



## Division of Land / Environmental Review

City Hall • 200 N. Spring Street, Room 750 • Los Angeles, CA 90012



### *Volume II*

## ***DRAFT ENVIRONMENTAL IMPACT REPORT***

### ***Technical Appendices C-F***

#### ***WEST LOS ANGELES COMMUNITY PLAN AREA***

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## ***10131 Constellation Boulevard***

***ENV-2004-6269-EIR  
State Clearinghouse No. 2005051145***

***Council District 5***

**THIS DOCUMENT COMPRISES THE FIRST PART OF THE ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE PROJECT DESCRIBED. THE FINAL EIR, WHICH WILL ALSO CIRCULATE FOR PUBLIC REVIEW AND COMMENT, COMPRISES THE SECOND AND FINAL PART.**

**Project Address:** 10131 Constellation Boulevard, Century City, CA 90067-4603

**Project Description:** Project Permit (Pursuant to the Century City North Specific Plan), Vesting Tentative Tract Map, Site Plan Review Findings, revision of an existing covenant and agreement with the City, Haul Route Permit and any other ministerial or discretionary permits to construct 483 residential condominium units in three separate buildings: two 47-story towers and one 12-story loft building. The two towers would each contain 194 units and would be approximately 570 feet above grade. The loft building would contain 95 units and would be approximately 135 feet above grade. A one-story recreational facility centered around a swimming pool would serve to connect the two 47-story towers. The Project would include at least 1.7 acres of open space, including a landscaped feature at the corner of Avenue of the Stars and Constellation Boulevard. The total proposed floor area is approximately 1,293,000 square feet and a total of 1,208 parking spaces would be provided. The Project is located on a 5.5-acre site in the C2-2-O zone. The Project will also include the demolition of approximately 35,000 square feet of commercial floor area including offices, drive-through bank facility, restaurant and nightclub; the majority of the site is undeveloped.

**APPLICANT:**

**Century City Realty LCC**

**PREPARED BY:**

**Environmental Review Section  
Los Angeles City Planning Department**

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**November 2005**

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LADOT ASSESSMENT LETTER

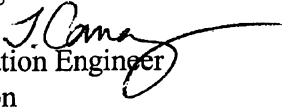
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**CITY OF LOS ANGELES**  
**INTER-DEPARTMENTAL CORRESPONDENCE**

10131 W. Constellation Blvd.  
 DOT Case No. WLA 05-010

Date: October 27, 2005

To: Emily Gabel-Luddy, Associate Zoning Administrator  
 Department of City Planning

From: Tomas Carranza, Transportation Engineer   
 Department of Transportation

Subject: **TRAFFIC ASSESSMENT FOR THE PROPOSED 483-UNIT CONDOMINIUM PROJECT AT 10131 WEST CONSTELLATION BOULEVARD**

Pursuant to the West Los Angeles Transportation Improvement and Mitigation Specific Plan Ordinance No. 171,492 (WLA TIMP), the Department of Transportation (DOT) has completed the traffic assessment of the proposed 483-unit condominium project located at 10131 Constellation Boulevard. This traffic assessment is based on a traffic study prepared by Kaku Associates, Inc. received by DOT on July 28, 2005 with subsequent revisions received on October 24, 2005. After a careful review of the pertinent data, DOT has determined that the traffic study adequately describes the project-related impacts of the proposed development.

**DISCUSSION AND FINDINGS**

The proposed 483-unit condominium project will be constructed on a site that is currently occupied by approximately 6,700 square feet of office space, a 9,150 square-foot bank, and a 19,754 square-foot restaurant. After taking into account the existing use trip credits, the project is expected to result in a 1,636 net reduction in daily trips, an increase of 48 net new a.m. peak hour trips and a 154 net reduction in p.m. peak hour trips. The trip generation estimates are based on rates from Appendix "A" of the WLA TIMP and formulas published by the Institute of Transportation Engineers (ITE) Trip Generation, 7<sup>th</sup> Edition, 2003.

| Land Use    | Size<br>(dwelling units) | Net New Daily Trips | Net New AM Peak Hour Trips |     |       | Net New PM Peak Hour Trips |        |        |
|-------------|--------------------------|---------------------|----------------------------|-----|-------|----------------------------|--------|--------|
|             |                          | Total               | In                         | Out | Total | In                         | Out    | Total  |
| Condominium | 483                      | (-1,636)            | (-38)                      | 86  | 48    | (-49)                      | (-105) | (-154) |

DOT has determined that the proposed project will not have significant traffic impacts at any of the intersections or residential streets studied. Attachment A summarizes the volume-to-capacity (V/C) ratios and levels of service (LOS) at the study intersections.

DOT recommends that the following project requirements be adopted as conditions of project approval. These requirements must be completed and/or guaranteed before the issuance of any building permits for the proposed project.

**PROJECT REQUIREMENTS****A. Covenant and Agreement**

Pursuant to Section 4.B of the WLA TIMP, the owner(s) of the property must sign and record a Covenant and Agreement prior to issuance of any building permit, acknowledging the contents and limitations of this Specific Plan in a form designed to run with the land.

**B. Site Access and Internal Circulation**

This determination does not include approval of the project's driveways, internal circulation and parking scheme. Adverse traffic impacts could occur due to access and circulation issues. The applicant is advised to consult with DOT for driveway locations and specifications prior to the commencement of any architectural plans, as they may affect building design. Final DOT approval shall be obtained prior to issuance of any building permits. This should be accomplished by submitting detailed site/driveway plans, at a scale of at least 1" = 40', separately to DOT's WLA/Coastal Development Review Section at 7166 W. Manchester Avenue, Los Angeles 90045 as soon as possible but prior to submittal of building plans for plan check to the Department of Building and Safety.

In order to minimize and prevent last minute building design changes, it is highly imperative that the applicant, prior to the commencement of building or parking layout design efforts, contact DOT for driveway width and internal circulation requirements. This would ensure that such traffic flow considerations are designed and incorporated early into the building and parking layout plans to avoid any unnecessary time delays and potential costs associated with late design changes.

**C. Highway Dedication and Physical Street Improvements**

Pursuant to Section 4.E.2 of the WLA TIMP, and in order to mitigate potential access and circulation impacts, the applicant may be required to make highway dedications and improvements. The applicant shall consult the Bureau of Engineering for any highway dedication or street widening requirements. These requirements must be guaranteed before the issuance of any building permit through the B-permit process of the Bureau of Engineering, Department of Public Works. They must be constructed and completed prior to the issuance of any certificate of occupancy to the satisfaction of DOT and the Bureau of Engineering.

Pursuant to Section 8.A of the WLA TIMP, an applicant or any other interested person adversely affected by the proposed Project who disputes any determination made by DOT pursuant to this Ordinance may appeal to the General Manager of DOT. This appeal must be filed within a 15 day period following the applicant's receipt date of this letter of determination. The appeal shall set forth specifically the basis of the appeal and the reasons why the determination should be reversed or modified.

Emily Gabel-Luddy

- 3 -

October 27, 2005

If you have any questions, please feel free to call Hui Huang of my staff or me at (213) 485-1062.

HH:hmh

Attachments

c: Renee Schillaci, Fifth Council District  
Tom Gaul, Kaku Associates  
Mike Patonai, BOE  
Jay Kim, DOT





**ATTACHMENT A**  
**483-Unit Condominium Project at 10131 Constellation Boulevard**

Summary of Volume to Capacity Ratios (V/C) and Levels of Service (LOS)

| No. | Intersection                            | Peak Hour | Year 2005 Existing |     | Year 2010 w/o Project |     | Year 2010 w/ Project |     | Project Impact |     |
|-----|---|-----------|--------------------|-----|-----------------------|-----|----------------------|-----|----------------|-----|
|     |   |           | V/C                | LOS | V/C                   | LOS | V/C                  | LOS | V/C            | LOS |
| 1.  | Beverly Glen Blvd & Wilshire Blvd       | AM        | 0.913              | E   | 1.075                 | F   | 1.074                | F   | -0.001         |     |
|     |   | PM        | 0.928              | E   | 1.193                 | F   | 1.192                | F   | -0.001         |     |
| 2.  | Overland Ave & Santa Monica Blvd N      | AM        | 0.999              | E   | 1.162                 | F   | 1.161                | F   | -0.001         |     |
|     |   | PM        | 0.859              | D   | 1.129                 | F   | 1.129                | F   | 0.000          |     |
| 3.  | Overland Ave & Santa Monica Blvd S      | AM        | 0.601              | B   | 0.367                 | A   | 0.367                | A   | 0.000          |     |
|     |   | PM        | 0.582              | A   | 0.514                 | A   | 0.514                | A   | 0.000          |     |
| 4.  | Beverly Glen Blvd & Santa Monica Blvd N | AM        | 0.939              | E   | 1.199                 | F   | 1.197                | F   | -0.002         |     |
|     |   | PM        | 0.903              | E   | 1.232                 | F   | 1.228                | F   | -0.004         |     |
| 5.  | Beverly Glen Blvd & Santa Monica Blvd S | AM        | 0.875              | D   | 0.401                 | A   | 0.401                | A   | 0.000          |     |
|     |   | PM        | 0.911              | E   | 0.503                 | A   | 0.503                | A   | 0.000          |     |
| 6.  | Century Park W & Santa Monica Blvd S    | AM        | 0.391              | A   | 1.111                 | F   | 1.106                | F   | -0.005         |     |
|     |   | PM        | 0.489              | A   | 1.057                 | F   | 1.052                | F   | -0.005         |     |
| 7.  | Club View Dr & Santa Monica Blvd N      | AM        | 0.625              | B   | 0.183                 | A   | 0.183                | A   | 0.000          |     |
|     |   | PM        | 0.724              | C   | 0.350                 | A   | 0.350                | A   | 0.000          |     |
| 8.  | Ave of the Stars & Santa Monica Blvd N  | AM        | 1.062              | F   | 1.414                 | F   | 1.417                | F   | 0.003          |     |
|     |   | PM        | 0.789              | C   | 1.024                 | F   | 1.007                | F   | -0.017         |     |
| 9.  | *Ave of the Stars & Santa Monica Blvd S | AM        | 0.522              | A   | N/A                   | N/A | N/A                  | N/A | N/A            |     |
|     |   | PM        | 0.551              | A   |                       |     |                      |     |                |     |

\* This intersection will be removed as part of the Santa Monica Boulevard Transit Parkway Project.

**ATTACHMENT A (continued)**  
**483-Unit Condominium Project at 10131 Constellation Boulevard**

Summary of Volume to Capacity Ratios (V/C) and Levels of Service (LOS)

| No. | Intersection                          | Peak Hour | Year 2005 Existing |     | Year 2010 w/o Project |     | Year 2010 w/ Project |     | Project Impact |     |
|-----|---------------------------------------|-----------|--------------------|-----|-----------------------|-----|----------------------|-----|----------------|-----|
|     |                                       |           | V/C                | LOS | V/C                   | LOS | V/C                  | LOS | V/C            | LOS |
| 10. | Century Park E & Santa Monica Blvd N  | AM<br>PM  | 0.813              | D   | 1.184                 | F   | 1.174                | F   | -0.010         |     |
|     |                                       |           | 0.785              | C   | 0.870                 | D   | 0.860                | D   | -0.010         |     |
| 11. | *Century Park E & Santa Monica Blvd S | AM<br>PM  | 0.810              | D   | N/A                   | N/A | N/A                  | N/A | N/A            |     |
|     |                                       |           | 0.662              | B   |                       |     |                      |     |                |     |
| 12. | Century Park W & Constellation Blvd   | AM<br>PM  | 0.612              | B   | 0.612                 | B   | 0.611                | B   | -0.001         |     |
|     |                                       |           | 0.405              | A   | 0.410                 | A   | 0.401                | A   | -0.009         |     |
| 13. | Ave of the Stars & Constellation Blvd | AM<br>PM  | 0.690              | B   | 0.773                 | C   | 0.798                | C   | 0.025          |     |
|     |                                       |           | 0.738              | C   | 0.874                 | D   | 0.851                | D   | -0.023         |     |
| 14. | Century Park E & Constellation Blvd   | AM<br>PM  | 0.397              | A   | 0.548                 | A   | 0.553                | A   | 0.005          |     |
|     |                                       |           | 0.574              | A   | 0.633                 | B   | 0.638                | B   | 0.005          |     |
| 15. | Overland Ave & Olympic Blvd           | AM<br>PM  | 1.387              | F   | 1.629                 | F   | 1.631                | F   | 0.002          |     |
|     |                                       |           | 1.293              | F   | 1.534                 | F   | 1.529                | F   | -0.005         |     |
| 16. | Beverly Glen Blvd & Olympic Blvd      | AM<br>PM  | 0.916              | E   | 1.067                 | F   | 1.062                | F   | -0.005         |     |
|     |                                       |           | 0.954              | E   | 1.070                 | F   | 1.067                | F   | -0.003         |     |
| 17. | Century Park W & Olympic Blvd         | AM<br>PM  | 0.833              | D   | 0.960                 | E   | 0.964                | E   | 0.004          |     |
|     |                                       |           | 1.122              | F   | 1.304                 | F   | 1.290                | F   | -0.014         |     |
| 18. | Ave of the Stars & Olympic Blvd (WB)  | AM<br>PM  | 0.563              | A   | 0.597                 | A   | 0.594                | A   | -0.003         |     |
|     |                                       |           | 0.513              | A   | 0.527                 | A   | 0.505                | A   | -0.022         |     |

\* This intersection will be removed as part of the Santa Monica Boulevard Transit Parkway Project.

