.0 |
| LOS by Move: | D | D | D | C | D | D | D | B | A | D | C | C |
| HCM2kAvgQ: | 1 | 1 | 1 | 5 | 0 | 1 | 3 | 7 | 0 | 0 | 1 | 4 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #5 28th Street/Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.622 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 33.3 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 20 | 438 | 112 | 295 | 312 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 20 | 438 | 112 | 295 | 312 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 21 | 469 | 120 | 316 | 334 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 21 | 469 | 120 | 316 | 334 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 21 | 469 | 120 | 316 | 334 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.93 | 0.91 | 0.91 | 0.93 | 0.91 | 0.91 | 0.93 | 0.84 | 0.84 |
| Lanes: | 1.00 | 1.59 | 0.41 | 1.00 | 1.76 | 0.24 | 1.00 | 1.69 | 0.31 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1769 | 2730 | 698 | 1769 | 3053 | 421 | 1769 | 2927 | 529 | 1769 | 1596 | 1596 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.17 | 0.17 | 0.18 | 0.11 | 0.11 | 0.06 | 0.06 | 0.06 | 0.03 | 0.06 | 0.11 |
| Crit Moves: | | **** | | **** | | | **** | | | | | **** |
| Green/Cycle: | 0.18 | 0.28 | 0.28 | 0.29 | 0.39 | 0.39 | 0.09 | 0.16 | 0.16 | 0.12 | 0.18 | 0.18 |
| Volume/Cap: | 0.07 | 0.62 | 0.62 | 0.62 | 0.28 | 0.28 | 0.62 | 0.41 | 0.41 | 0.21 | 0.33 | 0.62 |
| Delay/Veh: | 34.4 | 32.9 | 32.9 | 33.3 | 21.2 | 21.2 | 50.8 | 38.6 | 38.6 | 40.2 | 35.7 | 40.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 34.4 | 32.9 | 32.9 | 33.3 | 21.2 | 21.2 | 50.8 | 38.6 | 38.6 | 40.2 | 35.7 | 40.4 |
| LOS by Move: | C | C | C | C | C | C | D | D | D | D | D | D |
| HCM2kAvgQ: | 1 | 9 | 9 | 8 | 4 | 4 | 4 | 4 | 4 | 1 | 3 | 6 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 28th Street/Boston Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.477 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 26.0 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 6 | 528 | 207 | 213 | 657 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 6 | 528 | 207 | 213 | 657 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 6 | 571 | 224 | 230 | 710 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 6 | 571 | 224 | 230 | 710 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 6 | 571 | 224 | 230 | 710 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.83 | 0.93 | 0.92 | 0.92 | 0.93 | 0.97 | 0.97 | 0.93 | 0.86 | 0.86 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.90 | 0.10 | 1.00 | 0.95 | 0.05 | 1.00 | 0.18 | 0.82 |
| Final Sat.: | 1769 | 3538 | 1583 | 1769 | 3345 | 168 | 1769 | 1757 | 92 | 1769 | 297 | 1336 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.16 | 0.14 | 0.13 | 0.21 | 0.21 | 0.02 | 0.11 | 0.11 | 0.00 | 0.02 | 0.02 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.11 | 0.32 | 0.32 | 0.26 | 0.47 | 0.47 | 0.13 | 0.21 | 0.21 | 0.05 | 0.13 | 0.13 |
| Volume/Cap: | 0.03 | 0.50 | 0.44 | 0.50 | 0.45 | 0.45 | 0.16 | 0.50 | 0.50 | 0.09 | 0.17 | 0.17 |
| Delay/Veh: | 39.8 | 27.8 | 27.4 | 32.4 | 18.0 | 18.0 | 39.0 | 36.0 | 36.0 | 45.7 | 39.1 | 39.1 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 39.8 | 27.8 | 27.4 | 32.4 | 18.0 | 18.0 | 39.0 | 36.0 | 36.0 | 45.7 | 39.1 | 39.1 |
| LOS by Move: | D | C | C | C | B | B | D | D | D | D | D | D |
| HCM2kAvgQ: | 0 | 7 | 5 | 6 | 8 | 8 | 1 | 6 | 6 | 0 | 1 | 1 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
Unknown Method (Base Volume Alternative)

**********

Intersection #7 28th Street/I-5 southbound ramp

**********

**********

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 | 2 0 | 0 | 0 0 | 1 1 | 0 | 0 0 | 0 0 | 1 | 0 0 | 0 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 587 | 0 | 0 | 381 | 0 | 0 | 0 | 526 | 0 | 0 | 0 |
| Growth Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCE Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MLF Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical Gap Module: >> Population:0 << >> Run Speed(N/S): 30 MPH << | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Level Of Service Module: | | | | | | | | | | | | |
| LOS by Move: | | | | | | | | | | | | |
| Movement: | LT - LTR | | RT | LT - LTR | | RT | LT - LTR | | RT | LT - LTR | | RT |
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**********

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 28th Street/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.731 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 31.3 |
| Optimal Cycle: | 74 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 1 | 0 | 0 0 | 1! 0 | 0 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 127 | 347 | 179 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 127 | 347 | 179 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 131 | 359 | 185 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 131 | 359 | 185 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 131 | 359 | 185 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.73 | 0.73 | 0.73 | 0.84 | 0.84 | 0.84 | 0.93 | 0.91 | 0.91 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.45 | 1.03 | 0.52 | 0.21 | 0.49 | 0.30 | 1.00 | 1.67 | 0.33 | 1.00 | 0.66 | 0.34 |
| Final Sat.: | 619 | 1426 | 713 | 338 | 781 | 479 | 1769 | 2877 | 573 | 1769 | 1166 | 601 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.06 | 0.06 | 0.23 | 0.23 | 0.23 | 0.08 | 0.15 | 0.15 | 0.07 | 0.31 | 0.31 |
| Crit Moves: | | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.11 | 0.35 | 0.35 | 0.18 | 0.42 | 0.42 |
| Volume/Cap: | 0.18 | 0.18 | 0.18 | 0.73 | 0.73 | 0.73 | 0.73 | 0.42 | 0.42 | 0.42 | 0.73 | 0.73 |
| Delay/Veh: | 25.3 | 25.3 | 25.3 | 36.3 | 36.3 | 36.3 | 56.5 | 24.8 | 24.8 | 37.5 | 27.9 | 27.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.3 | 25.3 | 25.3 | 36.3 | 36.3 | 36.3 | 56.5 | 24.8 | 24.8 | 37.5 | 27.9 | 27.9 |
| LOS by Move: | C | C | C | D | D | D | E | C | C | D | C | C |
| HCM2kAvgQ: | 2 | 2 | 2 | 11 | 11 | 11 | 6 | 6 | 6 | 4 | 15 | 15 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #9 I-5 northbound ramps/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.526 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 18.8 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 0 1 | 0 0 | 0 | 0 0 | 0 0 | 1 | 0 1 | 0 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 313 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 313 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.00 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 331 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 331 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 331 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 1769 | 0 | 1583 | 0 | 0 | 0 | 0 | 1862 | 1900 | 0 | 1862 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.19 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.00 | 0.00 | 0.18 | 0.00 |
| Crit Moves: | **** | | | | | | | **** | | | | |
| Green/Cycle: | 0.36 | 0.00 | 0.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.52 | 0.00 | 0.00 | 0.52 | 0.00 |
| Volume/Cap: | 0.53 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.53 | 0.00 | 0.00 | 0.35 | 0.00 |
| Delay/Veh: | 26.4 | 0.0 | 22.8 | 0.0 | 0.0 | 0.0 | 0.0 | 16.1 | 0.0 | 0.0 | 14.0 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.4 | 0.0 | 22.8 | 0.0 | 0.0 | 0.0 | 0.0 | 16.1 | 0.0 | 0.0 | 14.0 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | B | A | A | B | A |
| HCM2kAvgQ: | 8 | 0 | 3 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 6 | 0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #10 I-5 southbound ramp/Boston Avenue

Average Delay (sec/veh): 10.6 Worst Case Level Of Service: E[ 49.2]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 1 0 0 | 1 | 0 | 0 0 0 | 0 | 0 | 1 0 0 | 1 | 0 | 0 1 0 | 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 1200 | 1225 | 61 | xxxx | xxxx | xxxxx | 88 | xxxx | xxxxx | 69 | xxxx | xxxxx |
| Potent Cap.: | 204 | 179 | 1004 | xxxx | xxxx | xxxxx | 1508 | xxxx | xxxxx | 1532 | xxxx | xxxxx |
| Move Cap.: | 148 | 115 | 1004 | xxxx | xxxx | xxxxx | 1508 | xxxx | xxxxx | 1532 | xxxx | xxxxx |
| Volume/Cap: | 0.05 | 0.44 | 0.01 | xxxx | xxxx | xxxx | 0.35 | xxxx | xxxx | 0.00 | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | 0.2 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1.6 | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Control Del: | 30.7 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 8.7 | xxxx | xxxxx | 7.4 | xxxx | xxxxx |
| LOS by Move: | D | * | * | * | * | * | A | * | * | A | * | * |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | xxxx | xxxx | 137 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | 2.0 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | 51.6 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.4 | xxxx | xxxxx |
| Shared LOS: | * | * | F | * | * | * | * | * | * | A | * | * |
| ApproachDel: | | 49.2 | | | xxxxxx | | | xxxxxx | | | xxxxxx | |
| ApproachLOS: | | E | | | * | | | * | | | * | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #13 Cleveland Street/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.323 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 10.0 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.07 | 0.93 | 1.00 | 1.00 | 1.00 | 0.04 | 1.94 | 0.02 | 0.35 | 1.20 | 0.45 |
| Final Sat.: | 517 | 43 | 578 | 535 | 574 | 646 | 28 | 1255 | 16 | 213 | 752 | 298 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.05 | 0.05 | 0.32 | 0.01 | 0.01 | 0.25 | 0.25 | 0.25 | 0.13 | 0.13 | 0.12 |
| Crit Moves: | | | **** | **** | | | **** | | | **** | | |
| Delay/Veh: | 9.2 | 8.3 | 8.3 | 12.0 | 8.6 | 8.0 | 9.8 | 9.8 | 9.7 | 9.3 | 9.0 | 8.6 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.2 | 8.3 | 8.3 | 12.0 | 8.6 | 8.0 | 9.8 | 9.8 | 9.7 | 9.3 | 9.0 | 8.6 |
| LOS by Move: | A | A | A | B | A | A | A | A | A | A | A | A |
| ApproachDel: | | 8.3 | | | 11.7 | | | 9.8 | | | 8.9 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 8.3 | | | 11.7 | | | 9.8 | | | 8.9 | |
| LOS by Appr: | | A | | | B | | | A | | | A | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.3 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #16 Tidelands Avenue/W. 32nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.096 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.0 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 | 1 0 | 0 0 | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 1.00 | 0.00 | 1.00 | 0.59 | 0.41 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 0 | 738 | 0 | 671 | 463 | 324 | 701 | 777 | 914 | 674 | 743 | 869 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | xxxx | 0.01 | xxxx | 0.00 | 0.02 | 0.02 | 0.10 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crit Moves: | | **** | | | | **** | **** | | | **** | | |
| Delay/Veh: | 0.0 | 7.8 | 0.0 | 8.0 | 7.3 | 7.3 | 8.3 | 7.4 | 0.0 | 8.0 | 7.5 | 6.8 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 7.8 | 0.0 | 8.0 | 7.3 | 7.3 | 8.3 | 7.4 | 0.0 | 8.0 | 7.5 | 6.8 |
| LOS by Move: | * | A | * | A | A | A | A | A | * | A | A | A |
| ApproachDel: | | 7.8 | | | 7.4 | | | 8.1 | | | 7.4 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 7.8 | | | 7.4 | | | 8.1 | | | 7.4 | |
| LOS by Appr: | | A | | | A | | | A | | | A | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #29

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: [ 0.0]

| Approach: | North Bound | | | | South Bound | | | | East Bound | | | | West Bound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - T | - R | | L | - T | - R | | L | - T | - R | | L | - T | - R | |
| Control: | Stop Sign | | | | Stop Sign | | | | Uncontrolled | | | | Uncontrolled | | | |
| Rights: | Include | | | | Include | | | | Include | | | | Include | | | |
| Lanes: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Growth Adj: | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | |
| Initial Bse: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| User Adj: | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | |
| PHF Adj: | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | |
| PHF Volume: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Reduct Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| FinalVolume: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Critical Gap Module: | | | | | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | |
| FollowUpTim: | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | |
| Capacity Module: | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Potent Cap.: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Move Cap.: | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | |
| Volume/Cap: | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | | 0.00 | 0.00 | 0.00 | |
| Level Of Service Module: | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | |
| Control Del: | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | |
| LOS by Move: | | | | | | | | | | | | | | | | |
| Movement: | LT | - LTR | - RT | | LT | - LTR | - RT | | LT | - LTR | - RT | | LT | - LTR | - RT | |
| Shared Cap.: | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | |
| SharedQueue: | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | |
| Shrd ConDel: | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 | |
| Shared LOS: | | | | | | | | | | | | | | | | |
| ApproachDel: | | 0.0 | | | | 0.0 | | | | 0.0 | | | | 0.0 | | |
| ApproachLOS: | | | | | | | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #30

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: [ 0.0]

| Approach: | North Bound | | | | | South Bound | | | | | East Bound | | | | | West Bound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R | L | - | T | - | R |
| Control: | Stop Sign | | | | | Stop Sign | | | | | Uncontrolled | | | | | Uncontrolled | | | | |
| Rights: | Include | | | | | Include | | | | | Include | | | | | Include | | | | |
| Lanes: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Volume Module: | | | | | | | | | | | | | | | | | | | | |
| Base Vol: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| Growth Adj: | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 |
| Initial Bse: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| User Adj: | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 |
| PHF Adj: | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 |
| PHF Volume: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| Reduct Vol: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| FinalVolume: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| Critical Gap Module: | | | | | | | | | | | | | | | | | | | | |
| Critical Gp: | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 |
| FollowUpTim: | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 |
| Capacity Module: | | | | | | | | | | | | | | | | | | | | |
| Cnflict Vol: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| Potent Cap.: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| Move Cap.: | 1 | | 1 | | 1 | 1 | | 1 | | 1 | 1 | | 1 | | 1 | 1 | | 1 | | 1 |
| Volume/Cap: | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 | 0.00 | | 0.00 | | 0.00 |
| Level Of Service Module: | | | | | | | | | | | | | | | | | | | | |
| 2Way95thQ: | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 |
| Control Del: | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 |
| LOS by Move: | | | | | | | | | | | | | | | | | | | | |
| Movement: | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT | LT | - | LTR | - | RT |
| Shared Cap.: | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 | 0 | | 0 | | 0 |
| SharedQueue: | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | | 0.0 |
| Shrd ConDel: | 1.0 | | 1.0 | | 1.0 | 1.0 | | 1.0 | | 1.0 | 1.0 | | 1.0 | | 1.0 | 1.0 | | 1.0 | | 1.0 |
| Shared LOS: | | | | | | | | | | | | | | | | | | | | |
| ApproachDel: | | | 0.0 | | | | | 0.0 | | | | | 0.0 | | | | | 0.0 | | |
| ApproachLOS: | | | | | | | | | | | | | | | | | | | | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #48 32nd Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.676 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 34.6 |
| Optimal Cycle: | 66 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Ignore | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 | 1 0 | 2 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 93 | 459 | 146 | 210 | 154 | 76 | 155 | 540 | 44 | 25 | 113 | 300 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 93 | 459 | 146 | 210 | 154 | 76 | 155 | 540 | 44 | 25 | 113 | 300 |
| User Adj: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.00 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 100 | 496 | 0 | 227 | 166 | 82 | 167 | 583 | 48 | 27 | 122 | 324 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 100 | 496 | 0 | 227 | 166 | 82 | 167 | 583 | 48 | 27 | 122 | 324 |
| PCE Adj: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 100 | 496 | 0 | 227 | 166 | 82 | 167 | 583 | 48 | 27 | 122 | 324 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.83 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1769 | 3538 | 1900 | 1769 | 3538 | 1583 | 1769 | 3538 | 1583 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.14 | 0.00 | 0.13 | 0.05 | 0.05 | 0.09 | 0.16 | 0.03 | 0.02 | 0.03 | 0.20 |
| Crit Moves: | | **** | | **** | | | **** | | | | | **** |
| Green/Cycle: | 0.21 | 0.21 | 0.00 | 0.19 | 0.19 | 0.19 | 0.14 | 0.34 | 0.34 | 0.10 | 0.30 | 0.30 |
| Volume/Cap: | 0.27 | 0.68 | 0.00 | 0.68 | 0.25 | 0.27 | 0.68 | 0.49 | 0.09 | 0.15 | 0.11 | 0.68 |
| Delay/Veh: | 33.7 | 39.1 | 0.0 | 43.1 | 34.7 | 35.1 | 48.1 | 26.4 | 22.5 | 41.2 | 25.2 | 34.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 33.7 | 39.1 | 0.0 | 43.1 | 34.7 | 35.1 | 48.1 | 26.4 | 22.5 | 41.2 | 25.2 | 34.4 |
| LOS by Move: | C | D | A | D | C | D | D | C | C | D | C | C |
| HCM2kAvgQ: | 3 | 9 | 0 | 8 | 2 | 2 | 5 | 7 | 1 | 1 | 1 | 9 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #49 8th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.542 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 27.2 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Ignore | | | Ignore | | | Ignore | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 0 | 1 | 1 0 | 2 0 | 1 | 2 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 53 | 313 | 127 | 32 | 42 | 65 | 337 | 748 | 17 | 22 | 118 | 32 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 53 | 313 | 127 | 32 | 42 | 65 | 337 | 748 | 17 | 22 | 118 | 32 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.00 | 0.90 | 0.90 | 0.00 | 0.90 | 0.90 | 0.00 |
| PHF Volume: | 59 | 347 | 141 | 36 | 47 | 0 | 374 | 830 | 0 | 24 | 131 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 59 | 347 | 141 | 36 | 47 | 0 | 374 | 830 | 0 | 24 | 131 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| FinalVolume: | 59 | 347 | 141 | 36 | 47 | 0 | 374 | 830 | 0 | 24 | 131 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.98 | 0.83 | 0.93 | 0.93 | 1.00 | 0.90 | 0.93 | 1.00 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1769 | 1862 | 1583 | 1769 | 3538 | 1900 | 3432 | 3538 | 1900 | 1769 | 3538 | 1900 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.19 | 0.09 | 0.02 | 0.01 | 0.00 | 0.11 | 0.23 | 0.00 | 0.01 | 0.04 | 0.00 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.19 | 0.33 | 0.33 | 0.05 | 0.19 | 0.00 | 0.32 | 0.41 | 0.00 | 0.05 | 0.15 | 0.00 |
| Volume/Cap: | 0.18 | 0.57 | 0.27 | 0.40 | 0.07 | 0.00 | 0.34 | 0.57 | 0.00 | 0.28 | 0.25 | 0.00 |
| Delay/Veh: | 34.3 | 29.1 | 25.1 | 49.0 | 33.4 | 0.0 | 26.4 | 23.1 | 0.0 | 47.5 | 38.2 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 34.3 | 29.1 | 25.1 | 49.0 | 33.4 | 0.0 | 26.4 | 23.1 | 0.0 | 47.5 | 38.2 | 0.0 |
| LOS by Move: | C | C | C | D | C | A | C | C | A | D | D | A |
| HCM2kAvgQ: | 2 | 9 | 3 | 2 | 1 | 0 | 4 | 10 | 0 | 1 | 2 | 0 |

Note: Queue reported is the number of cars per lane.

| Movement | EBL2 | EBL | EBT | EBR | WBL | WBT | WBR | WBR2 | NBL | NBT | NBR | NBR2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 34 | 3 | 187 | 26 | 115 | 10 | 6 | 3 | 6 | 121 | 2 | 77 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 1.00 | | 0.95 | | 1.00 | 1.00 | | | 1.00 | 0.95 | | 0.95 |
| Frt | 1.00 | | 0.98 | | 1.00 | 0.93 | | | 1.00 | 0.99 | | 0.85 |
| Flt Protected | 0.95 | | 1.00 | | 0.95 | 1.00 | | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 1770 | | 3472 | | 1770 | 1730 | | | 1770 | 1749 | | 1504 |
| Flt Permitted | 0.73 | | 0.95 | | 0.59 | 1.00 | | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 1365 | | 3311 | | 1106 | 1730 | | | 1770 | 1749 | | 1504 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 37 | 3 | 205 | 29 | 126 | 11 | 7 | 3 | 7 | 133 | 2 | 85 |
| RTOR Reduction (vph) | 0 | 0 | 10 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 65 |
| Lane Group Flow (vph) | 37 | 0 | 227 | 0 | 126 | 19 | 0 | 0 | 7 | 141 | 0 | 11 |
| Turn Type | pm+pt | Perm | | | pm+pt | | | | Split | | | Perm |
| Protected Phases | 7 | | 4 | | 3 | 8 | | | 2 | 2 | | |
| Permitted Phases | 4 | 4 | | | 8 | | | | | | | 2 |
| Actuated Green, G (s) | 17.8 | | 13.4 | | 17.4 | 13.2 | | | 10.6 | 10.6 | | 10.6 |
| Effective Green, g (s) | 17.8 | | 13.4 | | 17.4 | 13.2 | | | 10.6 | 10.6 | | 10.6 |
| Actuated g/C Ratio | 0.24 | | 0.18 | | 0.24 | 0.18 | | | 0.15 | 0.15 | | 0.15 |
| Clearance Time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 358 | | 609 | | 302 | 313 | | | 257 | 254 | | 219 |
| v/s Ratio Prot | 0.01 | | | | c0.02 | 0.01 | | | 0.00 | c0.08 | | |
| v/s Ratio Perm | 0.02 | | 0.07 | | c0.08 | | | | | | | 0.01 |
| v/c Ratio | 0.10 | | 0.37 | | 0.42 | 0.06 | | | 0.03 | 0.56 | | 0.05 |
| Uniform Delay, d1 | 21.3 | | 26.1 | | 22.7 | 24.7 | | | 26.7 | 29.0 | | 26.8 |
| Progression Factor | 1.00 | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.1 | | 0.4 | | 0.9 | 0.1 | | | 0.0 | 2.6 | | 0.1 |
| Delay (s) | 21.4 | | 26.5 | | 23.7 | 24.8 | | | 26.8 | 31.6 | | 26.9 |
| Level of Service | C | | C | | C | C | | | C | C | | C |
| Approach Delay (s) | | | 25.8 | | | 23.8 | | | | 29.9 | | |
| Approach LOS | | | C | | | C | | | | C | | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 33.7 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.64 | | |
| Actuated Cycle Length (s) | 72.9 | Sum of lost time (s) | 24.0 |
| Intersection Capacity Utilization | 56.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | SBL | SBT | SBR | SWL2 | SWR | SWR2 |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 52 | 765 | 93 | 6 | 6 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.85 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 1583 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 1583 | |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 57 | 841 | 102 | 7 | 7 | 1 |
| RTOR Reduction (vph) | 0 | 0 | 74 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 57 | 841 | 28 | 7 | 7 | 0 |
| Turn Type | Split | | Perm | Prot | custom | |
| Protected Phases | 6 | 6 | | 1 | | |
| Permitted Phases | | | 6 | | 5 | |
| Actuated Green, G (s) | 18.7 | 18.7 | 18.7 | 1.0 | 1.0 | |
| Effective Green, g (s) | 18.7 | 18.7 | 18.7 | 1.0 | 1.0 | |
| Actuated g/C Ratio | 0.26 | 0.26 | 0.26 | 0.01 | 0.01 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 454 | 908 | 406 | 24 | 22 | |
| v/s Ratio Prot | 0.03 | c0.24 | | c0.00 | | |
| v/s Ratio Perm | | | 0.02 | | c0.00 | |
| v/c Ratio | 0.13 | 0.93 | 0.07 | 0.29 | 0.32 | |
| Uniform Delay, d1 | 20.8 | 26.4 | 20.5 | 35.6 | 35.6 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.1 | 15.0 | 0.1 | 6.7 | 8.2 | |
| Delay (s) | 20.9 | 41.4 | 20.6 | 42.3 | 43.8 | |
| Level of Service | C | D | C | D | D | |
| Approach Delay (s) | | 38.1 | | | | |
| Approach LOS | | D | | | | |