**ATTACHMENT A (continued)  
483-Unit Condominium Project at 10131 Constellation Boulevard**

Summary of Volume to Capacity Ratios (V/C) and Levels of Service (LOS)

| No. | Intersection                         | Peak Hour | Year 2005 Existing |     | Year 2010 w/o Project |     | Year 2010 w/ Project |     | Project Impact |     |
|-----|--------------------------------------|-----------|--------------------|-----|-----------------------|-----|----------------------|-----|----------------|-----|
|     |                                      |           | V/C                | LOS | V/C                   | LOS | V/C                  | LOS | V/C            | LOS |
| 19. | Ave of the Stars & Olympic Blvd (EB) | AM        | 0.398              | A   | 0.517                 | A   | 0.514                | A   | 0.003          |     |
|     |                                      | PM        | 0.368              | A   | 0.459                 | A   | 0.459                | A   | 0.000          |     |
| 20. | Century Park E & Olympic Blvd        | AM        | 0.807              | D   | 0.934                 | E   | 0.934                | E   | 0.000          |     |
|     |                                      | PM        | 0.839              | D   | 0.975                 | E   | 0.972                | E   | -0.003         |     |
| 21. | Ave of the Stars & Galaxy Way        | AM        | 0.322              | A   | 0.447                 | A   | 0.447                | A   | 0.000          |     |
|     |                                      | PM        | 0.485              | A   | 0.649                 | B   | 0.652                | B   | 0.003          |     |
| 22. | Ave of the Stars & Empyrean Way      | AM        | 0.418              | A   | 0.545                 | A   | 0.543                | A   | -0.002         |     |
|     |                                      | PM        | 0.366              | A   | 0.468                 | A   | 0.471                | A   | 0.003          |     |
| 23. | Overland Ave & Pico Blvd             | AM        | 1.256              | F   | 1.472                 | F   | 1.472                | F   | 0.000          |     |
|     |                                      | PM        | 1.312              | F   | 1.453                 | F   | 1.447                | F   | -0.006         |     |
| 24. | Patricia Ave & Pico Blvd             | AM        | 0.748              | C   | 0.788                 | C   | 0.791                | C   | 0.003          |     |
|     |                                      | PM        | 0.715              | C   | 0.719                 | C   | 0.718                | C   | -0.001         |     |
| 25. | Beverly Glen Blvd & Pico Blvd        | AM        | 0.745              | C   | 0.860                 | D   | 0.863                | D   | 0.003          |     |
|     |                                      | PM        | 0.671              | B   | 0.732                 | C   | 0.730                | C   | -0.002         |     |
| 26. | Motor Ave & Pico Blvd                | AM        | 1.252              | F   | 1.438                 | F   | 1.436                | F   | -0.002         |     |
|     |                                      | PM        | 1.331              | F   | 1.449                 | F   | 1.443                | F   | -0.006         |     |
| 27. | Ave of the Stars & Pico Blvd         | AM        | 0.833              | D   | 1.061                 | F   | 1.060                | F   | -0.001         |     |
|     |                                      | PM        | 0.850              | D   | 0.934                 | E   | 0.933                | E   | -0.001         |     |

**ATTACHMENT A (continued)  
483-Unit Condominium Project at 10131 Constellation Boulevard**

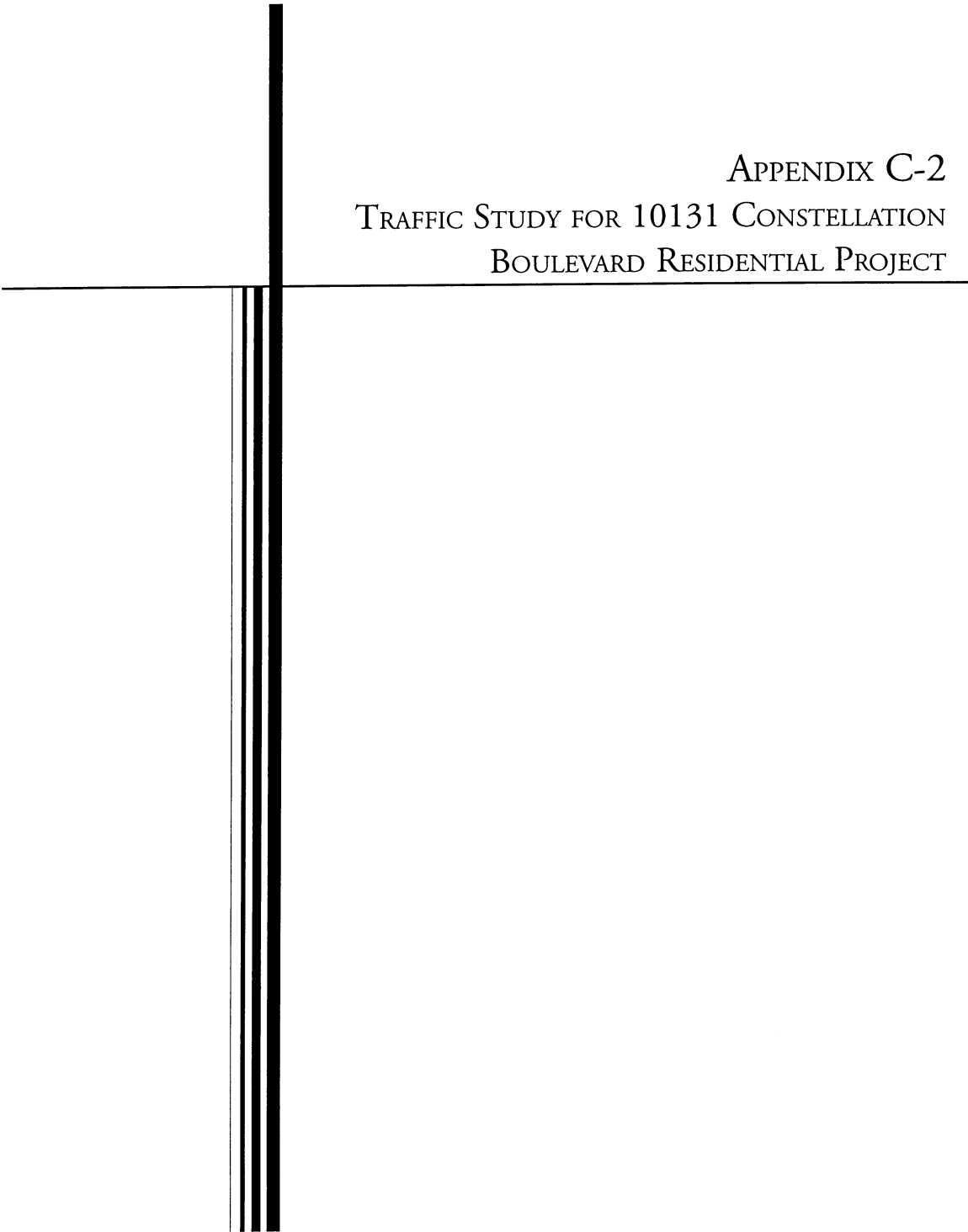
Summary of Volume to Capacity Ratios (V/C) and Levels of Service (LOS)

| No. | Intersection               | Peak Hour | Year 2005 Existing |     | Year 2010 w/o Project |     | Year 2010 w/ Project |     | Project Impact |     |
|-----|----------------------------|-----------|--------------------|-----|-----------------------|-----|----------------------|-----|----------------|-----|
|     |                            |           | V/C                | LOS | V/C                   | LOS | V/C                  | LOS | V/C            | LOS |
| 28. | Century Park E & Pico Blvd | AM        | 0.707              | C   | 0.819                 | D   | 0.816                | D   | -0.003         |     |
|     |                            | PM        | 0.691              | B   | 0.781                 | C   | 0.776                | C   | -0.005         |     |
| 29. | Motor Ave & Manning Ave    | AM        | 0.920              | E   | 1.076                 | F   | 1.075                | F   | -0.001         |     |
|     |                            | PM        | 0.782              | C   | 0.873                 | D   | 0.869                | D   | -0.004         |     |

Summary of Volume to Capacity Ratios (V/C) and Levels of Service (LOS)  
of Study Intersections Under City of Beverly Hills Jurisdiction\*\*

| No. | Intersection                        | Peak Hour | Year 2005 Existing |     | Year 2010 w/o Project |     | Year 2010 w/ Project |     | Project Impact |     |
|-----|-------------------------------------|-----------|--------------------|-----|-----------------------|-----|----------------------|-----|----------------|-----|
|     |                                     |           | V/C                | LOS | V/C                   | LOS | V/C                  | LOS | V/C            | LOS |
| 30. | Santa Monica Blvd N & Wilshire Blvd | AM        | 1.232              | F   | 1.358                 | F   | 1.356                | F   | -0.002         |     |
|     |                                     | PM        | 1.051              | F   | 1.276                 | F   | 1.272                | F   | -0.004         |     |
| 31. | Santa Monica Blvd S & Wilshire Blvd | AM        | 1.205              | F   | 1.454                 | F   | 1.454                | F   | 0.000          |     |
|     |                                     | PM        | 1.056              | F   | 1.245                 | F   | 1.242                | F   | -0.003         |     |
| 32. | Spalding Dr & Olympic Blvd          | AM        | 1.173              | F   | 1.324                 | F   | 1.323                | F   | -0.001         |     |
|     |                                     | PM        | 0.973              | E   | 1.085                 | F   | 1.083                | F   | -0.002         |     |

\*\* Study Intersections were analyzed using the Intersection Capacity Utilization (ICU) methodology to determine intersection V/C ratio, which is the intersection LOS methodology required by the City of Beverly Hills.



APPENDIX C-2  
TRAFFIC STUDY FOR 10131 CONSTELLATION  
BOULEVARD RESIDENTIAL PROJECT



***DRAFT***

**TRAFFIC STUDY  
FOR  
10131 CONSTELLATION BOULEVARD  
RESIDENTIAL PROJECT**

October 2005

Prepared for:

**CENTURY CITY REALTY**

Prepared by:

**KAKU ASSOCIATES, INC.**  
201 Santa Monica Boulevard, Suite 500  
Santa Monica, California 90401  
(310) 458-9916

Ref: 1792





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## I. INTRODUCTION

This report documents the assumptions, methodologies, and findings of a study conducted by Kaku Associates, Inc. to evaluate the potential traffic impacts of the proposed development of 483 high-rise residential condominium units at 10131 Constellation Boulevard in the Century City area of the City of Los Angeles, California.

### PROJECT DESCRIPTION

The proposed project is located on the northeast corner of Avenue of the Stars and Constellation Boulevard.<sup>1</sup> The project site is currently occupied by three structures that provide office, commercial bank and drive-through bank facility, restaurant, and nightclub uses. These structures are located along the street frontages of Avenue of the Stars and Constellation Boulevard. The remainder of the project site is undeveloped. The existing structures and the associated parking would be removed for the redevelopment of the project site. Figure 1 illustrates the location of the proposed project in relation to the surrounding street system.

The proposed project's site plan, illustrated in Figure 2, involves the construction of residential condominiums in three structures. The proposed project consists of the following components:

- Tower 1 with 194 condominiums
- Tower 2 with 194 condominiums
- A structure with 95 loft-style housing units

Parking for the proposed project will be provided in four subterranean levels. Vehicular access to the project site would be provided from the following three access points:

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<sup>1</sup> Note: Avenue of the Stars is considered to be north-south and Constellation Boulevard east-west for the purpose of this report.

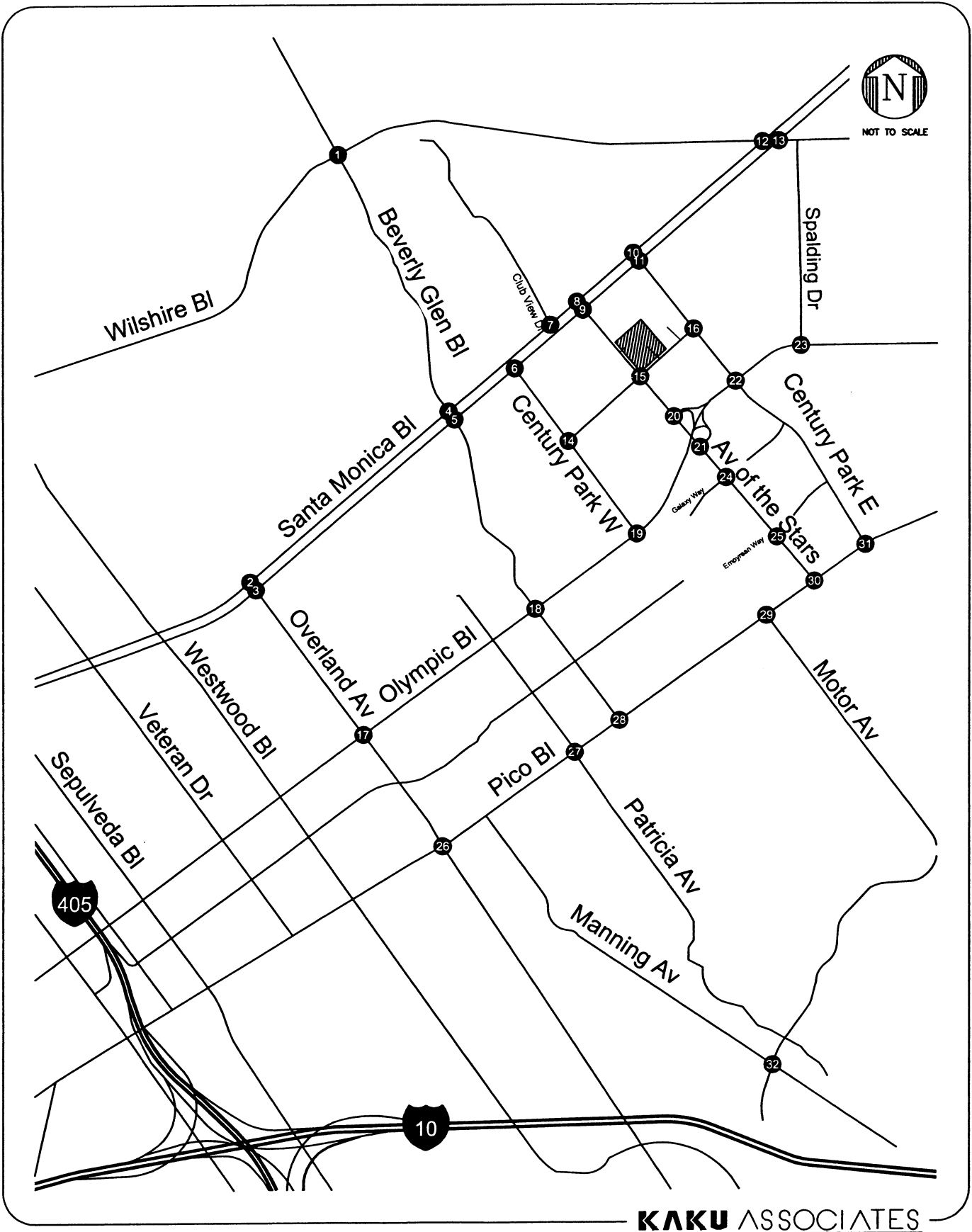
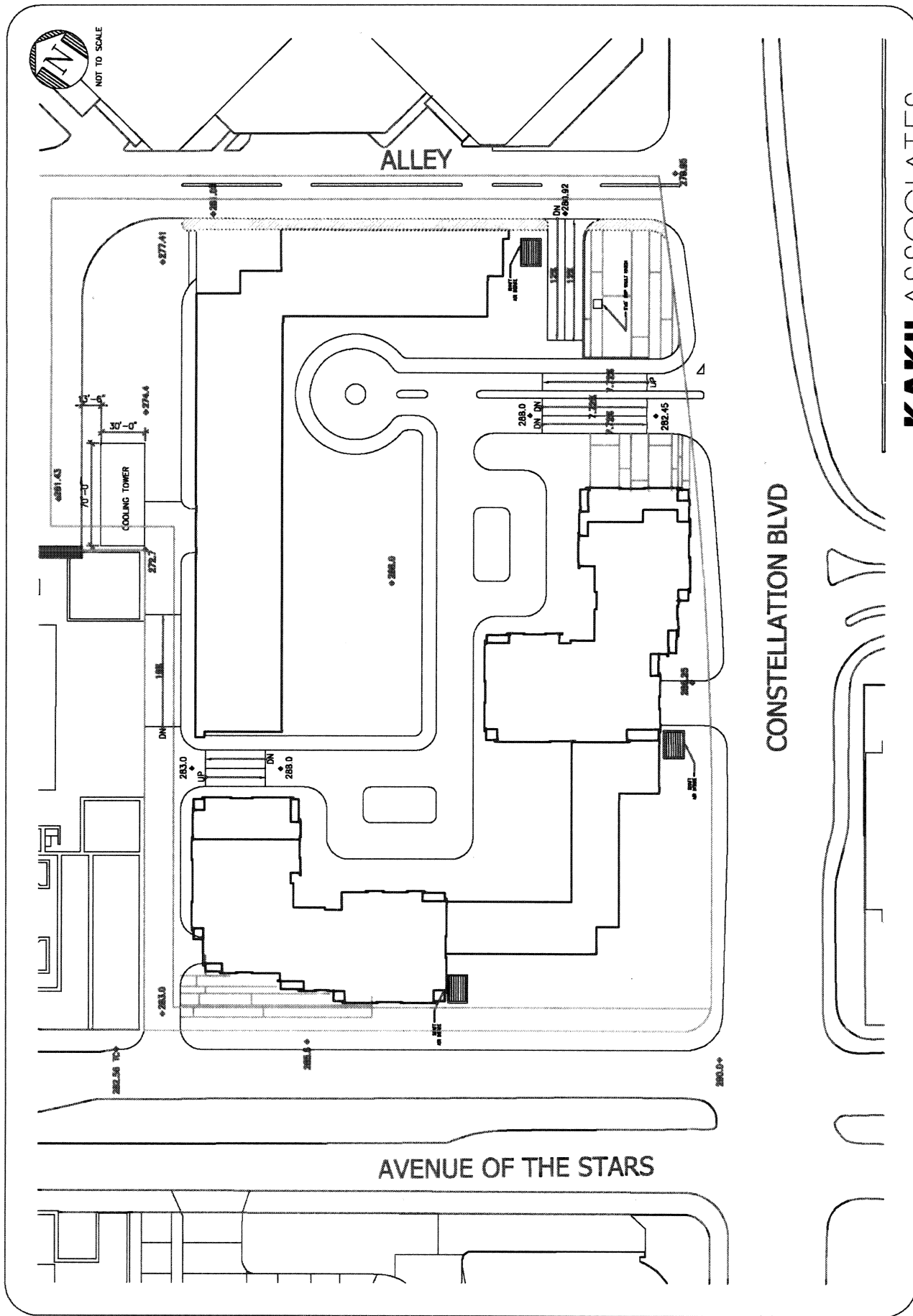


FIGURE 1  
PROJECT LOCATION & ANALYZED INTERSECTIONS



**KAKU ASSOCIATES**

**FIGURE 2  
SITE PLAN**

- The main driveway along Constellation Boulevard would lead to the central plaza and the drop-off areas at the main entrances of each of the residential structures. Valet services and a concierge would be located at each building entrance.
- A driveway located along the eastern boundary of the site approximately 100 feet east of the main driveway would provide access to the project's below-grade parking. This project driveway would provide vehicular access to the project site via shared use of the existing private alley. The existing alley, which provides access to Watt Towers and 10100 Santa Monica Boulevard, would be widened and reconfigured to align with the eastern boundary of the project site.
- A driveway located on Avenue of the Stars along the northern boundary of the project site would provide access to the underground parking and to the central plaza and drop-off areas. This driveway would be accessible from northbound Avenue of the Stars with access restricted to right turns in and right turns out only.