| Intersection Summary |
|---|

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Park Boulevard/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.509 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 15.0 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 0 | 0 0 | 0 | 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 81 | 0 | 25 | 0 | 0 | 0 | 44 | 284 | 436 | 141 | 596 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| PHF Volume: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 92 | 0 | 28 | 0 | 0 | 0 | 50 | 323 | 497 | 161 | 679 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.91 | 1.00 | 0.91 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.62 | 0.00 | 0.38 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 2800 | 0 | 660 | 0 | 0 | 0 | 1769 | 3538 | 1583 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.03 | 0.09 | 0.31 | 0.09 | 0.19 | 0.00 |
| Crit Moves: | | | **** | | | | | | **** | **** | | |
| Green/Cycle: | 0.07 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.16 | 0.62 | 0.62 | 0.18 | 0.63 | 0.00 |
| Volume/Cap: | 0.49 | 0.00 | 0.51 | 0.00 | 0.00 | 0.00 | 0.17 | 0.15 | 0.51 | 0.51 | 0.30 | 0.00 |
| Delay/Veh: | 46.5 | 0.0 | 45.6 | 0.0 | 0.0 | 0.0 | 36.2 | 8.1 | 11.1 | 38.5 | 8.5 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 46.5 | 0.0 | 45.6 | 0.0 | 0.0 | 0.0 | 36.2 | 8.1 | 11.1 | 38.5 | 8.5 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | D | A | B | D | A | A |
| HCM2kAvgQ: | 2 | 0 | 3 | 0 | 0 | 0 | 1 | 2 | 9 | 4 | 5 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Cesar Chavez Parkway/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.512 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 31.5 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 1 0 | 0 1 | 0 | 0 1 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 4 | 25 | 14 | 37 | 73 | 279 | 140 | 128 | 19 | 39 | 385 | 56 |
| Added Vol: | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 4 | 25 | 29 | 37 | 73 | 279 | 140 | 128 | 19 | 83 | 385 | 56 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 4 | 28 | 32 | 41 | 82 | 312 | 156 | 143 | 21 | 93 | 430 | 63 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 28 | 32 | 41 | 82 | 312 | 156 | 143 | 21 | 93 | 430 | 63 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 28 | 32 | 41 | 82 | 312 | 156 | 143 | 21 | 93 | 430 | 63 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.96 | 0.96 | 0.83 | 0.93 | 0.91 | 0.91 | 0.93 | 0.91 | 0.91 |
| Lanes: | 1.00 | 0.46 | 0.54 | 0.34 | 0.66 | 1.00 | 1.00 | 1.74 | 0.26 | 1.00 | 1.75 | 0.25 |
| Final Sat.: | 1769 | 792 | 919 | 616 | 1215 | 1583 | 1769 | 3022 | 449 | 1769 | 3030 | 441 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.04 | 0.04 | 0.07 | 0.07 | 0.20 | 0.09 | 0.05 | 0.05 | 0.05 | 0.14 | 0.14 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.18 | 0.18 | 0.24 | 0.36 | 0.36 | 0.16 | 0.21 | 0.21 | 0.22 | 0.26 | 0.26 |
| Volume/Cap: | 0.05 | 0.20 | 0.20 | 0.28 | 0.18 | 0.54 | 0.54 | 0.23 | 0.23 | 0.24 | 0.54 | 0.54 |
| Delay/Veh: | 45.5 | 35.5 | 35.5 | 31.5 | 21.8 | 26.2 | 40.5 | 33.1 | 33.1 | 32.6 | 32.4 | 32.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 45.5 | 35.5 | 35.5 | 31.5 | 21.8 | 26.2 | 40.5 | 33.1 | 33.1 | 32.6 | 32.4 | 32.4 |
| LOS by Move: | D | D | D | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 0 | 2 | 2 | 3 | 3 | 8 | 4 | 2 | 2 | 2 | 7 | 7 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Sampson Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.280 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 19.9 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 | 0 1! | 0 | 0 | 0 1! | 0 | 1 | 0 1 | 1 0 | 1 | 0 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 135 | 31 | 87 | 477 | 6 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 135 | 31 | 87 | 477 | 6 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 44 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 19 | 33 | 56 | 7 | 50 | 22 | 15 | 150 | 31 | 87 | 521 | 6 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 158 | 33 | 92 | 548 | 6 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 158 | 33 | 92 | 548 | 6 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 20 | 35 | 59 | 7 | 53 | 23 | 16 | 158 | 33 | 92 | 548 | 6 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 0.92 | 0.92 | 0.92 | 0.93 | 0.91 | 0.91 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.18 | 0.30 | 0.52 | 0.09 | 0.63 | 0.28 | 1.00 | 1.66 | 0.34 | 1.00 | 1.98 | 0.02 |
| Final Sat.: | 288 | 501 | 849 | 155 | 1109 | 488 | 1769 | 2856 | 590 | 1769 | 3491 | 40 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.07 | 0.07 | 0.07 | 0.05 | 0.05 | 0.05 | 0.01 | 0.06 | 0.06 | 0.05 | 0.16 | 0.16 |
| Crit Moves: | | **** | | | | | **** | | | | **** | |
| Green/Cycle: | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.05 | 0.31 | 0.31 | 0.29 | 0.55 | 0.55 |
| Volume/Cap: | 0.29 | 0.29 | 0.29 | 0.20 | 0.20 | 0.20 | 0.18 | 0.18 | 0.18 | 0.18 | 0.29 | 0.29 |
| Delay/Veh: | 31.3 | 31.3 | 31.3 | 30.4 | 30.4 | 30.4 | 46.5 | 25.4 | 25.4 | 26.8 | 12.2 | 12.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 31.3 | 31.3 | 31.3 | 30.4 | 30.4 | 30.4 | 46.5 | 25.4 | 25.4 | 26.8 | 12.2 | 12.2 |
| LOS by Move: | C | C | C | C | C | C | D | C | C | C | B | B |
| HCM2kAvgQ: | 3 | 3 | 3 | 2 | 2 | 2 | 0 | 2 | 2 | 2 | 5 | 5 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 28th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.433 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 27.8 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 1 0 | 1 1 | 0 | 1 0 | 1 1 | 0 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 4 | 7 | 5 | 315 | 9 | 28 | 36 | 186 | 7 | 12 | 448 | 142 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 4 | 7 | 5 | 315 | 9 | 28 | 36 | 186 | 7 | 12 | 448 | 142 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 20 | 2 | 13 | 0 | 0 | 24 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 4 | 7 | 5 | 315 | 9 | 48 | 38 | 199 | 7 | 12 | 472 | 142 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 4 | 7 | 5 | 335 | 10 | 51 | 40 | 211 | 7 | 13 | 502 | 151 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 4 | 7 | 5 | 335 | 10 | 51 | 40 | 211 | 7 | 13 | 502 | 151 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 4 | 7 | 5 | 335 | 10 | 51 | 40 | 211 | 7 | 13 | 502 | 151 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.93 | 0.93 | 0.81 | 0.81 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.83 |
| Lanes: | 0.25 | 0.44 | 0.31 | 1.00 | 1.00 | 1.00 | 1.00 | 1.93 | 0.07 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 441 | 771 | 551 | 1769 | 1546 | 1546 | 1769 | 3400 | 120 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.01 | 0.01 | 0.19 | 0.01 | 0.03 | 0.02 | 0.06 | 0.06 | 0.01 | 0.14 | 0.10 |
| Crit Moves: | | **** | | **** | | | **** | | | | **** | |
| Green/Cycle: | 0.24 | 0.05 | 0.05 | 0.42 | 0.24 | 0.24 | 0.05 | 0.20 | 0.20 | 0.16 | 0.32 | 0.32 |
| Volume/Cap: | 0.04 | 0.19 | 0.19 | 0.45 | 0.03 | 0.14 | 0.45 | 0.31 | 0.31 | 0.04 | 0.45 | 0.30 |
| Delay/Veh: | 29.5 | 46.6 | 46.6 | 21.0 | 29.4 | 30.3 | 49.6 | 34.0 | 34.0 | 35.3 | 27.5 | 26.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 29.5 | 46.6 | 46.6 | 21.0 | 29.4 | 30.3 | 49.6 | 34.0 | 34.0 | 35.3 | 27.5 | 26.2 |
| LOS by Move: | C | D | D | C | C | C | D | C | C | D | C | C |
| HCM2kAvgQ: | 0 | 1 | 1 | 7 | 0 | 1 | 1 | 3 | 3 | 0 | 6 | 3 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 28th Street/Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.395 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 29.9 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 35 | 191 | 58 | 163 | 413 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 35 | 191 | 58 | 163 | 413 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| Added Vol: | 0 | 2 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 35 | 193 | 58 | 163 | 433 | 41 | 66 | 88 | 43 | 53 | 211 | 187 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 37 | 204 | 61 | 172 | 458 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 37 | 204 | 61 | 172 | 458 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 37 | 204 | 61 | 172 | 458 | 43 | 70 | 93 | 45 | 56 | 223 | 198 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.93 | 0.92 | 0.92 | 0.93 | 0.89 | 0.89 | 0.93 | 0.87 | 0.87 |
| Lanes: | 1.00 | 1.54 | 0.46 | 1.00 | 1.83 | 0.17 | 1.00 | 1.34 | 0.66 | 1.00 | 1.06 | 0.94 |
| Final Sat.: | 1769 | 2625 | 789 | 1769 | 3190 | 302 | 1769 | 2260 | 1104 | 1769 | 1744 | 1546 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.08 | 0.08 | 0.10 | 0.14 | 0.14 | 0.04 | 0.04 | 0.04 | 0.03 | 0.13 | 0.13 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.18 | 0.18 | 0.23 | 0.36 | 0.36 | 0.10 | 0.21 | 0.21 | 0.21 | 0.32 | 0.32 |
| Volume/Cap: | 0.39 | 0.42 | 0.42 | 0.42 | 0.39 | 0.39 | 0.39 | 0.19 | 0.19 | 0.15 | 0.39 | 0.39 |
| Delay/Veh: | 48.5 | 36.5 | 36.5 | 33.4 | 23.9 | 23.9 | 43.6 | 32.5 | 32.5 | 32.3 | 26.5 | 26.5 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 48.5 | 36.5 | 36.5 | 33.4 | 23.9 | 23.9 | 43.6 | 32.5 | 32.5 | 32.3 | 26.5 | 26.5 |
| LOS by Move: | D | D | D | C | C | C | D | C | C | C | C | C |
| HCM2kAvgQ: | 2 | 4 | 4 | 4 | 6 | 6 | 2 | 2 | 2 | 1 | 5 | 5 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 28th Street/Boston Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.313 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 18.2 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 351 | 80 | 137 | 650 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 351 | 80 | 137 | 650 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| Added Vol: | 0 | 2 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 3 | 353 | 80 | 137 | 670 | 26 | 23 | 48 | 7 | 11 | 15 | 44 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| PHF Volume: | 3 | 374 | 85 | 145 | 710 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 3 | 374 | 85 | 145 | 710 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 3 | 374 | 85 | 145 | 710 | 28 | 24 | 51 | 7 | 12 | 16 | 47 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.93 | 0.93 | 0.96 | 0.96 | 0.93 | 0.87 | 0.87 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.93 | 0.07 | 1.00 | 0.87 | 0.13 | 1.00 | 0.25 | 0.75 |
| Final Sat.: | 1769 | 3538 | 1583 | 1769 | 3385 | 131 | 1769 | 1594 | 232 | 1769 | 420 | 1233 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.11 | 0.05 | 0.08 | 0.21 | 0.21 | 0.01 | 0.03 | 0.03 | 0.01 | 0.04 | 0.04 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.38 | 0.38 | 0.30 | 0.63 | 0.63 | 0.05 | 0.08 | 0.08 | 0.08 | 0.11 | 0.11 |
| Volume/Cap: | 0.04 | 0.28 | 0.14 | 0.28 | 0.33 | 0.33 | 0.28 | 0.39 | 0.39 | 0.08 | 0.33 | 0.33 |
| Delay/Veh: | 45.4 | 21.5 | 20.3 | 27.3 | 8.9 | 8.9 | 47.5 | 45.3 | 45.3 | 42.7 | 41.9 | 41.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 45.4 | 21.5 | 20.3 | 27.3 | 8.9 | 8.9 | 47.5 | 45.3 | 45.3 | 42.7 | 41.9 | 41.9 |
| LOS by Move: | D | C | C | C | A | A | D | D | D | D | D | D |
| HCM2kAvgQ: | 0 | 4 | 2 | 3 | 6 | 6 | 1 | 2 | 2 | 0 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
Unknown Method (Future Volume Alternative)

Intersection #7 28th Street/I-5 southbound ramp

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 | 2 0 | 0 | 0 0 | 1 1 | 0 | 0 0 | 0 0 | 1 | 0 0 | 0 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 415 | 0 | 0 | 303 | 0 | 0 | 0 | 508 | 0 | 0 | 0 |
| Growth Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Added Vol: | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCE Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MLF Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical Gap Module: >> Population:0 << >> Run Speed(N/S): 30 MPH << | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Level Of Service Module: | | | | | | | | | | | | |
| LOS by Move: | | | | | | | | | | | | |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 28th Street/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.781 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 33.7 |
| Optimal Cycle: | 82 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 | 1 0 | 1 0 | 0 | 0 | 1! 0 0 | 1 | 0 | 1 1 0 | 1 | 0 | 0 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 146 | 537 | 86 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 146 | 537 | 86 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 37 | 65 | 32 | 50 | 135 | 183 | 114 | 172 | 25 | 146 | 537 | 86 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 151 | 556 | 89 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 151 | 556 | 89 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 38 | 67 | 33 | 52 | 140 | 190 | 118 | 178 | 26 | 151 | 556 | 89 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.68 | 0.68 | 0.68 | 0.85 | 0.85 | 0.85 | 0.93 | 0.91 | 0.91 | 0.93 | 0.96 | 0.96 |
| Lanes: | 0.55 | 0.97 | 0.48 | 0.13 | 0.37 | 0.50 | 1.00 | 1.75 | 0.25 | 1.00 | 0.86 | 0.14 |
| Final Sat.: | 712 | 1251 | 616 | 221 | 596 | 808 | 1769 | 3030 | 440 | 1769 | 1571 | 252 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.05 | 0.05 | 0.05 | 0.23 | 0.23 | 0.23 | 0.07 | 0.06 | 0.06 | 0.09 | 0.35 | 0.35 |
| Crit Moves: | | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.09 | 0.22 | 0.22 | 0.32 | 0.45 | 0.45 |
| Volume/Cap: | 0.18 | 0.18 | 0.18 | 0.78 | 0.78 | 0.78 | 0.78 | 0.27 | 0.27 | 0.27 | 0.78 | 0.78 |
| Delay/Veh: | 26.0 | 26.0 | 26.0 | 39.9 | 39.9 | 39.9 | 67.3 | 32.5 | 32.5 | 25.6 | 27.9 | 27.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.0 | 26.0 | 26.0 | 39.9 | 39.9 | 39.9 | 67.3 | 32.5 | 32.5 | 25.6 | 27.9 | 27.9 |
| LOS by Move: | C | C | C | D | D | D | E | C | C | C | C | C |
| HCM2kAvgQ: | 2 | 2 | 2 | 13 | 13 | 13 | 6 | 3 | 3 | 3 | 18 | 18 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 I-5 northbound ramps/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.493 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 18.6 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 0 1 | 0 0 | 0 | 0 0 | 0 0 | 1 | 0 1 | 0 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 304 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 304 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 304 | 0 | 79 | 0 | 0 | 0 | 0 | 236 | 19 | 0 | 450 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.00 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 319 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 319 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 319 | 0 | 83 | 0 | 0 | 0 | 0 | 247 | 0 | 0 | 472 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 1769 | 0 | 1583 | 0 | 0 | 0 | 0 | 1862 | 1900 | 0 | 1862 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.18 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.13 | 0.00 | 0.00 | 0.25 | 0.00 |
| Crit Moves: | **** | | | | | | | | | | **** | |
| Green/Cycle: | 0.37 | 0.00 | 0.37 | 0.00 | 0.00 | 0.00 | 0.00 | 0.51 | 0.00 | 0.00 | 0.51 | 0.00 |
| Volume/Cap: | 0.49 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.26 | 0.00 | 0.00 | 0.49 | 0.00 |
| Delay/Veh: | 25.1 | 0.0 | 21.3 | 0.0 | 0.0 | 0.0 | 0.0 | 13.7 | 0.0 | 0.0 | 16.2 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.1 | 0.0 | 21.3 | 0.0 | 0.0 | 0.0 | 0.0 | 13.7 | 0.0 | 0.0 | 16.2 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | B | A | A | B | A |
| HCM2kAvgQ: | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 9 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 I-5 southbound ramp/Boston Avenue

Average Delay (sec/veh): 6.1 Worst Case Level Of Service: C[ 15.2]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 1 0 | 0 | 1 0 | 0 0 | 0 | 0 0 | 1 0 | 0 | 1 0 | 0 1 | 0 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 9 | 23 | 5 | 0 | 0 | 0 | 255 | 26 | 8 | 2 | 50 | 43 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 9 | 23 | 5 | 0 | 0 | 0 | 255 | 26 | 8 | 2 | 50 | 43 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 9 | 23 | 5 | 0 | 0 | 0 | 255 | 26 | 8 | 2 | 50 | 43 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 9 | 23 | 5 | 0 | 0 | 0 | 255 | 26 | 8 | 2 | 50 | 43 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 9 | 23 | 5 | 0 | 0 | 0 | 255 | 26 | 8 | 2 | 50 | 43 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 616 | 637 | 30 | xxxx | xxxx | xxxxx | 93 | xxxx | xxxxx | 34 | xxxx | xxxxx |
| Potent Cap.: | 454 | 395 | 1044 | xxxx | xxxx | xxxxx | 1501 | xxxx | xxxxx | 1578 | xxxx | xxxxx |
| Move Cap.: | 395 | 327 | 1044 | xxxx | xxxx | xxxxx | 1501 | xxxx | xxxxx | 1578 | xxxx | xxxxx |
| Volume/Cap: | 0.02 | 0.07 | 0.00 | xxxx | xxxx | xxxx | 0.17 | xxxx | xxxx | 0.00 | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | 0.1 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 0.6 | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Control Del: | 14.3 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.9 | xxxx | xxxxx | 7.3 | xxxx | xxxxx |
| LOS by Move: | B | * | * | * | * | * | A | * | * | A | * | * |
| Movement: | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT | LT | LTR | RT |
| Shared Cap.: | xxxx | xxxx | 373 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | 0.2 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | 15.4 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.3 | xxxx | xxxxx |
| Shared LOS: | * | * | C | * | * | * | * | * | * | A | * | * |
| ApproachDel: | | 15.2 | | | xxxxxx | | | xxxxxx | | | xxxxxx | |
| ApproachLOS: | | C | | | * | | | * | | | * | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #13 Cleveland Street/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.308 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.9 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 2 | 6 | 15 | 40 | 2 | 9 | 10 | 90 | 4 | 10 | 257 | 184 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.29 | 0.71 | 1.00 | 1.00 | 1.00 | 0.19 | 1.73 | 0.08 | 0.04 | 1.14 | 0.82 |
| Final Sat.: | 536 | 180 | 450 | 526 | 567 | 637 | 130 | 1186 | 53 | 32 | 853 | 679 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.03 | 0.03 | 0.08 | 0.00 | 0.01 | 0.08 | 0.08 | 0.07 | 0.31 | 0.30 | 0.27 |
| Crit Moves: | | **** | | **** | | | **** | | | **** | | |
| Delay/Veh: | 9.0 | 8.2 | 8.2 | 9.6 | 8.6 | 8.0 | 8.3 | 8.2 | 8.2 | 9.7 | 9.5 | 8.5 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.0 | 8.2 | 8.2 | 9.6 | 8.6 | 8.0 | 8.3 | 8.2 | 8.2 | 9.7 | 9.5 | 8.5 |
| LOS by Move: | A | A | A | A | A | A | A | A | A | A | A | A |
| ApproachDel: | | 8.2 | | | 9.3 | | | 8.3 | | | 9.1 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 8.2 | | | 9.3 | | | 8.3 | | | 9.1 | |
| LOS by Appr: | | A | | | A | | | A | | | A | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.4 | 0.4 | 0.4 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Tidelands Avenue/W. 32nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.066 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 7.3 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 | 1 | 0 0 | 1 0 | 0 1 | 0 | 1 0 | 1 | 0 1 | 1 0 | 1 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 7 | 0 | 6 | 9 | 50 | 19 | 1 | 0 | 0 | 0 | 1 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 1.00 | 0.00 | 1.00 | 0.15 | 0.85 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 0 | 770 | 0 | 704 | 137 | 759 | 682 | 753 | 883 | 676 | 745 | 871 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | xxxx | 0.01 | xxxx | 0.01 | 0.07 | 0.07 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crit Moves: | | **** | | | | **** | **** | | | | | **** |
| Delay/Veh: | 0.0 | 7.7 | 0.0 | 7.8 | 7.0 | 7.0 | 8.1 | 7.4 | 0.0 | 0.0 | 0.0 | 6.8 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 7.7 | 0.0 | 7.8 | 7.0 | 7.0 | 8.1 | 7.4 | 0.0 | 0.0 | 0.0 | 6.8 |
| LOS by Move: | * | A | * | A | A | A | A | A | * | * | * | A |
| ApproachDel: | | 7.7 | | | 7.1 | | | 8.0 | | | 6.8 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 7.7 | | | 7.1 | | | 8.0 | | | 6.8 | |
| LOS by Appr: | | A | | | A | | | A | | | A | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[ 0.0]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 0 0 0 | | | 0 0 0 0 0 | | | 0 0 1 0 0 | | | 0 0 1 0 0 | | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 44 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 44 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 44 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 44 | 0 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Move Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Volume/Cap: | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| LOS by Move: | * | * | * | * | * | * | * | * | * | * | * | * |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | * | | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[ 0.0]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 0 | 0 0 | | 0 0 0 | 0 0 | | 0 0 1 | 0 0 | | 0 0 1 | 0 0 | |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 44 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 44 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 44 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 44 | 0 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Move Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Volume/Cap: | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| LOS by Move: | * | * | * | * | * | * | * | * | * | * | * | * |
| Movement: | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT | LT - | LTR - | RT |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | * | | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #48 32nd Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.462 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 28.3 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Ignore | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 34 | 459 | 146 | 82 | 676 | 122 | 60 | 148 | 96 | 185 | 442 | 172 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 34 | 459 | 146 | 82 | 676 | 122 | 60 | 148 | 96 | 185 | 442 | 172 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 24 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 34 | 459 | 146 | 82 | 676 | 122 | 60 | 161 | 96 | 185 | 466 | 172 |
| User Adj: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.00 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 35 | 474 | 0 | 85 | 698 | 126 | 62 | 166 | 99 | 191 | 481 | 178 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 35 | 474 | 0 | 85 | 698 | 126 | 62 | 166 | 99 | 191 | 481 | 178 |
| PCE Adj: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 35 | 474 | 0 | 85 | 698 | 126 | 62 | 166 | 99 | 191 | 481 | 178 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.83 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1769 | 3538 | 1900 | 1769 | 3538 | 1583 | 1769 | 3538 | 1583 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.13 | 0.00 | 0.05 | 0.20 | 0.08 | 0.04 | 0.05 | 0.06 | 0.11 | 0.14 | 0.11 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.34 | 0.00 | 0.13 | 0.42 | 0.42 | 0.08 | 0.13 | 0.13 | 0.23 | 0.29 | 0.29 |
| Volume/Cap: | 0.40 | 0.39 | 0.00 | 0.37 | 0.47 | 0.19 | 0.47 | 0.35 | 0.47 | 0.47 | 0.47 | 0.38 |
| Delay/Veh: | 49.0 | 25.0 | 0.0 | 40.9 | 21.0 | 18.2 | 46.9 | 39.7 | 41.6 | 33.9 | 29.4 | 28.8 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 49.0 | 25.0 | 0.0 | 40.9 | 21.0 | 18.2 | 46.9 | 39.7 | 41.6 | 33.9 | 29.4 | 28.8 |
| LOS by Move: | D | C | A | D | C | B | D | D | D | C | C | C |
| HCM2kAvgQ: | 2 | 6 | 0 | 3 | 8 | 2 | 2 | 2 | 3 | 5 | 6 | 4 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