## STUDY SCOPE

The scope of work for this study was determined by the City of Los Angeles Department of Transportation (LADOT). The base assumptions and technical methodologies were discussed as part of the study approach and agreed to in a memorandum of understanding. The study, which is directed at the analysis of potential project-generated traffic impacts on the adjacent street system, assumes that the project would be completed by 2010. The analysis of future year traffic impacts is based on projected conditions in 2010 both with and without the addition of the project traffic. The following traffic scenarios have been developed and analyzed as part of this study:

- Existing Conditions - The analysis of existing traffic conditions is intended to provide a basis for the remainder of the study. The existing conditions analysis includes a description of the street system serving the site, existing traffic volumes, and an assessment of the operating conditions at these locations. It was determined by LADOT that, since current construction of the Santa Monica Parkway has resulted in temporarily abnormal and below average traffic volumes along Santa Monica Boulevard, existing counts would not be conducted.<sup>2</sup> Instead, traffic data from a traffic study conducted prior to Parkway construction and certified by LADOT was used for the purpose of assessment of existing operating conditions with conservative growth assumptions to account for ambient growth and actual related project growth.

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<sup>2</sup> Recent traffic counts taken after the start of the Santa Monica Parkway construction indicate that peak period traffic volumes along Santa Monica Boulevard in the Century City area have declined from between 18% and 47% depending upon direction and peak hour. See Appendix B.



- Cumulative Base (2010) Conditions - Future traffic projections without the proposed project were developed for the year 2010. The objective of this analysis was to project future traffic growth and operating conditions that could be expected to result from regional growth and related projects in the vicinity of the project site by the year 2010.
- Cumulative (2010) plus Project Conditions - This traffic scenario provides projected traffic volumes and an assessment of operating conditions under future conditions with the addition of project-generated traffic. The impacts of the proposed project on future traffic operating conditions were then identified.

LADOT identified the following 32 intersections, illustrated in Figure 1, to be analyzed as part of the scope of work for this project:

1. Beverly Glen Boulevard & Wilshire Boulevard
2. Overland Avenue & Santa Monica Boulevard (North)
3. Overland Avenue & Santa Monica Boulevard (South)
4. Beverly Glen Boulevard & Santa Monica Boulevard (North)
5. Beverly Glen Boulevard & Santa Monica Boulevard (South)
6. Century Park West & Santa Monica Boulevard (South)
7. Club View Drive & Santa Monica Boulevard (North)
8. Avenue of the Stars & Santa Monica Boulevard (North)
9. Avenue of the Stars & Santa Monica Boulevard (South)
10. Century Park East & Santa Monica Boulevard (North)
11. Century Park East & Santa Monica Boulevard (South)
12. Santa Monica Boulevard (North) & Wilshire Boulevard
13. Santa Monica Boulevard (South) & Wilshire Boulevard
14. Century Park West & Constellation Boulevard
15. Avenue of the Stars & Constellation Boulevard
16. Century Park East & Constellation Boulevard
17. Overland Avenue & Olympic Boulevard
18. Beverly Glen Boulevard & Olympic Boulevard
19. Century Park West & Olympic Boulevard
20. Avenue of the Stars & Olympic Boulevard (westbound ramps)
21. Avenue of the Stars & Olympic Boulevard (eastbound ramps)
22. Century Park East & Olympic Boulevard
23. Spalding Drive & Olympic Boulevard
24. Avenue of the Stars & Galaxy Way
25. Avenue of the Stars & Empyrean Way
26. Overland Avenue & Pico Boulevard
27. Patricia Avenue & Pico Boulevard
28. Beverly Glen Boulevard & Pico Boulevard
29. Motor Avenue & Pico Boulevard
30. Avenue of the Stars & Pico Boulevard
31. Century Park East & Pico Boulevard
32. Motor Avenue & Manning Avenue

## **ORGANIZATION OF REPORT**

This report is divided into nine chapters. Chapter I provides an introduction to the study and presents details of the various elements of the study. Chapter II describes the existing conditions in the study area including an inventory of the streets, highways, and transit service in the study area, a summary of traffic volumes, and an assessment of operating conditions. The methodologies used to develop traffic forecasts for the cumulative base and cumulative plus project scenarios and the forecasts themselves are included in Chapter III. Chapter IV presents an assessment of potential project traffic impacts of the proposed project. Chapter V addresses the potential for project impact on local residential streets. The results of the regional transportation system analysis are provided in Chapter VI. Chapter VII provides an assessment of the proposed project access scheme, while Chapter VIII provides an analysis of parking for the project. Chapter IX summarizes the analyses and study conclusions. Appendices to this report include details of the technical analysis.

## II. EXISTING CONDITIONS

A comprehensive data collection effort was undertaken to develop a detailed description of existing conditions within the study area. The assessment of conditions relevant to this study includes a description of the study area, an inventory of the local street system in the vicinity of the project site, a review of traffic volumes on these facilities, an assessment of the resulting operating conditions, and the current transit service in the study area. A detailed description of these elements is presented in this chapter.

### STUDY AREA

The project site is located within the West Los Angeles Community Plan area and the Century City North Specific Plan area in the City of Los Angeles, approximately ten miles west of downtown Los Angeles and approximately six miles east of the Pacific Ocean. Access to the site would be provided via driveways on Constellation Boulevard and Avenue of the Stars. The study area for this analysis extends one to two miles from the project site in each direction.

### EXISTING STREET SYSTEM

Major arterials serving the study area include Santa Monica Boulevard, Olympic Boulevard, and Pico Boulevard in the east-west direction and Avenue of the Stars and Beverly Glen Boulevard in the north-south direction. The San Diego Freeway (I-405) about two miles to the west of the project site and the Santa Monica Freeway (I-10) about two miles to the south of the project site provide regional access to and from the study area:

#### *Freeways*

- The Santa Monica Freeway (I-10) runs in an east-west direction and extends from the Pacific Ocean eastward through downtown Los Angeles and beyond. In the vicinity of the study area, the freeway provides four lanes in each direction plus auxiliary lanes.

Interchanges are provided at Overland Avenue, National Boulevard (to and from the east only), and Robertson Avenue.

- The San Diego Freeway (I-405) runs in a north-south direction, extending from the northern part of the San Fernando Valley through Los Angeles County and into Orange County. In the vicinity of the study area, the freeway provides four lanes in each direction plus auxiliary lanes. Surface street access is provided via interchanges at Santa Monica Boulevard and Pico Boulevard/Olympic Boulevard (to and from the north only).

#### *East-West Streets*

- Santa Monica Boulevard is a Class I major highway (State Route 2) and consists of two roadways, North Santa Monica Boulevard and Little Santa Monica Boulevard, in the project study area. North Santa Monica Boulevard, the larger of the two roadways, provides two to three lanes in each direction plus left-turn channelization at all major intersections. Little Santa Monica Boulevard provides two to four lanes plus left-turn channelization in the study area.

Currently North Santa Monica Boulevard and Little Santa Monica Boulevard are under construction in the project study area. The two roadways are being reconstructed to combine them into one roadway, termed the "Santa Monica Transit Parkway," extending from Sepulveda Boulevard in the west to east of Century Park East in the east. Chapter III of this report details information regarding the future configuration of the Santa Monica Transit Parkway upon completion of the ongoing construction.

- Olympic Boulevard is a Class II major highway providing three lanes in the eastbound direction and four lanes in the westbound direction plus left-turn channelization at intersections. Olympic Boulevard is grade-separated at the intersection with Avenue of the Stars and is connected to it by cloverleaf ramps.
- Pico Boulevard is a Class II major highway south of the project site and provides three lanes of traffic in each direction plus left-turn channelization at most intersections.
- Wilshire Boulevard is a Class I major highway north of the site and provides three to four lanes in each direction with left-turn channelization at intersections.
- Constellation Boulevard is a secondary highway facility limited to the Century City portion of the project study area. It extends from Century Park West in the west to Century Park East in the east and provides three lanes in each direction, with left-turn channelization. Constellation Boulevard bounds the project site to the south and provides vehicular access to the project site at two of the three proposed access locations.
- Galaxy Way is an east-west collector street connecting Avenue of the Stars and Century Park East south of Olympic Boulevard.
- Empyrean Way is an east-west collector street connecting Avenue of the Stars and Century Park East north of Pico Boulevard.
- Manning Avenue is an east-west collector street running south of the project site in the study area. Manning Avenue becomes a secondary highway southeast of Motor Avenue.

### *North-South Streets*

- Overland Avenue is a north-south Class II major highway running west of the project site. This facility provides two lanes in each direction with left-turn channelization. North of Pico Boulevard, this highway becomes a secondary highway and terminates at Santa Monica Boulevard.
- Beverly Glen Boulevard is a north-south Class II major highway running west of the project site in the study area. This facility provides two lanes in each direction with left-turn channelization. Beverly Glen Boulevard terminates at Pico Boulevard.
- Century Park West is a north-south secondary highway running west of the project site in the study area. This facility is limited to the Century City area, extending from Santa Monica Boulevard in the north to Olympic Boulevard in the south. It provides two to four lanes, including turn lanes, in each direction.
- Avenue of the Stars is a north/south Class II major highway and bounds the project site on the west side. This facility is limited to the Century City area, extending from North Santa Monica Boulevard in the north to Pico Boulevard in the south and providing three lanes in each directions plus left-turn channelization. Avenue of the Stars provides restricted vehicular access of right turn in and right turn out to the project site.
- Century Park East is a north/south secondary highway running east of the project site. This facility is limited to the Century City area, extending from North Santa Monica Boulevard in the north to Pico Boulevard in the south and providing three lanes in each direction, with left-turn channelization.
- Motor Avenue is a north/south collector street that extends from Pico Boulevard to Manning Avenue and becomes a secondary highway south of Manning Avenue. This facility provides two lanes in each direction from Pico Boulevard to Monte Mar Drive, and one lane in each direction to Manning Avenue.
- Patricia Avenue is a north-south local street running west of the project site in the study area. It becomes a collector street south of Pico Boulevard.
- Spalding Drive is a north-south local street located in the City of Beverly Hills east of Century City.

Lane configurations at the study intersections are illustrated in Appendix A.

## **EXISTING BASE TRAFFIC VOLUMES AND LEVELS OF SERVICE**

This section presents existing base peak hour traffic volumes, describes the methodology used to assess the traffic conditions at each intersection, and analyzes the resulting operating conditions at each, indicating volume/capacity ratios and levels of service.

### **Existing Base Traffic Volumes**

The Santa Monica Transit Parkway construction project currently underway is causing abnormal traffic conditions along Santa Monica Boulevard and other major streets in the area such as Wilshire Boulevard and Olympic Boulevard, including temporary changes in lane configurations along Santa Monica Boulevard, temporary reductions in traffic volumes along Santa Monica Boulevard, and shifts of traffic to other routes.<sup>3</sup> LADOT determined that traffic data from the approved traffic study for the 2000 Avenue of the Stars project<sup>4</sup> would be used as the base data for the purpose of assessing operating conditions (as the traffic counts for this study were conducted prior to the commencement of construction activity on Santa Monica Boulevard), with the addition of conservative growth assumptions to account for ambient growth (1.5% per year) and growth from related projects actually constructed between the count base year and the 2005 base year. The a.m. and p.m. peak hour traffic data obtained from the approved traffic study is contained in Appendix C and the list of related projects constructed between the count base year and the 2005 base year and included in this analysis is presented in Appendix D. The 2005 base year peak hour traffic volumes thus estimated are illustrated in Figure 3. These volumes represent estimates of what 2005 volumes could otherwise have been if the Santa Monica Parkway construction was not temporarily causing abnormal conditions.