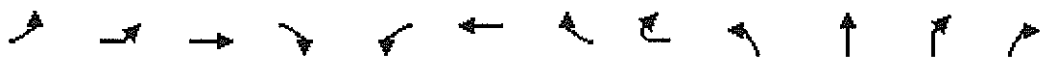
Intersection #49 8th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.408 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 24.3 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Ignore | | | Ignore | | | Ignore | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 0 | 1 | 1 0 | 2 0 | 1 | 2 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 24 | 75 | 11 | 16 | 260 | 228 | 74 | 98 | 26 | 134 | 687 | 77 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 24 | 75 | 11 | 16 | 260 | 228 | 74 | 98 | 26 | 134 | 687 | 77 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 24 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 24 | 75 | 11 | 16 | 260 | 228 | 74 | 111 | 26 | 134 | 711 | 77 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.00 | 0.90 | 0.90 | 0.00 | 0.90 | 0.90 | 0.00 |
| PHF Volume: | 27 | 83 | 12 | 18 | 288 | 0 | 82 | 123 | 0 | 148 | 787 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 27 | 83 | 12 | 18 | 288 | 0 | 82 | 123 | 0 | 148 | 787 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| FinalVolume: | 27 | 83 | 12 | 18 | 288 | 0 | 82 | 123 | 0 | 148 | 787 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.98 | 0.83 | 0.93 | 0.93 | 1.00 | 0.90 | 0.93 | 1.00 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1769 | 1862 | 1583 | 1769 | 3538 | 1900 | 3432 | 3538 | 1900 | 1769 | 3538 | 1900 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.02 | 0.04 | 0.01 | 0.01 | 0.08 | 0.00 | 0.02 | 0.03 | 0.00 | 0.08 | 0.22 | 0.00 |
| Crit Moves: | **** | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.12 | 0.12 | 0.12 | 0.20 | 0.00 | 0.06 | 0.22 | 0.00 | 0.37 | 0.54 | 0.00 |
| Volume/Cap: | 0.30 | 0.36 | 0.06 | 0.08 | 0.41 | 0.00 | 0.41 | 0.16 | 0.00 | 0.23 | 0.41 | 0.00 |
| Delay/Veh: | 47.7 | 41.2 | 38.9 | 39.0 | 35.6 | 0.0 | 46.9 | 31.5 | 0.0 | 21.7 | 14.0 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 47.7 | 41.2 | 38.9 | 39.0 | 35.6 | 0.0 | 46.9 | 31.5 | 0.0 | 21.7 | 14.0 | 0.0 |
| LOS by Move: | D | D | D | D | D | A | D | C | A | C | B | A |
| HCM2kAvgQ: | 1 | 3 | 0 | 1 | 4 | 0 | 1 | 2 | 0 | 3 | 7 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA



| Movement | EBL2 | EBL | EBT | EBR | WBL | WBT | WBR | WBR2 | NBL | NBT | NBR | NBR2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 104 | 13 | 109 | 8 | 40 | 15 | 58 | 2 | 6 | 762 | 3 | 41 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 1.00 | | 0.95 | | 1.00 | 1.00 | | | 1.00 | 0.95 | | 0.95 |
| Frt | 1.00 | | 0.99 | | 1.00 | 0.88 | | | 1.00 | 1.00 | | 0.85 |
| Flt Protected | 0.95 | | 1.00 | | 0.95 | 1.00 | | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 1770 | | 3488 | | 1770 | 1639 | | | 1770 | 1767 | | 1504 |
| Flt Permitted | 0.51 | | 0.92 | | 0.66 | 1.00 | | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 947 | | 3241 | | 1235 | 1639 | | | 1770 | 1767 | | 1504 |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 112 | 14 | 117 | 9 | 43 | 16 | 62 | 2 | 6 | 819 | 3 | 44 |
| RTOR Reduction (vph) | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 9 |
| Lane Group Flow (vph) | 112 | 0 | 136 | 0 | 43 | 79 | 0 | 0 | 6 | 826 | 0 | 31 |
| Turn Type | pm+pt | Perm | | | pm+pt | | | | Split | | | Perm |
| Protected Phases | 7 | | 4 | | 3 | 8 | | | 2 | 2 | | |
| Permitted Phases | 4 | 4 | | | 8 | | | | | | | 2 |
| Actuated Green, G (s) | 17.2 | | 12.2 | | 11.6 | 9.4 | | | 60.0 | 60.0 | | 60.0 |
| Effective Green, g (s) | 17.2 | | 12.2 | | 11.6 | 9.4 | | | 60.0 | 60.0 | | 60.0 |
| Actuated g/C Ratio | 0.16 | | 0.11 | | 0.11 | 0.09 | | | 0.55 | 0.55 | | 0.55 |
| Clearance Time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 188 | | 365 | | 143 | 142 | | | 981 | 979 | | 833 |
| v/s Ratio Prot | c0.03 | | | | 0.01 | 0.05 | | | 0.00 | c0.47 | | |
| v/s Ratio Perm | c0.07 | | 0.04 | | 0.03 | | | | | | | 0.02 |
| v/c Ratio | 0.60 | | 0.37 | | 0.30 | 0.56 | | | 0.01 | 0.84 | | 0.04 |
| Uniform Delay, d1 | 41.6 | | 44.5 | | 44.2 | 47.5 | | | 10.8 | 20.2 | | 11.0 |
| Progression Factor | 1.00 | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 5.0 | | 0.6 | | 1.2 | 4.7 | | | 0.0 | 6.7 | | 0.0 |
| Delay (s) | 46.6 | | 45.2 | | 45.4 | 52.1 | | | 10.8 | 27.0 | | 11.0 |
| Level of Service | D | | D | | D | D | | | B | C | | B |
| Approach Delay (s) | | | 45.8 | | | 49.8 | | | | 26.1 | | |
| Approach LOS | | | D | | | D | | | | C | | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 34.5 | HCM Level of Service | C |
| HCM Volume to Capacity ratio | 0.76 | | |
| Actuated Cycle Length (s) | 108.3 | Sum of lost time (s) | 24.0 |
| Intersection Capacity Utilization | 66.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | SBL | SBT | SBR | SWL2 | SWR |
|---|---|---|---|---|---|
| Lane Configurations | | | | | |
| Volume (vph) | 28 | 78 | 28 | 15 | 2 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.85 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 1583 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 1583 |
| Peak-hour factor, PHF | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Adj. Flow (vph) | 30 | 84 | 30 | 16 | 2 |
| RTOR Reduction (vph) | 0 | 0 | 28 | 0 | 0 |
| Lane Group Flow (vph) | 30 | 84 | 2 | 16 | 2 |
| Turn Type | Split | | Perm | Prot | custom |
| Protected Phases | 6 | 6 | | 1 | |
| Permitted Phases | | | 6 | | 5 |
| Actuated Green, G (s) | 6.3 | 6.3 | 6.3 | 2.6 | 1.0 |
| Effective Green, g (s) | 6.3 | 6.3 | 6.3 | 2.6 | 1.0 |
| Actuated g/C Ratio | 0.06 | 0.06 | 0.06 | 0.02 | 0.01 |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 103 | 206 | 92 | 42 | 15 |
| v/s Ratio Prot | 0.02 | c0.02 | | c0.01 | |
| v/s Ratio Perm | | | 0.00 | | c0.00 |
| v/c Ratio | 0.29 | 0.41 | 0.02 | 0.38 | 0.13 |
| Uniform Delay, d1 | 48.9 | 49.2 | 48.1 | 52.1 | 53.2 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.6 | 1.3 | 0.1 | 5.7 | 4.0 |
| Delay (s) | 50.4 | 50.5 | 48.2 | 57.7 | 57.2 |
| Level of Service | D | D | D | E | E |
| Approach Delay (s) | | 50.0 | | | |
| Approach LOS | | D | | | |