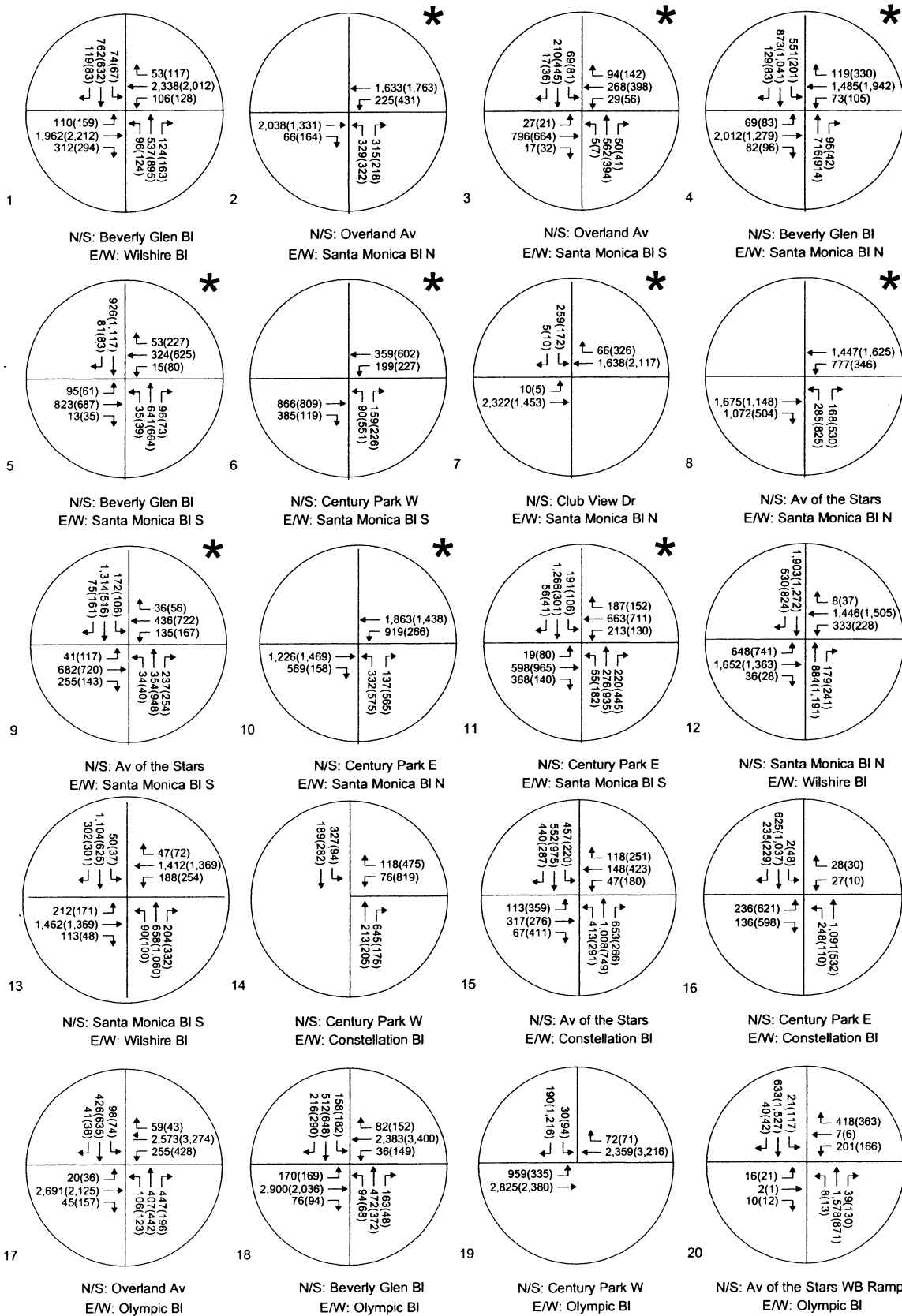
### **Level of Service Methodology**

Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow on the street system, ranging from excellent conditions at LOS A to overloaded conditions at

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<sup>3</sup> Recent traffic counts taken after the start of the Santa Monica Parkway construction indicate that peak period traffic volumes along Santa Monica Boulevard in the Century City area have declined from between 18% and 47% depending upon direction and peak hour. See Appendix B.

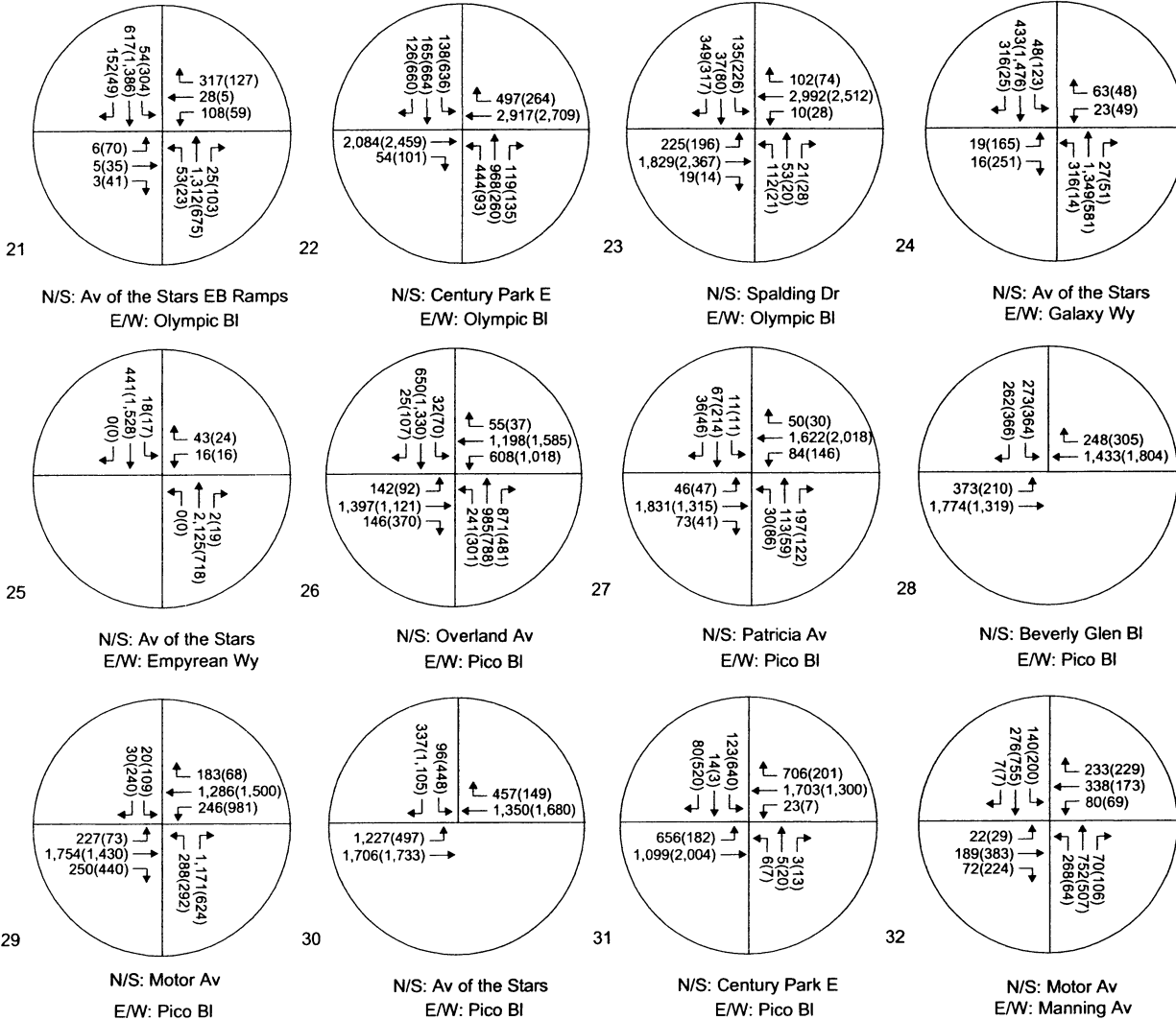
<sup>4</sup> *Traffic Impact Study for Office, Commercial and Cultural Use Project at 2000 Avenue of the Stars, Century City*, Crain & Associates, June 2002.



\* Assumes lane configuration prior to the commencement of construction activity on Santa Monica Boulevard.  
NOTE: XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES

**KAKU ASSOCIATES**

**FIGURE 3 (1 OF 2)**  
**EXISTING BASE YEAR (2005) PEAK HOUR TRAFFIC VOLUMES**



NOTE: XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES

**KAKU ASSOCIATES**

**FIGURE 3 (2 OF 2)  
EXISTING BASE YEAR (2005) PEAK HOUR TRAFFIC VOLUMES**



LOS F. Level of service definitions for signalized intersections are provided in Table 1. All of the study intersections are controlled by traffic signals except for the intersection of Empyrean Way/Avenue of the Stars.

There are a variety of standard methodologies to analyze LOS. According to the LADOT's *Traffic Study Policies and Procedures*, this study is required to utilize the "Critical Movement Analysis – Planning" (Transportation Research Board, 1980) (CMA) method of intersection capacity calculation to analyze signalized intersections, with the exception of the intersections of North Santa Monica Boulevard/Wilshire Boulevard, Little Santa Monica/Wilshire Boulevard, and Spalding Drive/Olympic Boulevard. Those three intersections are under City of Beverly Hills jurisdiction and were analyzed using both the Intersection Capacity Utilization (ICU) methodology consistent with the requirements of the City of Beverly Hills and the CMA methodology used by City of Los Angeles. The CMA and ICU methodologies determine the intersection volume-to-capacity (V/C) ratio. The V/C ratio is then used to find the corresponding LOS based on the definitions in Table 1.

The City of Los Angeles provides a 7% credit toward increased capacity (e.g., 0.07 reduction in the volume-to-capacity ratio) at any intersection where the City's Automated Traffic Surveillance and Control (ATSAC) system is implemented and an additional 3% capacity increase (0.03 reduction in V/C ratio) at intersections where the City's Adaptive Traffic Control System (ATCS) is implemented. All but five of the study intersections operate under both ATSAC and ATCS control. The exceptions are as follows:

- 12. Santa Monica Boulevard (North) & Wilshire Boulevard - neither ATSAC nor ATCS
- 13. Santa Monica Boulevard (South) & Wilshire Boulevard - neither ATSAC nor ATCS
- 23. Spalding Drive & Olympic Boulevard - ATSAC only, not ATCS
- 25. Avenue of the Stars & Empyrean Way - neither ATSAC nor ATCS
- 32. Motor Avenue & Manning Avenue - ATSAC only, not ATCS

### **Existing Levels of Service**

The year 2005 estimated traffic volumes presented in Figure 3 were analyzed using the intersection capacity analysis methodology described above to determine the estimated existing base (2005) operating conditions at the 32 study intersections. The intersection level of service worksheets are included in Appendix E.

**TABLE 1**  
**LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS**

| Level of Service | Intersection Capacity Utilization | Definition  |
|------------------|-----------------------------------|---|
| A                | 0.000-0.600                       | EXCELLENT. No Vehicle waits longer than one red light and no approach phase is fully used.  |
| B                | 0.601-0.700                       | VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.  |
| C                | 0.701-0.800                       | GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.   |
| D                | 0.801-0.900                       | FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.                              |
| E                | 0.901-1.000                       | POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.  |
| F                | > 1.000                           | FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches.<br>Tremendous delays with continuously increasing queue lengths |

Source: Transportation Research Board, *Highway Capacity Manual, Special Report 209, 1994*

Table 2 summarizes the results of this analysis indicating the existing a.m. and p.m. peak hour V/C ratio and corresponding level of service at each of the analyzed intersections. As indicated in the table, existing levels of service have been calculated for the intersections along Santa Monica Boulevard located within the limits of the Santa Monica Parkway construction zone using the lane configurations and signal phasing that existed prior to commencement of the construction.

The following 14 intersections are estimated to operate at LOS E or F during the a.m. peak hour, the p.m. peak hour, or both:

1. Beverly Glen Boulevard & Wilshire Boulevard
2. Overland Avenue & Santa Monica Boulevard (North)
4. Beverly Glen Boulevard & Santa Monica Boulevard (North)
5. Beverly Glen Boulevard & Santa Monica Boulevard (South)
8. Avenue of the Stars & Santa Monica Boulevard (North)
12. Santa Monica Boulevard (North) & Wilshire Boulevard
13. Santa Monica Boulevard (South) & Wilshire Boulevard
17. Overland Avenue & Olympic Boulevard
18. Beverly Glen Boulevard & Olympic Boulevard
19. Century Park West & Olympic Boulevard
23. Spalding Drive & Olympic Boulevard
26. Overland Avenue & Pico Boulevard
29. Motor Avenue & Pico Boulevard
32. Motor Avenue & Manning Avenue

## **EXISTING TRANSIT SERVICE**

The study area is well served by public transportation facilities. The Los Angeles County Metropolitan Transportation Authority (MTA), Los Angeles Department of Transportation (LADOT), the Santa Monica Big Blue Bus (SM), Culver City Bus (CC), Santa Clarita Transit (SC), and the Antelope Valley Transit Authority (AVTA) provide public transit service to the Century City area. The following bus routes provide service to the vicinity of the project site:

- MTA 28/328 - These transit lines are operated by the MTA and provide service between Century City and the downtown area of Los Angeles with line 328 providing peak hour express service. In the study area, these lines travel on Olympic Boulevard, Avenue of the Stars, Santa Monica Boulevard, Century Park West and Constellation Boulevard, with stops on Constellation Boulevard and Avenue of the Stars adjacent to the project site.

**TABLE 2  
EXISTING BASE YEAR (2005) INTERSECTION LEVEL OF SERVICE ANALYSIS**

| Intersection                                       | Peak Hour  | Existing Base Year<br>(Year 2005) Estimates |     |
|--|------------|---|-----|
|  |            | V/C or Delay                                | LOS |
| *1 Beverly Glen Blvd & Wilshire Blvd               | A.M.       | 0.913                                       | E   |
|  | P.M.       | 0.928                                       | E   |
| *2 Overland Ave & Santa Monica Blvd (N) [1]        | A.M.       | 0.999                                       | E   |
|  | P.M.       | 0.859                                       | D   |
| *3 Overland Ave & Santa Monica Blvd (S) [1]        | A.M.       | 0.601                                       | B   |
|  | P.M.       | 0.582                                       | A   |
| *4 Beverly Glen Blvd & Santa Monica Blvd (N) [1]   | A.M.       | 0.939                                       | E   |
|  | P.M.       | 0.903                                       | E   |
| *5 Beverly Glen Blvd & Santa Monica Blvd (S) [1]   | A.M.       | 0.875                                       | D   |
|  | P.M.       | 0.911                                       | E   |
| *6 Century Park West & Santa Monica Blvd (S) [1]   | A.M.       | 0.391                                       | A   |
|  | P.M.       | 0.489                                       | A   |
| *7 Club View Dr & Santa Monica Blvd (N) [1]        | A.M.       | 0.625                                       | B   |
|  | P.M.       | 0.724                                       | C   |
| *8 Avenue of the Stars & Santa Monica Blvd (N) [1] | A.M.       | 1.062                                       | F   |
|  | P.M.       | 0.789                                       | C   |
| *9 Avenue of the Stars & Santa Monica Blvd (S) [1] | A.M.       | 0.522                                       | A   |
|  | P.M.       | 0.551                                       | A   |
| *10 Century Park East & Santa Monica Blvd (N) [1]  | A.M.       | 0.813                                       | D   |
|  | P.M.       | 0.785                                       | C   |
| *11 Century Park East & Santa Monica Blvd (S) [1]  | A.M.       | 0.810                                       | D   |
|  | P.M.       | 0.662                                       | B   |
| 12 Santa Monica Blvd (N) & Wilshire Blvd [2]       | (CMA) A.M. | 1.365                                       | F   |
|  | (ICU) A.M. | 1.232                                       | F   |
|  | (CMA) P.M. | 1.271                                       | F   |
|  | (ICU) P.M. | 1.051                                       | F   |
| 13 Santa Monica Blvd (S) & Wilshire Blvd [2]       | (CMA) A.M. | 1.287                                       | F   |
|  | (ICU) A.M. | 1.205                                       | F   |
|  | (CMA) P.M. | 1.113                                       | F   |
|  | (ICU) P.M. | 1.056                                       | F   |
| *14 Century Park West & Constellation Blvd         | A.M.       | 0.612                                       | B   |
|  | P.M.       | 0.405                                       | A   |
| *15 Avenue of the Stars & Constellation Blvd       | A.M.       | 0.690                                       | B   |
|  | P.M.       | 0.738                                       | C   |
| *16 Century Park East & Constellation Blvd         | A.M.       | 0.397                                       | A   |
|  | P.M.       | 0.574                                       | A   |
| *17 Overland Ave & Olympic Blvd                    | A.M.       | 1.387                                       | F   |
|  | P.M.       | 1.293                                       | F   |
| *18 Beverly Glen Blvd & Olympic Blvd               | A.M.       | 0.916                                       | E   |
|  | P.M.       | 0.954                                       | E   |
| *19 Century Park West & Olympic Blvd               | A.M.       | 0.833                                       | D   |
|  | P.M.       | 1.122                                       | F   |
| *20 Avenue of the Stars & Olympic Blvd (WB Ramps)  | A.M.       | 0.563                                       | A   |
|  | P.M.       | 0.513                                       | A   |

**TABLE 2  
EXISTING BASE YEAR (2005) INTERSECTION LEVEL OF SERVICE ANALYSIS**

| Intersection                                      | Peak Hour | Existing Base Year (Year 2005) Estimates |       |
|---|-----------|--|-------|
|   |           | V/C or Delay                             | LOS   |
| *21 Avenue of the Stars & Olympic Blvd (EB Ramps) | A.M.      | 0.398                                    | A     |
|   | P.M.      | 0.368                                    | A     |
| *22 Century Park East & Olympic Blvd              | A.M.      | 0.807                                    | D     |
|   | P.M.      | 0.839                                    | D     |
| **23 Spalding Dr & Olympic Blvd [2]               | (CMA)     | A.M.                                     | 1.056 |
|   |           | (ICU)                                    | 1.173 |
|   | (CMA)     | P.M.                                     | 0.972 |
|   |           | (ICU)                                    | 0.973 |
| *24 Avenue of the Stars & Galaxy Way              | A.M.      | 0.322                                    | A     |
|   | P.M.      | 0.485                                    | A     |
| 25 Avenue of the Stars & Empyrean Way [3]         | A.M.      | 0.418                                    | A     |
|   | P.M.      | 0.366                                    | A     |
| *26 Overland Ave & Pico Blvd                      | A.M.      | 1.256                                    | F     |
|   | P.M.      | 1.312                                    | F     |
| *27 Patricia Ave & Pico Blvd                      | A.M.      | 0.748                                    | C     |
|   | P.M.      | 0.715                                    | C     |
| *28 Beverly Glen Blvd & Pico Blvd                 | A.M.      | 0.745                                    | C     |
|   | P.M.      | 0.671                                    | B     |
| *29 Motor Ave & Pico Blvd                         | A.M.      | 1.252                                    | F     |
|   | P.M.      | 1.331                                    | F     |
| *30 Avenue of the Stars & Pico Blvd               | A.M.      | 0.833                                    | D     |
|   | P.M.      | 0.850                                    | D     |
| *31 Century Park East & Pico Blvd                 | A.M.      | 0.707                                    | C     |
|   | P.M.      | 0.691                                    | B     |
| **32 Motor Ave & Manning Ave                      | A.M.      | 0.920                                    | E     |
|   | P.M.      | 0.782                                    | C     |

Notes:

\* Intersection is currently operating under ATSAC & ATCS system.

\*\* Intersection is currently operating under ATSAC system only.

[1] Levels of service for intersections along Santa Monica Boulevard within the limits of the Santa Monica Transit Parkway construction zone have been calculated using the lane configurations and signal phasing that existed prior to commencement of construction.

[2] Intersection under City of Beverly Hills jurisdiction. Analyzed using both Critical Movement Analysis (CMA) methodology used by City of Los Angeles, and Intersection Capacity Utilization (ICU) methodology used by City of Beverly Hills to determine intersection V/C ratio.

[3] Unsignalized Intersection

- MTA 316 - This limited-stop line operated by the MTA and operated between Cedars-Sinai Medical Center in Beverly Hills and the downtown area of Los Angeles. In the study area, the service provides a “shortline” extension loop from Santa Monica Boulevard via Century Park West to Constellation Boulevard to Avenue of the Stars with a stop on Avenue of the Stars at Constellation Boulevard adjacent to the project site.
- MTA 16 - This transit line operated by MTA provides service between Century City and the downtown area of Los Angeles. In the study area, this line travels on Olympic Boulevard, Avenue of the Stars, Santa Monica Boulevard, and Century Park West with a late night and early morning loop on Constellation Boulevard. It has stops along Avenue of the Stars adjacent to the project site.
- LADOT 534 - This line is a LADOT Commuter Express providing limited-stop westbound morning peak period express service to West Los Angeles and eastbound evening peak period express service to Union Station/downtown Los Angeles on weekdays. In the study area, Line 534 travels on Olympic Boulevard and Century Park East and has stops at the intersection location of Constellation Boulevard and Century Park East near the project site.
- LADOT 573 - This line is a LADOT Commuter Express providing limited-stop extended southbound morning peak period express service to West Los Angeles and northbound evening peak period express service to Encino and Mission Hills on weekdays. In the study area, Line 573 travels on Santa Monica Boulevard and loops into the Century City area with a stop at the intersection of Avenue of the Stars and Constellation Boulevard adjacent to the project site.
- SM 5 - This transit line is operated by the City of Santa Monica’s Big Blue Bus and provides service between downtown, Santa Monica and Pico – Rimpau Transit Center. The line travels along Olympic Boulevard in the study area with a loop into Century City via Century Park West, Constellation Boulevard and Century Park East. It provides a stop at the intersection of Constellation Boulevard and Avenue of the Stars adjacent to the project site.
- CC 3 - This transit line is operated by Culver City Bus and provides service between Century City and Fox Hills Mall south of Culver City. In the study area the line travels along Olympic Boulevard and loops into Century City via Century Park West, Constellation Boulevard, and Century Park East and provides a stop along Constellation Boulevard adjacent to the project site.
- SC 797 - This transit line is operated by Santa Clarita Transit and provides express southbound morning peak period to and northbound afternoon peak period commuter service to/from UCLA, Westwood, and Century City. In the study area, this line travels on Constellation Boulevard and serves a stop on Avenue of the Stars adjacent to the project site.
- SC 792 - This transit line is also operated by Santa Clarita Transit and provides reverse express service northbound in the morning peak period and southbound in the afternoon peak period. In the study area, this line travels on Constellation Boulevard and serves a stop on Avenue of the Stars adjacent to the project site.

- AVTA 786 - This transit line is operated by Antelope Valley Transit and provides peak period express commuter service between Lancaster and Palmdale in the Antelope Valley and West Los Angeles including the area of Century City. In the study area, this line serves a bus stop at Avenue of the Stars and Constellation Boulevard adjacent to the project site.





### III. FUTURE YEAR (2010) TRAFFIC PROJECTIONS

Estimates of future traffic conditions both with and without the proposed project were necessary to evaluate the potential impact of the proposed project on the local street system. The cumulative base traffic scenario represents future traffic conditions without the addition of the proposed project, while the cumulative plus project scenario represents future traffic conditions with the development of the proposed project. The development of these future traffic scenarios is described in this chapter.

#### **FUTURE ROADWAY IMPROVEMENTS**

Several key roadway improvements in or near the study area are expected to be completed by 2010. These improvements, whether the result of local or regional capital improvement programs or as mitigation for entitled related projects, would result in capacity changes at various locations throughout the study area. These changes would affect the operations of several study intersections and/or would result in changes to the existing traffic patterns in the study area and are assumed to be in place by the study horizon year of 2010. Details of the anticipated street improvements and related changes in existing traffic patterns are described below.

#### **Santa Monica Transit Parkway Project**

The Santa Monica Transit Parkway Project is currently being constructed according to the "Classic Boulevard" design alternative. This design alternative is a multimodal transportation improvement that will consolidate North Santa Monica Boulevard and Little Santa Monica Boulevard and provide three travel lanes in each direction with a center landscaped median, bike lanes on either side of the median, and side medians separating the boulevard from one-way local access roads. The Parkway Project will provide parking, a two-way Little Santa Monica Boulevard between Overland Avenue and Beverly Glen Boulevard for local access, freeway ramp improvements, and transit improvements.

The Santa Monica Transit Parkway Project would involve a shift in future traffic volumes from Little Santa Monica Boulevard (does not exist in the future from Beverly Glen Boulevard in the west to east of Century Park East) to Santa Monica Parkway. Appendix A contains information regarding improvements to various analyzed study intersections to be implemented as part of the Santa Monica Transit Parkway Project.

### **Other Roadway Improvements**

The Fox Studios expansion project involved implementation of a number of mitigation measures affecting intersections within the study area. Most of these mitigation measures have previously been implemented. The mitigation measure proposed at the Avenue of the Stars/Constellation Boulevard intersection (modification of the northbound Avenue of the Stars approach to provide a shared northbound through/right-turn lane) is presently under construction and therefore has been assumed to be in place as part of the year 2010 future analysis in this report. The mitigation measure proposed at the Avenue of the Stars/Pico Boulevard intersection has not been implemented and, to be conservative, has not been assumed to be in place as part of the year 2010 future analysis in this report.

The Constellation Place project also implemented mitigation measures within the study area. These included improvements at the Avenue of the Stars/Constellation Boulevard and Century Park West/Olympic Boulevard intersections and implementation of a sub-regional ATCS program. These mitigation measures have already been implemented and were reflected in the existing conditions analysis in Chapter II.

Finally, the Century City Neighborhood Traffic Management Plan (NTMP), adopted in July 2003 and consisting of a series of measures to enhance flow on arterial streets and discourage travel on residential streets, is being implemented in two phases. Many of the measures contained in Phase I of the Century City NTMP have already been implemented.

Appendix A illustrates the existing year 2005 and future year 2010 intersection lane configurations in the study area.

## CUMULATIVE BASE TRAFFIC PROJECTIONS

### Areawide Traffic Growth

The cumulative base traffic projections reflect growth in traffic from two primary sources: background or ambient growth in the existing traffic volumes to reflect the effects of overall regional growth both in and outside of the study area, and traffic generated by specific projects located within, or in the vicinity of, the study area. These factors are described below.

Based on historic trends and at the direction of LADOT, it was established that an ambient growth factor of 1.5% per year should be applied to adjust the existing base year traffic volumes to reflect the effects of regional growth and development by the year 2010. This adjustment was applied to the base year 2005 traffic volume data to reflect the effect of ambient growth by the year 2010.

### Cumulative Project Traffic Generation and Assignment

Cumulative base traffic forecasts include the effects of specific projects, called related projects, expected to be implemented in the vicinity of the proposed project site prior to the buildout date of the proposed project. The list of related projects was prepared by obtaining data from various sources, including those listed below:

- *Traffic Impact Study for Office, Commercial and Cultural Use Project at 2000 Avenue of the Stars, Century City, Crain & Associates, June 2002*
- *Traffic Analysis for 35-Unit Condominium Project Located at the Southeast Corner of Wilshire Boulevard and Comstock Avenue in Westwood Village, Crain & Associates, November 2004*
- Staff of City of Los Angeles for cumulative projects in the City of Los Angeles
- City of Beverly Hills cumulative projects data

A total of 49 cumulative projects were identified within the study area and are summarized in Table 3. Their locations are illustrated in Figure 4.

**TABLE 3  
RELATED PROJECTS LIST AND TRIP GENERATION**

| Proj # | Address                                     | Jurisdiction          | Size  | Unit  | Description  | Daily Trips  |   |  | AM Peak Hour Trips                            |  |  | PM Peak Hour Trips |     |       |
|--------|---|-----------------------|---|---|--|--|---|--|---|--|--|--------------------|-----|-------|
|        |   |                       |   |   |  | In   | Out   | Total  | In  | Out  | Total  | In                 | Out | Total |
| 1      | UCLA Westwood Campus                        | Los Angeles           | 2000<br>296.7<br>1500<br>101.9<br>95<br>166<br>1710                 | Beds<br>KSF<br>SP<br>KSF<br>KSF<br>KSF<br>KSF | University Expansion [5]<br>- Southwest Campus Housing<br>- Northwest Campus Phase II Developments<br>- Intramural Field Parking Structure<br>- Physics and Astronomy Building<br>- Luck Research Ctr., Thermal Energy Storage<br>- California NanoSystems Institute<br>- Academic Health Center Seismic Replacement<br>- Remaining 2002 LRDP Growth | 2,496<br>428<br>5,630<br>18<br>137<br>98<br>nom.<br>544<br>9,351 | 214<br>0<br>53<br>0<br>0<br>0<br>nom.<br>267<br>228 | 234<br>21<br>442<br>2<br>10<br>11<br>nom.<br>720 | 194<br>7<br>139<br>0<br>2<br>0<br>nom.<br>342 | 118<br>40<br>324<br>2<br>10<br>13<br>nom.<br>507 | 312<br>47<br>463<br>2<br>12<br>13<br>nom.<br>849 |                    |     |       |
|        |   | County of Los Angeles | 937   | KSF   | Federal Bureau of Investigation (FBI) Office [5]   | 26,161   | 1,843   | 2,071  | 1,046   | 2,327  | 3,373  |                    |     |       |
| 2      | 11000 Wilshire Boulevard                    | Los Angeles           | 115   | KSF   | Shopping Center [4] [5]  | 3,374  | 73  | 91   | 164   | 228  | 213  |                    |     |       |
| 3      | 1001 Tiverton Avenue                        | Los Angeles           | 350   | DU  | Apartments   |  |   |  |   |  |  |                    |     |       |
| 4      | SEC Broxton Av./Le Conte Av.                | Los Angeles           | 15  | KSF   | Retail [5] [12]  |  |   |  |   |  |  |                    |     |       |
| 5      | 10886 Le Conte Av                           | Los Angeles           | 2,993   | KSF   | High Turnover Restaurant   | 4,598  | 149   | 45   | 195   | 195  | 271  |                    |     |       |
| 6      | 10852 Lindbrook Avenue                      | Los Angeles           | 74<br>1,135   | KSF<br>Seats                                  | Medical Office<br>Theater (34,000 KSF)   |  |   |  |   |  |  |                    |     |       |
| 7      | 10886 Le Conte Av                           | Los Angeles           | 106   | Seats   | Theater Expansion (12,900 KSF)   | 191  | 1   | 0  | 1   | 8  | 8  |                    |     |       |
| 8      | 10852 Lindbrook Avenue                      | Los Angeles           | 19  | DU  | Apartments [5]   | 128  | 2   | 8  | 10  | 6  | 3  |                    |     |       |
| 9      | NEC Wilshire Bl/Devon Av.                   | Los Angeles           | 6.1<br>(16.1)   | KSF   | Specialty Retail   | 270  | 4   | 3  | 7   | 13   | 18   |                    |     |       |
| 10     | 10776 Wilshire Boulevard                    | Los Angeles           | 119   | DU  | Less - Existing Specialty Retail   | (714)<br>(316)   | (11)<br>(5)   | (8)<br>3   | (19)<br>(2)                                   | (35)<br>(16)                                     | (46)<br>(25)                                     |                    |     |       |
| 11     | 700 N Faring Road                           | Los Angeles           | 122.2   | KSF   | Subtotal   | 126  | 2   | 8  | 10  | 6  | 3  |                    |     |       |
| 12     | 10250 Santa Monica Boulevard                | Los Angeles           | 19  | DU  | Apartments [5]   | 545  | 7   | 34   | 41  | 34   | 17   |                    |     |       |
| 13     | Constellation Bl & Av of the Stars          | Los Angeles           | 93  | DU  | Condominiums [5]   | 154  | (14)  | 29   | 15  | 18   | (3)  |                    |     |       |
| 14     | 10201 W Pico Boulevard                      | Los Angeles           | 119   | DU  | Condominium (Replace Existing Hotel - 66 Rooms) [5] [13]   | N/A  | 9   | 0  | 9   | 0  | 9  |                    |     |       |
| 15     | 9760 W Pico Boulevard                       | Los Angeles           | 71  | KSF   | Century City Shopping Center [5]   | 2,273  | 29  | 19   | 48  | 253  | 275  |                    |     |       |
| 16     | 9051 W Pico Boulevard                       | Los Angeles           | 508.6   | KSF   | General Office [5] [7]   | 4,628  | 600   | 82   | 682   | 105  | 515  |                    |     |       |
| 17     | Wilshire-Comstock Condominiums              | Los Angeles           | 360   | KSF   | Fox Studio Expansion (remainder est.) [5] [8]  | 4,086  | 420   | 30   | 450   | 54   | 226  |                    |     |       |
| 18     | 2000 Av of the Stars                        | Los Angeles           | 14.8  | KSF   | High School addition [5]   | 660  | 92  | 40   | 132   | 37   | 55   |                    |     |       |
| 19     | 8261 Alden Drive                            | Beverly Hills         | 42  | KSF   | Private School   | 760  | 94  | 55   | 149   | 65   | 166  |                    |     |       |
| 20     | 216-220 S. Arnaz Drive                      | Beverly Hills         | 35  | DU  | Condominiums   | 205  | 3   | 12   | 15  | 13   | 6  |                    |     |       |
| 21     | 202-240 N. Beverly Drive                    | Beverly Hills         | 825,812   | KSF   | Mixed-Use Office, Restaurant, Retail & Cultural Center [9]   | (11,357)   | 101   | (181)  | (80)  | (683)  | (216)  |                    |     |       |
| 22     | 203-241 N. Canon Drive                      | Beverly Hills         | 5   | KSF   | Synagogue  | 53   | 1   | 0  | 1   | 4  | 4  |                    |     |       |
| 23     | 438 N. Beverly Drive/<br>439 N. Canon Drive | Beverly Hills         | 6.675   | KSF   | Private School   | 74   | 15  | 9  | 24  | nom.   | nom.   |                    |     |       |
| 24     |   | Beverly Hills         | 16  | DU  | Condominiums [5]   | 127  | 16  | 9  | 25  | 4  | 8  |                    |     |       |
| 25     |   | Beverly Hills         | 228 Rooms Plus<br>Banquet, Retail,<br>Dining, Spa,<br>Condos & Park |   | Subtotal   | 94   | 1   | 6  | 7   | 6  | 3  |                    |     |       |
| 26     |   | Beverly Hills         | 78  | KSF   | Retail   | 2,151  | 86  | 57   | 143   | 141  | 97   |                    |     |       |
| 27     |   | Beverly Hills         | 12  | KSF   | General Office   | 802  | 35  | 16   | 51  | 31   | 37   |                    |     |       |
| 28     |   | Beverly Hills         |   |   | Subtotal   | 2,953  | 121   | 73   | 194   | 172  | 134  |                    |     |       |
| 29     |   | Beverly Hills         |   |   | Subtotal   | 3,457  | 56  | 38   | 94  | 93   | 118  |                    |     |       |
| 30     |   | Beverly Hills         |   |   | Subtotal   | 261  | 30  | 4  | 34  | 16   | 76   |                    |     |       |
| 31     |   | Beverly Hills         |   |   | Subtotal   | 3,718  | 86  | 42   | 128   | 109  | 194  |                    |     |       |
| 32     |   | Beverly Hills         |   |   | Subtotal   |  |   |  |   |  |  |                    |     |       |