| Intersection Summary |
|---|

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Park Boulevard/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.425 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 13.9 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1! 0 | 0 | 0 0 | 0 0 | 0 0 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 96 | 0 | 52 | 0 | 0 | 0 | 6 | 912 | 91 | 50 | 356 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| PHF Volume: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 104 | 0 | 56 | 0 | 0 | 0 | 7 | 989 | 99 | 54 | 386 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.90 | 1.00 | 0.90 | 1.00 | 1.00 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.48 | 0.00 | 0.52 | 0.00 | 0.00 | 0.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 0.00 |
| Final Sat.: | 2529 | 0 | 888 | 0 | 0 | 0 | 1769 | 3538 | 1583 | 1769 | 3538 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.04 | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.06 | 0.03 | 0.11 | 0.00 |
| Crit Moves: | | | **** | | | | | **** | | **** | | |
| Green/Cycle: | 0.10 | 0.00 | 0.15 | 0.00 | 0.00 | 0.00 | 0.23 | 0.66 | 0.66 | 0.07 | 0.50 | 0.00 |
| Volume/Cap: | 0.41 | 0.00 | 0.42 | 0.00 | 0.00 | 0.00 | 0.02 | 0.42 | 0.09 | 0.42 | 0.22 | 0.00 |
| Delay/Veh: | 43.0 | 0.0 | 39.4 | 0.0 | 0.0 | 0.0 | 29.8 | 8.2 | 6.3 | 46.7 | 14.0 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 43.0 | 0.0 | 39.4 | 0.0 | 0.0 | 0.0 | 29.8 | 8.2 | 6.3 | 46.7 | 14.0 | 0.0 |
| LOS by Move: | D | A | D | A | A | A | C | A | A | D | B | A |
| HCM2kAvgQ: | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 8 | 1 | 2 | 3 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 Cesar Chavez Parkway/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.457 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 26.4 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 1 0 | 0 | 1 0 | 0 1 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 21 | 77 | 34 | 46 | 36 | 158 | 346 | 670 | 10 | 11 | 118 | 20 |
| Added Vol: | 0 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 21 | 77 | 78 | 46 | 36 | 158 | 346 | 670 | 10 | 26 | 118 | 20 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 23 | 85 | 86 | 51 | 40 | 175 | 383 | 741 | 11 | 29 | 131 | 22 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 23 | 85 | 86 | 51 | 40 | 175 | 383 | 741 | 11 | 29 | 131 | 22 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 23 | 85 | 86 | 51 | 40 | 175 | 383 | 741 | 11 | 29 | 131 | 22 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.91 | 0.91 | 0.95 | 0.95 | 0.83 | 0.93 | 0.93 | 0.93 | 0.93 | 0.91 | 0.91 |
| Lanes: | 1.00 | 0.50 | 0.50 | 0.56 | 0.44 | 1.00 | 1.00 | 1.97 | 0.03 | 1.00 | 1.71 | 0.29 |
| Final Sat.: | 1769 | 856 | 867 | 1016 | 795 | 1583 | 1769 | 3479 | 52 | 1769 | 2959 | 501 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.10 | 0.10 | 0.05 | 0.05 | 0.11 | 0.22 | 0.21 | 0.21 | 0.02 | 0.04 | 0.04 |
| Crit Moves: | **** | | | | | **** | **** | | | | **** | |
| Green/Cycle: | 0.05 | 0.19 | 0.19 | 0.10 | 0.24 | 0.24 | 0.46 | 0.45 | 0.45 | 0.11 | 0.09 | 0.09 |
| Volume/Cap: | 0.26 | 0.52 | 0.52 | 0.52 | 0.21 | 0.47 | 0.47 | 0.47 | 0.47 | 0.15 | 0.47 | 0.47 |
| Delay/Veh: | 47.3 | 38.0 | 38.0 | 46.0 | 31.0 | 33.8 | 19.0 | 19.5 | 19.5 | 41.1 | 44.0 | 44.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 47.3 | 38.0 | 38.0 | 46.0 | 31.0 | 33.8 | 19.0 | 19.5 | 19.5 | 41.1 | 44.0 | 44.0 |
| LOS by Move: | D | D | D | D | C | C | B | B | B | D | D | D |
| HCM2kAvgQ: | 1 | 5 | 5 | 3 | 2 | 5 | 8 | 8 | 8 | 1 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Sampson Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.339 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 17.0 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 0 | 1! 0 | 0 | 0 0 | 1! 0 | 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 622 | 5 | 20 | 145 | 5 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 622 | 5 | 20 | 145 | 5 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 15 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 17 | 30 | 45 | 12 | 21 | 16 | 75 | 666 | 5 | 20 | 160 | 5 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| PHF Volume: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 738 | 6 | 22 | 177 | 6 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 738 | 6 | 22 | 177 | 6 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 19 | 33 | 50 | 13 | 23 | 18 | 83 | 738 | 6 | 22 | 177 | 6 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.86 | 0.86 | 0.86 | 0.87 | 0.87 | 0.87 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.18 | 0.33 | 0.49 | 0.24 | 0.43 | 0.33 | 1.00 | 1.99 | 0.01 | 1.00 | 1.94 | 0.06 |
| Final Sat.: | 303 | 535 | 803 | 404 | 706 | 538 | 1769 | 3508 | 26 | 1769 | 3417 | 107 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.06 | 0.06 | 0.03 | 0.03 | 0.03 | 0.05 | 0.21 | 0.21 | 0.01 | 0.05 | 0.05 |
| Crit Moves: | | **** | | | | | | **** | | **** | | |
| Green/Cycle: | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.32 | 0.61 | 0.61 | 0.05 | 0.34 | 0.34 |
| Volume/Cap: | 0.34 | 0.34 | 0.34 | 0.18 | 0.18 | 0.18 | 0.14 | 0.34 | 0.34 | 0.25 | 0.15 | 0.15 |
| Delay/Veh: | 36.5 | 36.5 | 36.5 | 35.1 | 35.1 | 35.1 | 24.1 | 9.7 | 9.7 | 47.2 | 23.3 | 23.3 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 36.5 | 36.5 | 36.5 | 35.1 | 35.1 | 35.1 | 24.1 | 9.7 | 9.7 | 47.2 | 23.3 | 23.3 |
| LOS by Move: | D | D | D | D | D | D | C | A | A | D | C | C |
| HCM2kAvgQ: | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 6 | 6 | 1 | 2 | 2 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 28th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.393 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 22.4 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 | 0 | 1! 0 | 0 | 1 | 0 1 | 1 | 0 | 1 | 0 1 | 1 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 3 | 12 | 3 | 158 | 2 | 19 | 94 | 648 | 0 | 11 | 121 | 174 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 3 | 12 | 3 | 158 | 2 | 19 | 94 | 648 | 0 | 11 | 121 | 174 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 2 | 20 | 24 | 0 | 0 | 13 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 3 | 12 | 3 | 158 | 2 | 21 | 114 | 672 | 0 | 11 | 134 | 174 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| PHF Volume: | 3 | 13 | 3 | 177 | 2 | 23 | 128 | 752 | 0 | 12 | 150 | 195 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 3 | 13 | 3 | 177 | 2 | 23 | 128 | 752 | 0 | 12 | 150 | 195 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 3 | 13 | 3 | 177 | 2 | 23 | 128 | 752 | 0 | 12 | 150 | 195 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.95 | 0.95 | 0.95 | 0.93 | 0.80 | 0.80 | 0.93 | 0.93 | 0.95 | 0.93 | 0.93 | 0.83 |
| Lanes: | 0.16 | 0.67 | 0.17 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 0.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 301 | 1203 | 301 | 1769 | 1527 | 1527 | 1769 | 3538 | 0 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.01 | 0.01 | 0.10 | 0.00 | 0.02 | 0.07 | 0.21 | 0.00 | 0.01 | 0.04 | 0.12 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.14 | 0.05 | 0.05 | 0.24 | 0.14 | 0.14 | 0.20 | 0.50 | 0.00 | 0.05 | 0.35 | 0.35 |
| Volume/Cap: | 0.08 | 0.22 | 0.22 | 0.42 | 0.01 | 0.11 | 0.35 | 0.42 | 0.00 | 0.14 | 0.12 | 0.35 |
| Delay/Veh: | 37.2 | 46.9 | 46.9 | 33.1 | 36.7 | 37.5 | 34.7 | 15.8 | 0.0 | 46.2 | 22.2 | 24.6 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 37.2 | 46.9 | 46.9 | 33.1 | 36.7 | 37.5 | 34.7 | 15.8 | 0.0 | 46.2 | 22.2 | 24.6 |
| LOS by Move: | D | D | D | C | D | D | C | B | A | D | C | C |
| HCM2kAvgQ: | 1 | 1 | 1 | 5 | 0 | 1 | 3 | 7 | 0 | 0 | 2 | 4 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 28th Street/Main Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.629 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 33.3 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 | 1 0 | 1 | 1 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 20 | 438 | 112 | 295 | 312 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 20 | 438 | 112 | 295 | 312 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| Added Vol: | 0 | 20 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 20 | 458 | 112 | 295 | 314 | 43 | 96 | 177 | 32 | 42 | 89 | 170 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 21 | 490 | 120 | 316 | 336 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 21 | 490 | 120 | 316 | 336 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 21 | 490 | 120 | 316 | 336 | 46 | 103 | 190 | 34 | 45 | 95 | 182 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.90 | 0.90 | 0.93 | 0.91 | 0.91 | 0.93 | 0.91 | 0.91 | 0.93 | 0.84 | 0.84 |
| Lanes: | 1.00 | 1.61 | 0.39 | 1.00 | 1.76 | 0.24 | 1.00 | 1.69 | 0.31 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 1769 | 2760 | 675 | 1769 | 3056 | 418 | 1769 | 2927 | 529 | 1769 | 1596 | 1596 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.01 | 0.18 | 0.18 | 0.18 | 0.11 | 0.11 | 0.06 | 0.06 | 0.06 | 0.03 | 0.06 | 0.11 |
| Crit Moves: | | **** | | **** | | | **** | | | | | **** |
| Green/Cycle: | 0.18 | 0.28 | 0.28 | 0.28 | 0.39 | 0.39 | 0.09 | 0.15 | 0.15 | 0.12 | 0.18 | 0.18 |
| Volume/Cap: | 0.07 | 0.63 | 0.63 | 0.63 | 0.28 | 0.28 | 0.63 | 0.42 | 0.42 | 0.21 | 0.33 | 0.63 |
| Delay/Veh: | 34.4 | 32.6 | 32.6 | 33.8 | 21.1 | 21.1 | 51.3 | 38.8 | 38.8 | 40.3 | 35.9 | 40.7 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 34.4 | 32.6 | 32.6 | 33.8 | 21.1 | 21.1 | 51.3 | 38.8 | 38.8 | 40.3 | 35.9 | 40.7 |
| LOS by Move: | C | C | C | C | C | C | D | D | D | D | D | D |
| HCM2kAvgQ: | 1 | 9 | 9 | 8 | 4 | 4 | 4 | 4 | 4 | 1 | 3 | 6 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 28th Street/Boston Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.485 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 25.9 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 6 | 528 | 207 | 213 | 657 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 6 | 528 | 207 | 213 | 657 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| Added Vol: | 0 | 20 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 6 | 548 | 207 | 213 | 659 | 33 | 35 | 171 | 9 | 7 | 6 | 27 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 6 | 592 | 224 | 230 | 712 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 6 | 592 | 224 | 230 | 712 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 6 | 592 | 224 | 230 | 712 | 36 | 38 | 185 | 10 | 8 | 6 | 29 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 0.83 | 0.93 | 0.92 | 0.92 | 0.93 | 0.97 | 0.97 | 0.93 | 0.86 | 0.86 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 1.90 | 0.10 | 1.00 | 0.95 | 0.05 | 1.00 | 0.18 | 0.82 |
| Final Sat.: | 1769 | 3538 | 1583 | 1769 | 3346 | 168 | 1769 | 1757 | 92 | 1769 | 297 | 1336 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.17 | 0.14 | 0.13 | 0.21 | 0.21 | 0.02 | 0.11 | 0.11 | 0.00 | 0.02 | 0.02 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.11 | 0.33 | 0.33 | 0.26 | 0.47 | 0.47 | 0.13 | 0.21 | 0.21 | 0.05 | 0.13 | 0.13 |
| Volume/Cap: | 0.03 | 0.51 | 0.43 | 0.51 | 0.45 | 0.45 | 0.17 | 0.51 | 0.51 | 0.09 | 0.17 | 0.17 |
| Delay/Veh: | 39.7 | 27.5 | 26.8 | 32.9 | 17.9 | 17.9 | 39.2 | 36.3 | 36.3 | 45.7 | 39.2 | 39.2 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 39.7 | 27.5 | 26.8 | 32.9 | 17.9 | 17.9 | 39.2 | 36.3 | 36.3 | 45.7 | 39.2 | 39.2 |
| LOS by Move: | D | C | C | C | B | B | D | D | D | D | D | D |
| HCM2kAvgQ: | 0 | 7 | 5 | 6 | 8 | 8 | 1 | 6 | 6 | 0 | 1 | 1 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
Unknown Method (Future Volume Alternative)

Intersection #7 28th Street/I-5 southbound ramp

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 | 2 0 | 0 | 0 0 | 1 1 | 0 | 0 0 | 0 0 | 1 | 0 0 | 0 0 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 587 | 0 | 0 | 381 | 0 | 0 | 0 | 526 | 0 | 0 | 0 |
| Growth Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Added Vol: | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| User Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCE Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MLF Adj: | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Critical Gap Module: >> Population:0 << >> Run Speed(N/S): 30 MPH << | | | | | | | | | | | | |
| Critical Gp: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Potent Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Level Of Service Module: | | | | | | | | | | | | |
| LOS by Move: | | | | | | | | | | | | |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 28th Street/National Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.731
Loss Time (sec): 16 Average Delay (sec/veh): 31.3
Optimal Cycle: 74 Level Of Service: C