TABLE 3  
RELATED PROJECTS LIST AND TRIP GENERATION

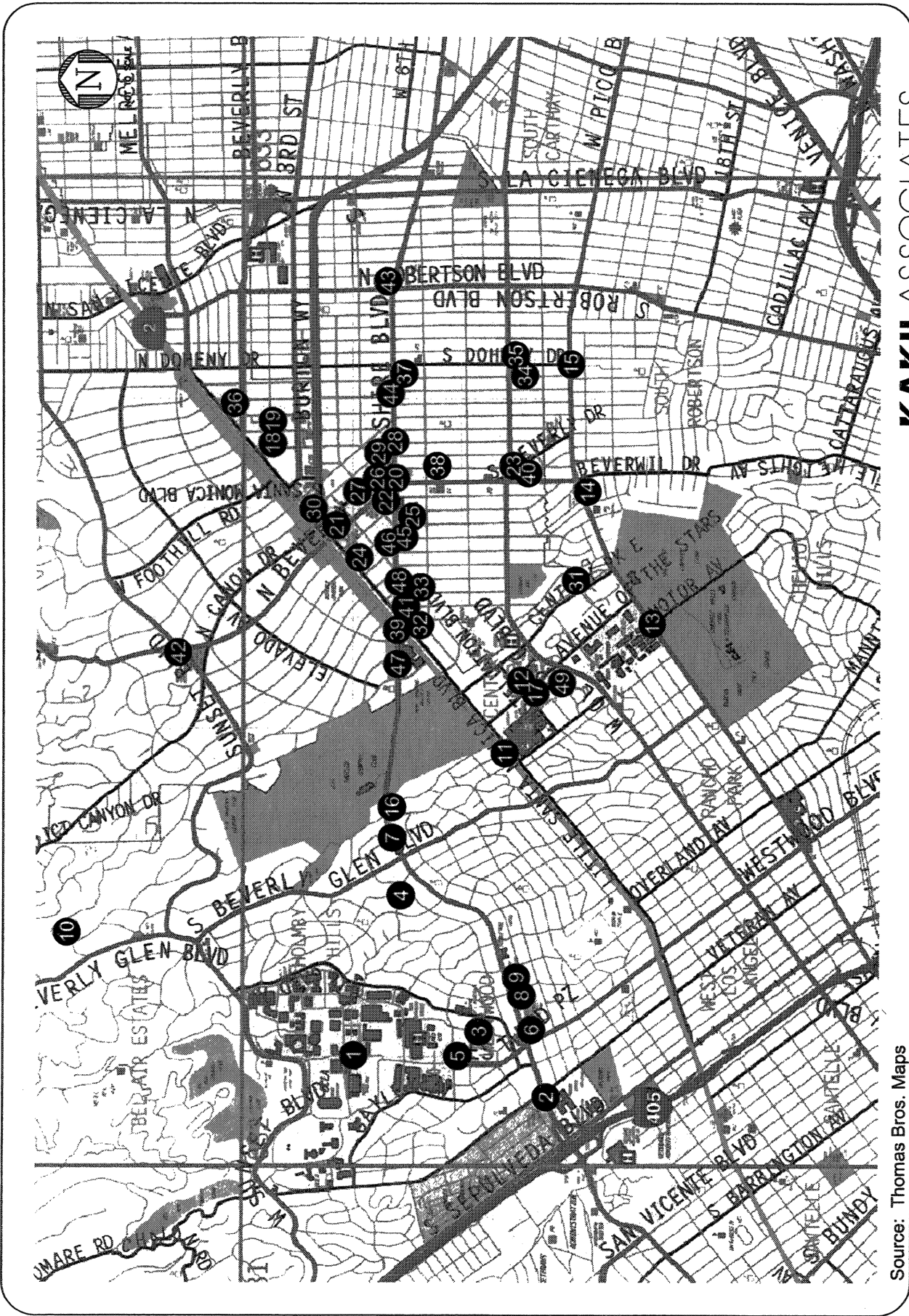
| Proj # | Address  | Jurisdiction  | Size   | Unit     | Description   | Daily Trips | AM Peak Hour Trips |     |       | PM Peak Hour Trips |       |       |
|--------|--|---------------|--------|----------|---|-------------|--------------------|-----|-------|--------------------|-------|-------|
|        |  |               |        |          |   |             | In                 | Out | Total | In                 | Out   | Total |
| 22     | 265 N. Beverly Drive   | Beverly Hills | 45     | KSF      | General Office<br>Restaurant  | 678         | 82                 | 11  | 93    | 21                 | 104   | 125   |
| 23     | 432-436 S. Beverly Drive   | Beverly Hills | 0.932  | KSF      | Church  | 8           | 1                  | 0   | 1     | 1                  | 0     | 1     |
| 24     | 456 N. Camden Drive  | Beverly Hills | 1.75   | KSF      | Retail Expansion (Gagosian)   | 445         | 21                 | 19  | 40    | 23                 | 15    | 38    |
| 25     | 125 S. Camden Drive  | Beverly Hills | 40     | DU       | Condominiums  | 1,123       | 103                | 30  | 133   | 44                 | 119   | 163   |
| 26     | 245-257 N. Canon Drive   | Beverly Hills | 44,896 | KSF      | Beverly Hills Medical Plaza: 23,139 KSF Medical Office,<br>13,609 KSF Surgery Center, 8,148 KSF Retail [10] | 1,678       | 77                 | 22  | 99    | 52                 | 116   | 168   |
| 27     | 338 N. Canon Drive   | Beverly Hills | 11.9   | KSF      | Mixed Use Commercial/Retail   | 527         | 8                  | 6   | 14    | 14                 | 18    | 32    |
| 28     | 131-191 N. Crescent Drive  | Beverly Hills | 88     | DU       | Residential   | 591         | 9                  | 36  | 45    | 36                 | 19    | 55    |
|        |  |               | 40     | KSF      | Office/Retail   | 440         | 55                 | 7   | 62    | 10                 | 50    | 60    |
|        |  |               |        |          |   | 1,031       | 64                 | 43  | 107   | 46                 | 69    | 115   |
| 29     | 201 N. Crescent Drive  | Beverly Hills | 80     | DU       | Senior Housing [5]  | 278         | 6                  | 7   | 13    | 8                  | 7     | 15    |
| 30     | 469 N. Crescent Drive  | Beverly Hills | 34     | KSF      | Cultural Center [2] [5]   | 778         | 34                 | 21  | 55    | 16                 | 40    | 56    |
| 31     | 552-558 N. Hillgreen Drive   | Beverly Hills | 9      | DU       | Condominiums  | 53          | 1                  | 3   | 4     | 3                  | 2     | 5     |
| 32     | 150 Lasky Drive  | Beverly Hills | 42     | Rooms    | Hotel   | 346         | 15                 | 9   | 24    | 13                 | 12    | 25    |
| 33     | 129 S. Linden Drive  | Beverly Hills | 75     | DU       | Senior Congregate Care [11]   | 152         | 3                  | 2   | 5     | 7                  | 6     | 13    |
| 34     | 140-144 S. Oakhurst Drive  | Beverly Hills | 11     | DU       | Condominiums  | 65          | 1                  | 4   | 5     | 4                  | 2     | 6     |
| 35     | 9090 Olympic Boulevard   | Beverly Hills | 9      | KSF      | Synagogue   | 96          | 1                  | 0   | 1     | 7                  | 8     | 15    |
|        |  |               | 10     | KSF      | Private School  | 111         | 22                 | 13  | 35    | nom.               | nom.  | nom.  |
|        |  |               |        |          |   | 207         | 23                 | 13  | 36    | 7                  | 8     | 15    |
| 36     | 437-443 N. Palm Drive  | Beverly Hills | 13     | DU       | Residential   | 87          | 1                  | 6   | 7     | 5                  | 3     | 8     |
| 37     | 150 El Camino Drive  | Beverly Hills | 66     | Students | Screening Room  | 116         | 1                  | 0   | 1     | 4                  | 1     | 5     |
| 38     | 261-283 S. Reeves Dr   | Beverly Hills | 23     | DU       | Condominiums  | 135         | 2                  | 8   | 10    | 8                  | 4     | 12    |
| 39     | 9844 Wilshire Boulevard  | Beverly Hills | 95     | KSF      | General Office (Beverly Hills Gateway) [1] [5]  | 1,090       | 131                | (4) | 127   | 21                 | 140   | 161   |
| 40     | 428-430 Smithwood Drive  | Beverly Hills | 1      | DU       | Apartments  | 7           | 0                  | 1   | 1     | 1                  | 0     | 1     |
| 41     | 133 Spalding Drive   | Beverly Hills | 4      | DU       | Condominiums  | 23          | 0                  | 2   | 2     | 1                  | 1     | 2     |
| 42     | 9641 Sunset Boulevard  | Beverly Hills | 2      | KSF      | Health Spa replaces existing Health Club  | 66          | 1                  | 1   | 2     | 4                  | 4     | 8     |
| 43     | 8747 Wilshire Boulevard  | Beverly Hills | 85     | KSF      | General Office  | 936         | 116                | 16  | 132   | 22                 | 105   | 127   |
| 44     | 9200 Wilshire Boulevard  | Beverly Hills | 52     | DU       | Condominiums  | 948         | 23                 | 35  | 58    | 51                 | 31    | 82    |
|        |  |               | 14     | KSF      | Retail/Restaurant   | 117         | 2                  | 7   | 9     | 7                  | 3     | 10    |
| 45     | 9590 Wilshire Boulevard  | Beverly Hills | 20     | DU       | Condominiums  | 488         | 8                  | 6   | 14    | 13                 | 18    | 31    |
|        |  |               | 12     | KSF      | Retail  | 605         | 10                 | 13  | 23    | 20                 | 21    | 41    |
| 46     | 9601 Wilshire Boulevard  | Beverly Hills | 30     | KSF      | Health Club (Sports LA)   | 988         | 15                 | 21  | 36    | 62                 | 60    | 122   |
| 47     | Wilshire Bl between Los Angeles<br>Country Club and Mervin Griffin<br>Way [5] [14] | Beverly Hills | 180    | KSF      | Department Store  |             | 113                | 72  | 185   | 324                | 351   | 675   |
|        |  |               | 20     | KSF      | Specialty Retail  |             | 0                  | 0   | 0     | 24                 | 30    | 54    |
|        |  |               | 10     | KSF      | Quality Restaurant  |             | 7                  | 1   | 8     | 50                 | 25    | 75    |
|        |  |               | 10     | KSF      | Office  |             | 14                 | 2   | 16    | 3                  | 12    | 15    |
|        |  |               | 240    | DU       | Condominiums  |             | 31                 | 103 | 134   | 83                 | 49    | 132   |
|        |  |               | 26     | DU       | Luxury Condominium  |             | 3                  | 12  | 15    | 9                  | 5     | 14    |
|        |  |               | (200)  | KSF      | Department Store (Existing)   |             | (86)               | (9) | (95)  | (85)               | (131) | (216) |
|        |  |               |        |          | Subtotal  | N/A         | 82                 | 181 | 263   | 408                | 341   | 749   |

**TABLE 3  
RELATED PROJECTS LIST AND TRIP GENERATION**

| Proj #       | Address                         | Jurisdiction  | Size | Unit  | Description  | Daily Trips | AM Peak Hour Trips |              | PM Peak Hour Trips |              |              |              |
|--------------|---------------------------------|---------------|------|-------|--|-------------|--------------------|--------------|--------------------|--------------|--------------|--------------|
|              |                                 |               |      |       |  |             | In                 | Out          | In                 | Out          |              |              |
| 48           | 9730 Wilshire Boulevard         | Beverly Hills | 204  | Rooms | Hotel  | 1,667       | 70                 | 44           | 114                | 64           | 56           | 120          |
| 49           | St. Regis Redevelopment Project | Los Angeles   | 147  | DU    | Demolition of Hotel and construction of Condominiums, 7KSF Restaurant [15] | 0           | 0                  | 0            | 0                  | 0            | 0            | 0            |
| <b>TOTAL</b> |                                 |               |      |       |  | <b>N/A</b>  | <b>4,873</b>       | <b>1,392</b> | <b>6,266</b>       | <b>2,898</b> | <b>5,865</b> | <b>8,766</b> |

Notes:

- [1] "Traffic Impact Study for Beverly Hills Gateway," Crain & Associates, September 2002.
- [2] DEIR, Technical Appendices B-E, Triangle Gateway Project, December 2000.
- [3] "Beverly Hills Gardens & Montage Hotel EIR - Revised Sections and Additional Alternatives," Alternative 13 Technical Analysis, Table 82, May 2004.
- [4] "Traffic Analysis for Palazzo Westwood Mixed-Use Development," Crain & Associates, May 2001.
- [5] Source: Table 8, Traffic Study Condominium Project - Wilshire Bl & Comstock Ave, Westwood Village, Crain & Associates, November 2004.
- [6] "Traffic and Parking Analysis for Harvard-Westlake Middle School Project," Crain & Associates, September, 2003.
- [7] Based on "replacement", i.e., remaining project site CCNSP daily trips.
- [8] DEIR, Fox Studio Historic Preservation and Expansion Project, December 1991.
- [9] "Traffic Impact Study for Office, Commercial and Cultural Use Project at 2000 Avenue of the Stars, Century City," Table 6, Crain & Associates, June 2002.
- [10] "Traffic Study for Beverly Hills Medical Plaza," Table 5, Kaku Associates, October 2004.
- [11] "Traffic Study for the Rocap Assisted Living Project at 129 South Linden Drive," Kaku Associates, February 2002.
- [12] Draft Traffic and Parking Analysis of the Broxton-Le Conte Commercial Entertainment Center, Crain & Associates, April 2004.
- [13] Century Landmark Project Memorandum of Understanding, Vince Giron at LADOT, 5/27/03
- [14] Existing Robinson May department store trip generation based on actual trip measurements conducted by Crain & Associates, July 2004
- [15] St. Regis project involves the demolition of existing hotel and construction of 147 condominium units and related uses and is expected to result in a net decrease in trips. To be conservative, no net change in trips is assumed.



Source: Thomas Bros. Maps

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**FIGURE 4**  
**APPROXIMATE LOCATIONS OF RELATED PROJECTS**

**Trip Generation.** Trip generation estimates for the related projects were calculated using a combination of previous study findings and the trip generation rates contained in *Trip Generation, 7<sup>th</sup> Edition* (Institute of Transportation Engineers [ITE], 2003). Table 3 presents the resulting trip generation estimates. These projections are conservative in that they do not in every case account for either the existing uses to be removed or the likely use of non-motorized travel modes (transit, walking, etc.)

**Trip Distribution.** The geographic distribution of the traffic generated by the cumulative projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which the employees and potential patrons of the proposed developments are drawn, and the location of the projects in relation to the surrounding street system. It should be noted that, due to the location of the related projects, much of the traffic they would generate is not expected to pass through the study intersections.

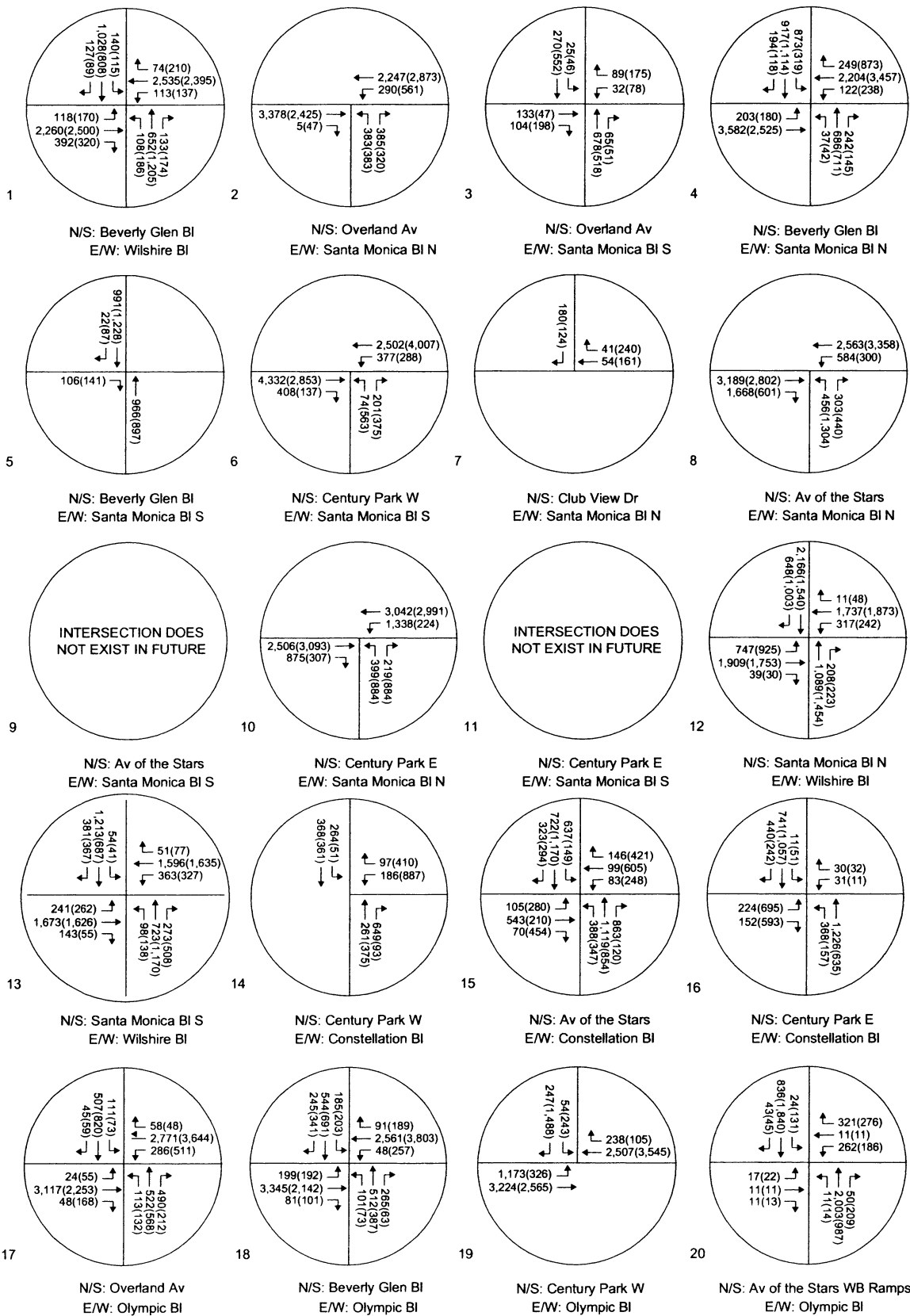
**Traffic Assignment.** Using the estimated trip generation and trip distribution patterns described above, traffic generated by the related projects was assigned to the street network. Since the year 2010 cumulative base traffic volumes in this study were calculated starting with the cumulative base traffic volume data from the prior approved traffic study, the data already included the traffic assignment for the cumulative projects identified in that study. Thus, additional cumulative project traffic volumes were assigned through the study area for additional projects proposed since 2002 and were added to the cumulative base volumes from the prior study with ambient growth. Also, an appropriate negative trip assignment was applied for the cumulative projects that are no longer proposed or have had changes in their proposed uses.

Figure 5 illustrates the cumulative base year 2010 weekday a.m. and p.m. peak hour traffic volumes for the analyzed intersections. The cumulative base traffic conditions represent projected future conditions without the proposed project.

## **PROJECT TRAFFIC VOLUMES**

The development of trip generation estimates for the proposed project involves the use of a three-step process similar to that discussed above for the cumulative projects. The three steps are trip generation, trip distribution, and traffic assignment.

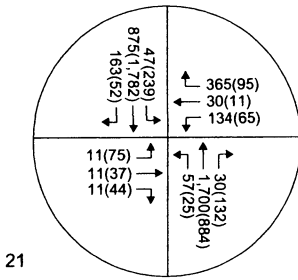




NOTE: XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES

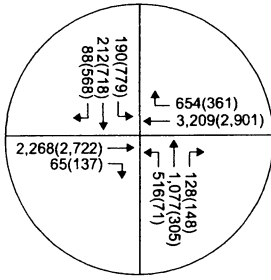
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**FIGURE 5 (1 OF 2)  
CUMULATIVE BASE YEAR 2010 PEAK HOUR TRAFFIC VOLUMES**



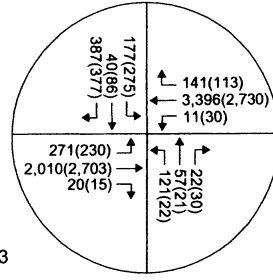
21

N/S: Av of the Stars EB Ramps  
E/W: Olympic Bl



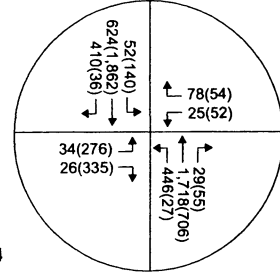
22

N/S: Century Park E  
E/W: Olympic Bl



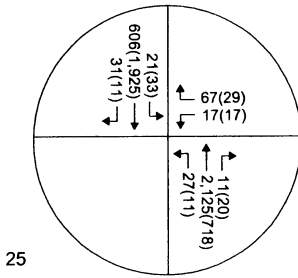
23

N/S: Spalding Dr  
E/W: Olympic Bl



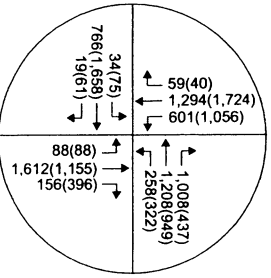
24

N/S: Av of the Stars  
E/W: Galaxy Wy



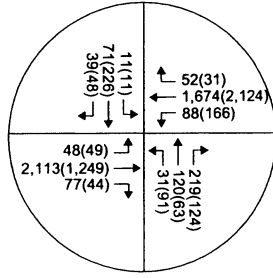
25

N/S: Av of the Stars  
E/W: Empeyrean Wy



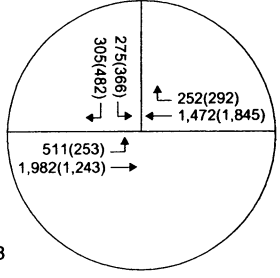
26

N/S: Overland Av  
E/W: Pico Bl



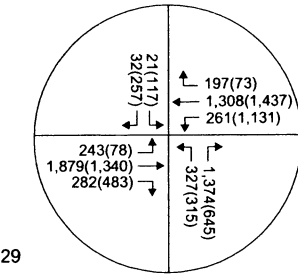
27

N/S: Patricia Av  
E/W: Pico Bl



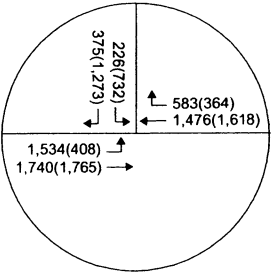
28

N/S: Beverly Glen Bl  
E/W: Pico Bl



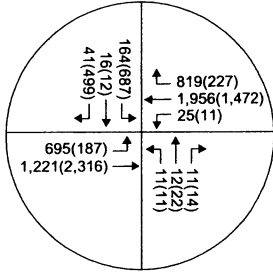
29

N/S: Motor Av  
E/W: Pico Bl



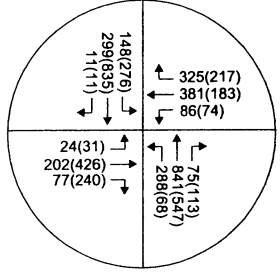
30

N/S: Av of the Stars  
E/W: Pico Bl



31

N/S: Century Park E  
E/W: Pico Bl



32

N/S: Motor Av  
E/W: Manning Av

NOTE: XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES

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FIGURE 5 (2 OF 2)

CUMULATIVE BASE YEAR 2010 PEAK HOUR TRAFFIC VOLUMES

## Project Trip Generation

As indicated, the proposed project consists of 483 high-rise condominium housing units. Trip generation rates from the ITE *Trip Generation, 7<sup>th</sup> Edition* utilized to estimate the numbers of trips associated with the development of the proposed project are presented in Table 4.

The proposed project site currently contains three existing structures. Following is a brief description of the trip credit taken for these existing uses:

- Bank - The ground floor of the existing bank building and the drive-through facility is a retail bank use and the second floor of the building is office space. The following provides a brief description of the two components of the existing bank building land use:
  - Commercial Bank - Trip generation estimates for this existing land use were calculated using ITE trip generation rates for the daily and a.m. peak hour, while West Los Angeles Transportation Improvement and Mitigation Specific Plan (WLA TIMP) trip generation rates were used for the p.m. peak hour. A pass-by reduction of 20% was factored in to decrease the baseline of existing trips consistent with LADOT's *Traffic Study Policies and Procedures* (revised March 2002).
  - Office - Trip generation estimates for this existing land use were calculated using ITE trip generation rates for the a.m. peak hour and WLA TIMP rates for the p.m. peak hour.
- Restaurant - Trip generation estimates for this existing land use were calculated using ITE trip generation rates for the daily and the a.m. peak hour. No existing trip credits were used for the p.m. peak hour since the restaurant is presently open for lunch and in the evening as a nightclub use but is closed during the p.m. peak hour of traffic.

As shown in Table 4, after subtracting trips generated by the existing land uses from the proposed project trip generation estimates, it is projected that the project would generate a net increase of approximately 48 trips during the a.m. peak hour (negative 37 inbound, positive 85 outbound) and a net decrease of 154 trips during the p.m. peak hour (negative 49 inbound, negative 105 outbound).

**TABLE 4  
TRIP GENERATION ESTIMATE  
10131 CONSTELLATION BOULEVARD RESIDENTIAL PROJECT/CENTURY CITY**

| Land Use   | Size              | Trip Generation Rates [a] |                |       |       |                |           | Estimated Trip Generation |                |                      |            |            |                      |             |             |             |  |  |  |
|--|-------------------|---------------------------|----------------|-------|-------|----------------|-----------|---------------------------|----------------|----------------------|------------|------------|----------------------|-------------|-------------|-------------|--|--|--|
|  |                   | ITE [a]<br>Code           | A.M. Peak Hour |       |       | P.M. Peak Hour |           |                           | Daily<br>Trips | A.M. Peak Hour Trips |            |            | P.M. Peak Hour Trips |             |             |             |  |  |  |
|  |                   |                           | Rate           | % In  | % Out | Rate           | % In      | % Out                     |                | Trip Rate<br>Unit    | In         | Out        | Total                | In          | Out         | Total       |  |  |  |
| <b>PROPOSED PROJECT</b>                          |                   |                           |                |       |       |                |           |                           |                |                      |            |            |                      |             |             |             |  |  |  |
| Condominium Units - Tower 1                      | 194 units         | 232                       | 4.18           | 0.34  | 19%   | 81%            | 0.38      | 62%                       | 38%            | 811                  | 13         | 53         | 66                   | 46          | 28          | 74          |  |  |  |
| Condominium Units - Tower 2                      | 194 units         | 232                       | 4.18           | 0.34  | 19%   | 81%            | 0.38      | 62%                       | 38%            | 811                  | 13         | 53         | 66                   | 46          | 28          | 74          |  |  |  |
| Condominium Units - Loft Housing                 | 95 units          | 232                       | 4.18           | 0.34  | 19%   | 81%            | 0.38      | 62%                       | 38%            | 397                  | 6          | 26         | 32                   | 22          | 14          | 36          |  |  |  |
| Total Proposed                                   | 483 units         |                           |                |       |       |                |           |                           |                | 2,019                | 32         | 132        | 164                  | 114         | 70          | 184         |  |  |  |
| <b>EXISTING USE TO BE REMOVED</b>                |                   |                           |                |       |       |                |           |                           |                |                      |            |            |                      |             |             |             |  |  |  |
| Bank: Retail Bank [b]<br>Less Pass-by Credit [c] | 9,150 ksf<br>-20% | A.M. - 912/P.M. - TIMP    | 246.49         | 12.34 | 56%   | 44%            | 43.63     | 50%                       | 50%            | 2,255<br>(451)       | 63<br>(13) | 50<br>(10) | 113<br>(23)          | 200<br>(40) | 199<br>(40) | 399<br>(80) |  |  |  |
| Office [b]                                       | 6,700 ksf         | A.M. - 710/P.M. - TIMP    | 11.01          | 1.55  | 88%   | 12%            | 2.84      | 17%                       | 83%            | 74                   | 9          | 1          | 10                   | 3           | 16          | 19          |  |  |  |
| Restaurant [d]                                   | 19,754 ksf        | 931 (Daily + AM)          | 89.95          | 0.81  | 60%   | 40%            | Empirical |                           |                | 1,777                | 10         | 6          | 16                   | *           | *           | *           |  |  |  |
| Total Existing                                   |                   |                           |                |       |       |                |           |                           |                | 3,655                | 69         | 47         | 116                  | 163         | 175         | 338         |  |  |  |
| <b>NET INCREMENTAL TRIPS</b>                     |                   |                           |                |       |       |                |           |                           |                | (1,636)              | (37)       | 85         | 48                   | (49)        | (105)       | (154)       |  |  |  |