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Permitted | | | Permitted | | | Protected | | | Protected | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 0 1 | 0 1 | 0 | 0 0 | 1! 0 | 0 | 1 0 | 1 1 | 0 | 1 0 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 127 | 347 | 179 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 127 | 347 | 179 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 33 | 76 | 38 | 74 | 171 | 105 | 136 | 412 | 82 | 127 | 347 | 179 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| PHF Volume: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 131 | 359 | 185 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 131 | 359 | 185 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 34 | 79 | 39 | 77 | 177 | 109 | 141 | 426 | 85 | 131 | 359 | 185 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.73 | 0.73 | 0.73 | 0.84 | 0.84 | 0.84 | 0.93 | 0.91 | 0.91 | 0.93 | 0.93 | 0.93 |
| Lanes: | 0.45 | 1.03 | 0.52 | 0.21 | 0.49 | 0.30 | 1.00 | 1.67 | 0.33 | 1.00 | 0.66 | 0.34 |
| Final Sat.: | 619 | 1426 | 713 | 338 | 781 | 479 | 1769 | 2877 | 573 | 1769 | 1166 | 601 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.06 | 0.06 | 0.23 | 0.23 | 0.23 | 0.08 | 0.15 | 0.15 | 0.07 | 0.31 | 0.31 |
| Crit Moves: | | | | | **** | | **** | | | | **** | |
| Green/Cycle: | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.11 | 0.35 | 0.35 | 0.18 | 0.42 | 0.42 |
| Volume/Cap: | 0.18 | 0.18 | 0.18 | 0.73 | 0.73 | 0.73 | 0.73 | 0.42 | 0.42 | 0.42 | 0.73 | 0.73 |
| Delay/Veh: | 25.3 | 25.3 | 25.3 | 36.3 | 36.3 | 36.3 | 56.5 | 24.8 | 24.8 | 37.5 | 27.9 | 27.9 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 25.3 | 25.3 | 25.3 | 36.3 | 36.3 | 36.3 | 56.5 | 24.8 | 24.8 | 37.5 | 27.9 | 27.9 |
| LOS by Move: | C | C | C | D | D | D | E | C | C | D | C | C |
| HCM2kAvgQ: | 2 | 2 | 2 | 11 | 11 | 11 | 6 | 6 | 6 | 4 | 15 | 15 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 I-5 northbound ramps/National Avenue

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.526 |
| Loss Time (sec): | 12 | Average Delay (sec/veh): | 18.8 |
| Optimal Cycle: | 60 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Split Phase | | | Split Phase | | | Permitted | | | Permitted | | |
| Rights: | Include | | | Include | | | Ignore | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 0 | 0 1 | 0 0 | 0 | 0 0 | 0 0 | 1 | 0 1 | 0 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 313 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 313 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 313 | 0 | 123 | 0 | 0 | 0 | 0 | 486 | 44 | 0 | 321 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.00 | 0.95 | 0.95 | 0.95 |
| PHF Volume: | 331 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 331 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 331 | 0 | 130 | 0 | 0 | 0 | 0 | 514 | 0 | 0 | 339 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 1.00 | 0.83 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 | 1.00 | 1.00 | 0.98 | 1.00 |
| Lanes: | 1.00 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 0.00 |
| Final Sat.: | 1769 | 0 | 1583 | 0 | 0 | 0 | 0 | 1862 | 1900 | 0 | 1862 | 0 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.19 | 0.00 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.00 | 0.00 | 0.18 | 0.00 |
| Crit Moves: | **** | | | | | | | **** | | | | |
| Green/Cycle: | 0.36 | 0.00 | 0.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.52 | 0.00 | 0.00 | 0.52 | 0.00 |
| Volume/Cap: | 0.53 | 0.00 | 0.23 | 0.00 | 0.00 | 0.00 | 0.00 | 0.53 | 0.00 | 0.00 | 0.35 | 0.00 |
| Delay/Veh: | 26.4 | 0.0 | 22.8 | 0.0 | 0.0 | 0.0 | 0.0 | 16.1 | 0.0 | 0.0 | 14.0 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 26.4 | 0.0 | 22.8 | 0.0 | 0.0 | 0.0 | 0.0 | 16.1 | 0.0 | 0.0 | 14.0 | 0.0 |
| LOS by Move: | C | A | C | A | A | A | A | B | A | A | B | A |
| HCM2kAvgQ: | 8 | 0 | 3 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 6 | 0 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #10 I-5 southbound ramp/Boston Avenue

Average Delay (sec/veh): 10.6 Worst Case Level Of Service: E[ 49.2]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 1 0 | 0 | 1 0 | 0 0 | 0 | 0 0 | 1 0 | 0 | 1 0 | 0 1 | 0 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 8 | 51 | 11 | 0 | 0 | 0 | 535 | 53 | 16 | 3 | 38 | 50 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | 6.4 | 6.5 | 6.2 | xxxxx | xxxx | xxxxx | 4.1 | xxxx | xxxxx | 4.1 | xxxx | xxxxx |
| FollowUpTim: | 3.5 | 4.0 | 3.3 | xxxxx | xxxx | xxxxx | 2.2 | xxxx | xxxxx | 2.2 | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | 1200 | 1225 | 61 | xxxx | xxxx | xxxxx | 88 | xxxx | xxxxx | 69 | xxxx | xxxxx |
| Potent Cap.: | 204 | 179 | 1004 | xxxx | xxxx | xxxxx | 1508 | xxxx | xxxxx | 1532 | xxxx | xxxxx |
| Move Cap.: | 148 | 115 | 1004 | xxxx | xxxx | xxxxx | 1508 | xxxx | xxxxx | 1532 | xxxx | xxxxx |
| Volume/Cap: | 0.05 | 0.44 | 0.01 | xxxx | xxxx | xxxx | 0.35 | xxxx | xxxx | 0.00 | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | 0.2 | xxxx | xxxxx | xxxx | xxxx | xxxxx | 1.6 | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Control Del: | 30.7 | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 8.7 | xxxx | xxxxx | 7.4 | xxxx | xxxxx |
| LOS by Move: | D | * | * | * | * | * | A | * | * | A | * | * |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | xxxx | xxxx | 137 | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | 2.0 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 0.0 | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | 51.6 | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | 7.4 | xxxx | xxxxx |
| Shared LOS: | * | * | F | * | * | * | * | * | * | A | * | * |
| ApproachDel: | 49.2 | | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | E | | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #13 Cleveland Street/24th Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.323 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 10.0 |
| Optimal Cycle: | 0 | Level Of Service: | B |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 1 0 | 0 1 | 0 | 1 0 | 1 0 | 1 | 0 1 | 0 1 | 0 | 0 1 | 0 1 | 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 2 | 2 | 27 | 173 | 3 | 8 | 7 | 311 | 4 | 28 | 95 | 36 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 1.00 | 0.07 | 0.93 | 1.00 | 1.00 | 1.00 | 0.04 | 1.94 | 0.02 | 0.35 | 1.20 | 0.45 |
| Final Sat.: | 517 | 43 | 578 | 535 | 574 | 646 | 28 | 1255 | 16 | 213 | 752 | 298 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.00 | 0.05 | 0.05 | 0.32 | 0.01 | 0.01 | 0.25 | 0.25 | 0.25 | 0.13 | 0.13 | 0.12 |
| Crit Moves: | | | **** | **** | | | **** | | | **** | | |
| Delay/Veh: | 9.2 | 8.3 | 8.3 | 12.0 | 8.6 | 8.0 | 9.8 | 9.8 | 9.7 | 9.3 | 9.0 | 8.6 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 9.2 | 8.3 | 8.3 | 12.0 | 8.6 | 8.0 | 9.8 | 9.8 | 9.7 | 9.3 | 9.0 | 8.6 |
| LOS by Move: | A | A | A | B | A | A | A | A | A | A | A | A |
| ApproachDel: | | 8.3 | | | 11.7 | | | 9.8 | | | 8.9 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 8.3 | | | 11.7 | | | 9.8 | | | 8.9 | |
| LOS by Appr: | | A | | | B | | | A | | | A | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.3 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #16 Tidelands Avenue/W. 32nd Street

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.096 |
| Loss Time (sec): | 0 | Average Delay (sec/veh): | 8.0 |
| Optimal Cycle: | 0 | Level Of Service: | A |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Stop Sign | | | Stop Sign | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Lanes: | 0 0 | 1 | 0 0 | 1 0 | 0 1 | 0 | 1 0 | 1 | 0 1 | 1 0 | 1 | 0 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 0 | 5 | 0 | 2 | 10 | 7 | 67 | 19 | 0 | 2 | 2 | 2 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Adjustment: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Lanes: | 0.00 | 1.00 | 0.00 | 1.00 | 0.59 | 0.41 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Final Sat.: | 0 | 738 | 0 | 671 | 463 | 324 | 701 | 777 | 914 | 674 | 743 | 869 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | xxxx | 0.01 | xxxx | 0.00 | 0.02 | 0.02 | 0.10 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| Crit Moves: | | **** | | | | **** | **** | | | **** | | |
| Delay/Veh: | 0.0 | 7.8 | 0.0 | 8.0 | 7.3 | 7.3 | 8.3 | 7.4 | 0.0 | 8.0 | 7.5 | 6.8 |
| Delay Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 0.0 | 7.8 | 0.0 | 8.0 | 7.3 | 7.3 | 8.3 | 7.4 | 0.0 | 8.0 | 7.5 | 6.8 |
| LOS by Move: | * | A | * | A | A | A | A | A | * | A | A | A |
| ApproachDel: | | 7.8 | | | 7.4 | | | 8.1 | | | 7.4 | |
| Delay Adj: | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| ApprAdjDel: | | 7.8 | | | 7.4 | | | 8.1 | | | 7.4 | |
| LOS by Appr: | | A | | | A | | | A | | | A | |
| AllWayAvgQ: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #29

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[ 0.0]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 0 | 1 | 0 0 | 0 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 15 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 15 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 15 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 15 | 0 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Move Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Volume/Cap: | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| LOS by Move: | * | * | * | * | * | * | * | * | * | * | * | * |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | * | | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #30

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[ 0.0]

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Stop Sign | | | Stop Sign | | | Uncontrolled | | | Uncontrolled | | |
| Rights: | Include | | | Include | | | Include | | | Include | | |
| Lanes: | 0 0 | 0 | 0 0 | 0 0 | 0 | 0 0 | 0 0 | 1 | 0 0 | 0 0 | 1 | 0 0 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 15 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 15 | 0 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Volume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 15 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FinalVolume: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 15 | 0 |
| Critical Gap Module: | | | | | | | | | | | | |
| Critical Gp: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Capacity Module: | | | | | | | | | | | | |
| Cnflict Vol: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Move Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Volume/Cap: | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx | xxxx |
| Level Of Service Module: | | | | | | | | | | | | |
| 2Way95thQ: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Control Del: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| LOS by Move: | * | * | * | * | * | * | * | * | * | * | * | * |
| Movement: | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | | LT - LTR - RT | | |
| Shared Cap.: | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| SharedQueue: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shrd ConDel: | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| Shared LOS: | * | * | * | * | * | * | * | * | * | * | * | * |
| ApproachDel: | xxxxxx | | | xxxxxx | | | xxxxxx | | | xxxxxx | | |
| ApproachLOS: | * | | | * | | | * | | | * | | |

Note: Queue reported is the number of cars per lane.

San Diego Sediment Project

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #48 32nd Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.676 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 34.4 |
| Optimal Cycle: | 66 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Ignore | | | Include | | | Include | | | Include | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 93 | 459 | 146 | 210 | 154 | 76 | 155 | 540 | 44 | 25 | 113 | 300 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 93 | 459 | 146 | 210 | 154 | 76 | 155 | 540 | 44 | 25 | 113 | 300 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 13 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 93 | 459 | 146 | 210 | 154 | 76 | 155 | 564 | 44 | 25 | 126 | 300 |
| User Adj: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PHF Adj: | 0.93 | 0.93 | 0.00 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 | 0.93 |
| PHF Volume: | 100 | 496 | 0 | 227 | 166 | 82 | 167 | 609 | 48 | 27 | 136 | 324 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 100 | 496 | 0 | 227 | 166 | 82 | 167 | 609 | 48 | 27 | 136 | 324 |
| PCE Adj: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| MLF Adj: | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| FinalVolume: | 100 | 496 | 0 | 227 | 166 | 82 | 167 | 609 | 48 | 27 | 136 | 324 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.93 | 1.00 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.83 | 0.93 | 0.93 | 0.83 |
| Lanes: | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1769 | 3538 | 1900 | 1769 | 3538 | 1583 | 1769 | 3538 | 1583 | 1769 | 3538 | 1583 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.06 | 0.14 | 0.00 | 0.13 | 0.05 | 0.05 | 0.09 | 0.17 | 0.03 | 0.02 | 0.04 | 0.20 |
| Crit Moves: | | **** | | **** | | | **** | | | | | **** |
| Green/Cycle: | 0.21 | 0.21 | 0.00 | 0.19 | 0.19 | 0.19 | 0.14 | 0.34 | 0.34 | 0.10 | 0.30 | 0.30 |
| Volume/Cap: | 0.27 | 0.68 | 0.00 | 0.68 | 0.25 | 0.27 | 0.68 | 0.50 | 0.09 | 0.15 | 0.13 | 0.68 |
| Delay/Veh: | 33.7 | 39.1 | 0.0 | 43.1 | 34.7 | 35.1 | 48.1 | 26.4 | 22.3 | 41.6 | 25.3 | 34.4 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 33.7 | 39.1 | 0.0 | 43.1 | 34.7 | 35.1 | 48.1 | 26.4 | 22.3 | 41.6 | 25.3 | 34.4 |
| LOS by Move: | C | D | A | D | C | D | D | C | C | D | C | C |
| HCM2kAvgQ: | 3 | 9 | 0 | 8 | 2 | 2 | 5 | 8 | 1 | 1 | 2 | 9 |

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

San Diego Sediment Project

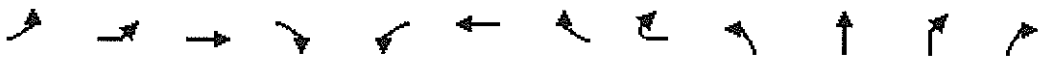
Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #49 8th Street/Harbor Drive

| | | | |
|---|---|---|---|
| Cycle (sec): | 100 | Critical Vol./Cap.(X): | 0.551 |
| Loss Time (sec): | 16 | Average Delay (sec/veh): | 27.3 |
| Optimal Cycle: | 60 | Level Of Service: | C |

| Approach: | North Bound | | | South Bound | | | East Bound | | | West Bound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement: | L | T | R | L | T | R | L | T | R | L | T | R |
| Control: | Protected | | | Protected | | | Protected | | | Protected | | |
| Rights: | Include | | | Ignore | | | Ignore | | | Ignore | | |
| Min. Green: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Y+R: | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lanes: | 1 0 | 1 0 | 1 | 1 0 | 2 0 | 1 | 2 0 | 2 0 | 1 | 1 0 | 2 0 | 1 |
| Volume Module: | | | | | | | | | | | | |
| Base Vol: | 53 | 313 | 127 | 32 | 42 | 65 | 337 | 748 | 17 | 22 | 118 | 32 |
| Growth Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Initial Bse: | 53 | 313 | 127 | 32 | 42 | 65 | 337 | 748 | 17 | 22 | 118 | 32 |
| Added Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 13 | 0 |
| PasserByVol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Initial Fut: | 53 | 313 | 127 | 32 | 42 | 65 | 337 | 772 | 17 | 22 | 131 | 32 |
| User Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| PHF Adj: | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.00 | 0.90 | 0.90 | 0.00 | 0.90 | 0.90 | 0.00 |
| PHF Volume: | 59 | 347 | 141 | 36 | 47 | 0 | 374 | 857 | 0 | 24 | 145 | 0 |
| Reduct Vol: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced Vol: | 59 | 347 | 141 | 36 | 47 | 0 | 374 | 857 | 0 | 24 | 145 | 0 |
| PCE Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| MLF Adj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 |
| FinalVolume: | 59 | 347 | 141 | 36 | 47 | 0 | 374 | 857 | 0 | 24 | 145 | 0 |
| Saturation Flow Module: | | | | | | | | | | | | |
| Sat/Lane: | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Adjustment: | 0.93 | 0.98 | 0.83 | 0.93 | 0.93 | 1.00 | 0.90 | 0.93 | 1.00 | 0.93 | 0.93 | 1.00 |
| Lanes: | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 1.00 | 2.00 | 2.00 | 1.00 | 1.00 | 2.00 | 1.00 |
| Final Sat.: | 1769 | 1862 | 1583 | 1769 | 3538 | 1900 | 3432 | 3538 | 1900 | 1769 | 3538 | 1900 |
| Capacity Analysis Module: | | | | | | | | | | | | |
| Vol/Sat: | 0.03 | 0.19 | 0.09 | 0.02 | 0.01 | 0.00 | 0.11 | 0.24 | 0.00 | 0.01 | 0.04 | 0.00 |
| Crit Moves: | | **** | | **** | | | | **** | | **** | | |
| Green/Cycle: | 0.19 | 0.32 | 0.32 | 0.05 | 0.19 | 0.00 | 0.32 | 0.42 | 0.00 | 0.05 | 0.15 | 0.00 |
| Volume/Cap: | 0.18 | 0.58 | 0.28 | 0.40 | 0.07 | 0.00 | 0.34 | 0.58 | 0.00 | 0.28 | 0.28 | 0.00 |
| Delay/Veh: | 34.5 | 29.7 | 25.5 | 49.0 | 33.6 | 0.0 | 26.1 | 22.9 | 0.0 | 47.5 | 38.2 | 0.0 |
| User DelAdj: | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| AdjDel/Veh: | 34.5 | 29.7 | 25.5 | 49.0 | 33.6 | 0.0 | 26.1 | 22.9 | 0.0 | 47.5 | 38.2 | 0.0 |
| LOS by Move: | C | C | C | D | C | A | C | C | A | D | D | A |
| HCM2kAvgQ: | 2 | 9 | 3 | 2 | 1 | 0 | 4 | 10 | 0 | 1 | 2 | 0 |

Note: Queue reported is the number of cars per lane.



| Movement | EBL2 | EBL | EBT | EBR | WBL | WBT | WBR | WBR2 | NBL | NBT | NBR | NBR2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Volume (vph) | 34 | 3 | 187 | 26 | 115 | 10 | 6 | 3 | 6 | 134 | 2 | 77 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 |
| Lane Util. Factor | 1.00 | | 0.95 | | 1.00 | 1.00 | | | 1.00 | 0.95 | | 0.95 |
| Frt | 1.00 | | 0.98 | | 1.00 | 0.93 | | | 1.00 | 0.99 | | 0.85 |
| Flt Protected | 0.95 | | 1.00 | | 0.95 | 1.00 | | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (prot) | 1770 | | 3472 | | 1770 | 1730 | | | 1770 | 1751 | | 1504 |
| Flt Permitted | 0.73 | | 0.95 | | 0.59 | 1.00 | | | 0.95 | 1.00 | | 1.00 |
| Satd. Flow (perm) | 1365 | | 3311 | | 1104 | 1730 | | | 1770 | 1751 | | 1504 |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 37 | 3 | 205 | 29 | 126 | 11 | 7 | 3 | 7 | 147 | 2 | 85 |
| RTOR Reduction (vph) | 0 | 0 | 10 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 65 |
| Lane Group Flow (vph) | 37 | 0 | 227 | 0 | 126 | 19 | 0 | 0 | 7 | 156 | 0 | 11 |
| Turn Type | pm+pt | Perm | | | pm+pt | | | | Split | | | Perm |
| Protected Phases | 7 | | 4 | | 3 | 8 | | | 2 | 2 | | |
| Permitted Phases | 4 | 4 | | | 8 | | | | | | | 2 |
| Actuated Green, G (s) | 17.9 | | 13.5 | | 17.5 | 13.3 | | | 11.0 | 11.0 | | 11.0 |
| Effective Green, g (s) | 17.9 | | 13.5 | | 17.5 | 13.3 | | | 11.0 | 11.0 | | 11.0 |
| Actuated g/C Ratio | 0.24 | | 0.18 | | 0.24 | 0.18 | | | 0.15 | 0.15 | | 0.15 |
| Clearance Time (s) | 4.0 | | 4.0 | | 4.0 | 4.0 | | | 4.0 | 4.0 | | 4.0 |
| Vehicle Extension (s) | 3.0 | | 3.0 | | 3.0 | 3.0 | | | 3.0 | 3.0 | | 3.0 |
| Lane Grp Cap (vph) | 357 | | 609 | | 301 | 313 | | | 265 | 262 | | 225 |
| v/s Ratio Prot | 0.01 | | | | c0.02 | 0.01 | | | 0.00 | c0.09 | | |
| v/s Ratio Perm | 0.02 | | 0.07 | | c0.08 | | | | | | | 0.01 |
| v/c Ratio | 0.10 | | 0.37 | | 0.42 | 0.06 | | | 0.03 | 0.60 | | 0.05 |
| Uniform Delay, d1 | 21.4 | | 26.2 | | 22.9 | 24.9 | | | 26.6 | 29.1 | | 26.7 |
| Progression Factor | 1.00 | | 1.00 | | 1.00 | 1.00 | | | 1.00 | 1.00 | | 1.00 |
| Incremental Delay, d2 | 0.1 | | 0.4 | | 0.9 | 0.1 | | | 0.0 | 3.6 | | 0.1 |
| Delay (s) | 21.6 | | 26.6 | | 23.9 | 25.0 | | | 26.7 | 32.8 | | 26.8 |
| Level of Service | C | | C | | C | C | | | C | C | | C |
| Approach Delay (s) | | | 25.9 | | | 24.0 | | | | 30.7 | | |
| Approach LOS | | | C | | | C | | | | C | | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM Average Control Delay | 37.4 | HCM Level of Service | D |
| HCM Volume to Capacity ratio | 0.66 | | |
| Actuated Cycle Length (s) | 73.4 | Sum of lost time (s) | 24.0 |
| Intersection Capacity Utilization | 57.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | SBL | SBT | SBR | SWL2 | SWR | SWR2 |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Volume (vph) | 52 | 789 | 93 | 6 | 6 | 1 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 0.85 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3539 | 1583 | 1770 | 1583 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3539 | 1583 | 1770 | 1583 | |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 57 | 867 | 102 | 7 | 7 | 1 |
| RTOR Reduction (vph) | 0 | 0 | 72 | 0 | 1 | 0 |
| Lane Group Flow (vph) | 57 | 867 | 30 | 7 | 7 | 0 |
| Turn Type | Split | | Perm | Prot | custom | |
| Protected Phases | 6 | 6 | | 1 | | |
| Permitted Phases | | | 6 | | 5 | |
| Actuated Green, G (s) | 18.7 | 18.7 | 18.7 | 1.0 | 1.0 | |
| Effective Green, g (s) | 18.7 | 18.7 | 18.7 | 1.0 | 1.0 | |
| Actuated g/C Ratio | 0.25 | 0.25 | 0.25 | 0.01 | 0.01 | |
| Clearance Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 451 | 902 | 403 | 24 | 22 | |
| v/s Ratio Prot | 0.03 | c0.24 | | c0.00 | | |
| v/s Ratio Perm | | | 0.02 | | c0.00 | |
| v/c Ratio | 0.13 | 0.96 | 0.08 | 0.29 | 0.32 | |
| Uniform Delay, d1 | 21.1 | 27.0 | 20.8 | 35.8 | 35.9 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.1 | 21.0 | 0.1 | 6.7 | 8.2 | |
| Delay (s) | 21.2 | 48.0 | 20.9 | 42.5 | 44.1 | |
| Level of Service | C | D | C | D | D | |
| Approach Delay (s) | | 43.8 | | | | |
| Approach LOS | | D | | | | |

| Intersection Summary |
|---|