Notes:  
 \* Negligible.  
 [a] Source: Institute of Transportation Engineers (ITE), "Trip Generation, 7th Edition," 2003, unless otherwise noted.  
 Source for PM peak hour rates for existing bank and office building: City of Los Angeles, "West Los Angeles Transportation Improvement and Mitigation Specific Plan (WLA TIMP)," Adopted March 8, 1997.  
 The WLA TIMP does not provide a trip rate for high-rise condominiums such as the proposed project, therefore LADOT has determined that the ITE trip generation rate should be used for such purpose, as permitted by the WLA TIMP.  
 [b] The entire ground floor (7,175 sf) of the existing bank building plus the drive-through facility (1,975 sf) is retail bank and entire second floor (6,700 sf) is office space.  
 [c] Source: Los Angeles Department of Transportation, "Traffic Study Policies and Procedures, Attachment H, LADOT Policy on Pass-by Trips," March 2002.  
 [d] Restaurant trip generation during peak hours is assumed to be employee, loading and service trips only, since restaurant is not open until 8 p.m. Kaku Associates conducted a comparative analysis of the empirical data provided by the "Century Supper Club" and the ITE trip generation rate. According to the empirical data, number of employees arriving for the 9:00 a.m. to 6:00 p.m. shift (30 employees on a weekday) was converted to 20 vehicle trips using an average vehicle ridership (AVR) ratio of 1.5. One delivery vehicle was estimated to arrive and depart during the a.m. peak hour. This would result in a total of 22 trips in the a.m. peak hour with 21 inbound and one outbound trip. Since ITE rates were found to be more conservative during the a.m. peak hour, they were used for the analysis. Also, a.m. peak hour trips were split into inbound/outbound trips using the percentage split stated in SanDAG since the ITE data does not provide an in/out split for the a.m. peak hour.

### **Project Traffic Distribution**

The geographic distribution of trips generated by the proposed project would be dependent on the locations of employment and commercial centers to which residents of the project would be drawn, characteristics of the street system serving the site, and the level of accessibility of the routes to and from the proposed project site. The general distribution pattern for this study was developed in conjunction with LADOT. The regional project traffic distribution of project trips is illustrated in Figure 6 and the local inbound/outbound trip distribution is illustrated in Figures 7A and 7B.

### **Project Traffic Assignment**

The traffic to be generated by the proposed project was assigned to the street network using the distribution pattern described in Figures 6, 7A and 7B. Figure 8 illustrates the assignment of the proposed project-generated peak hour traffic volumes at the analyzed intersections during the a.m. and p.m. peak hours, taking into consideration the limitation on right turns in/right turns out at the project driveway on Avenue of the Stars.

### **CUMULATIVE PLUS PROJECT TRAFFIC PROJECTIONS**

The proposed project traffic volumes were added to the year 2010 cumulative base traffic projections, resulting in cumulative plus project a.m. and p.m. peak hour traffic volumes. Illustrated in Figure 9, the cumulative plus project scenario presents future traffic conditions with the completion of the proposed project.

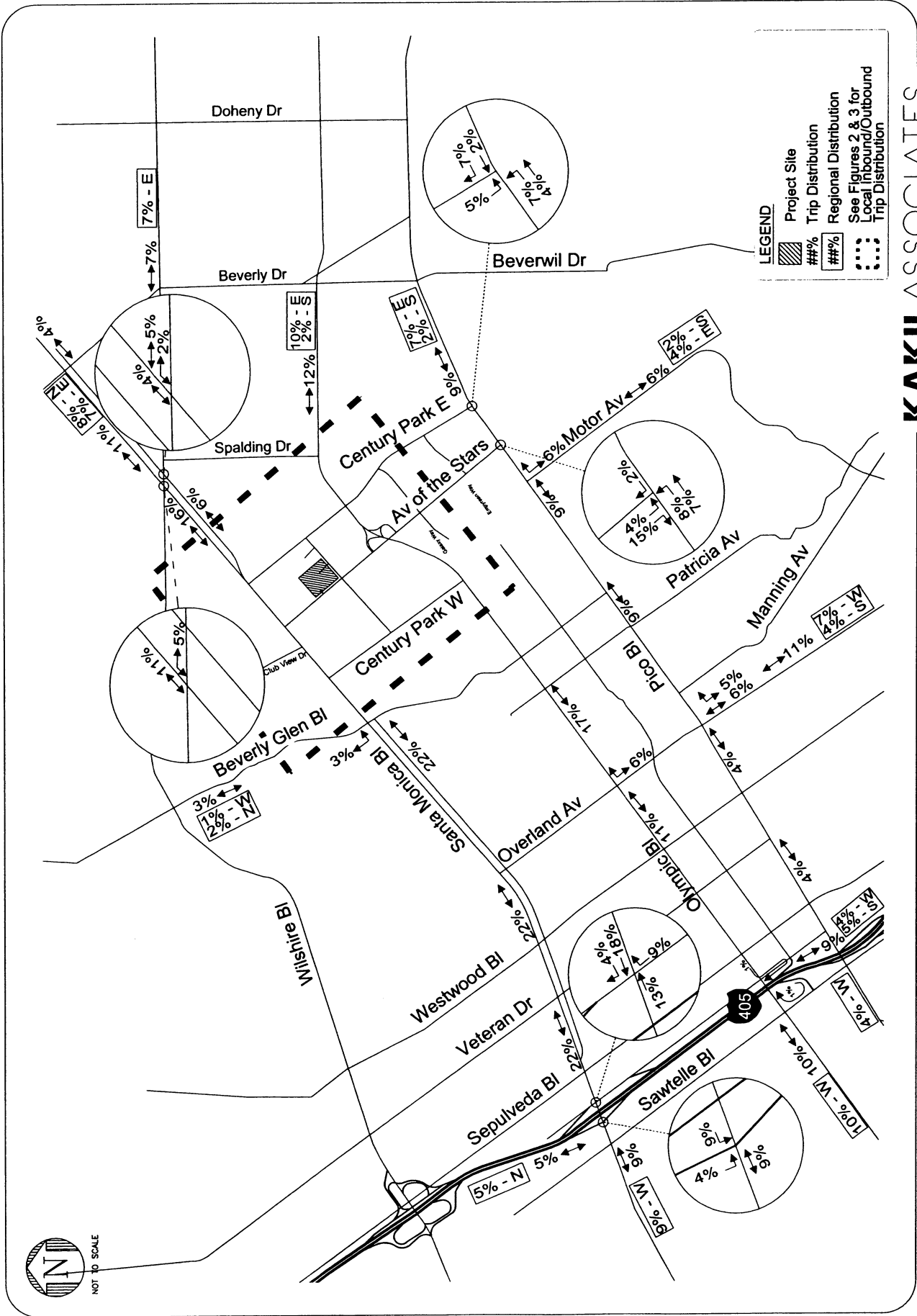
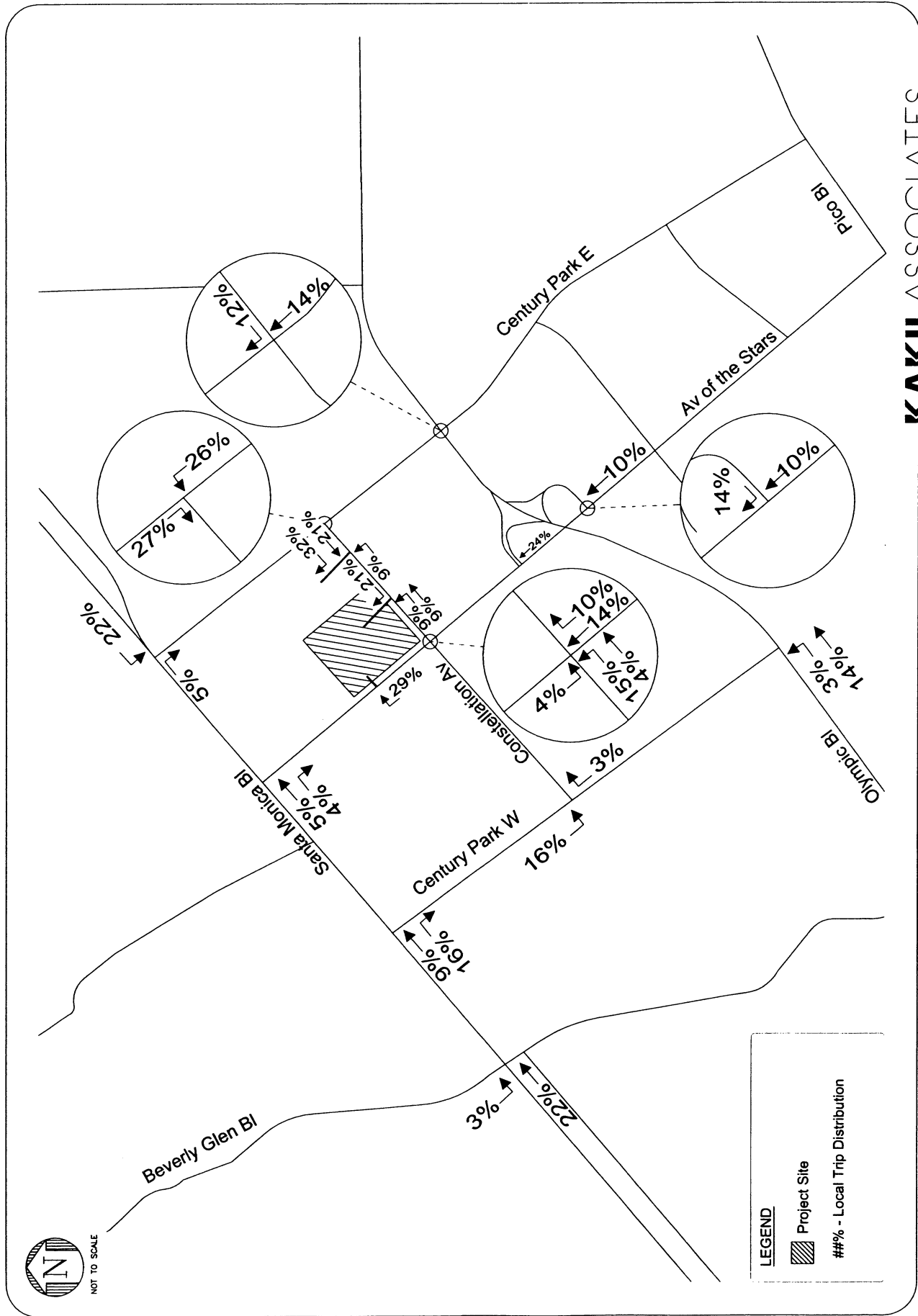
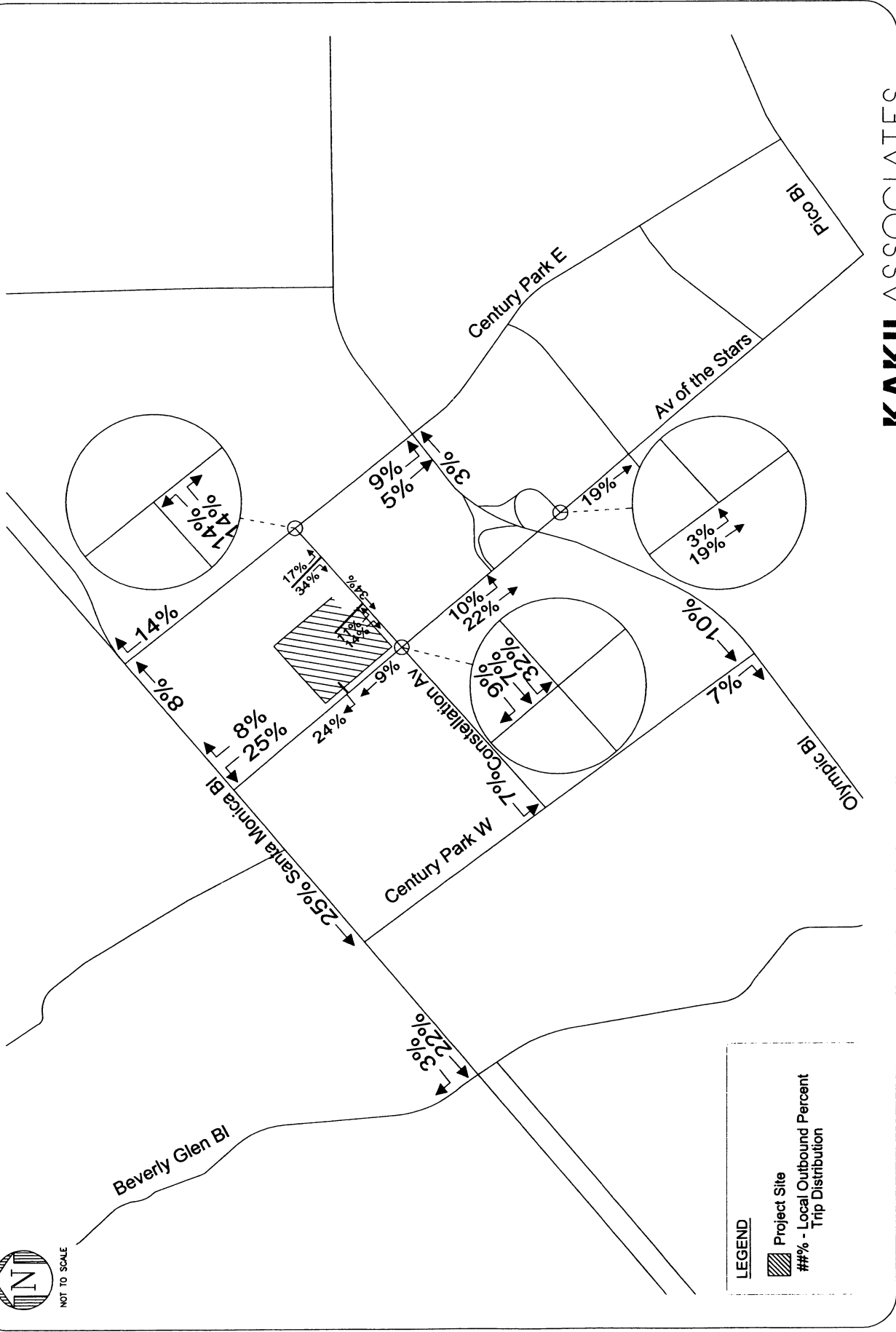


FIGURE 6  
REGIONAL TRIP DISTRIBUTION



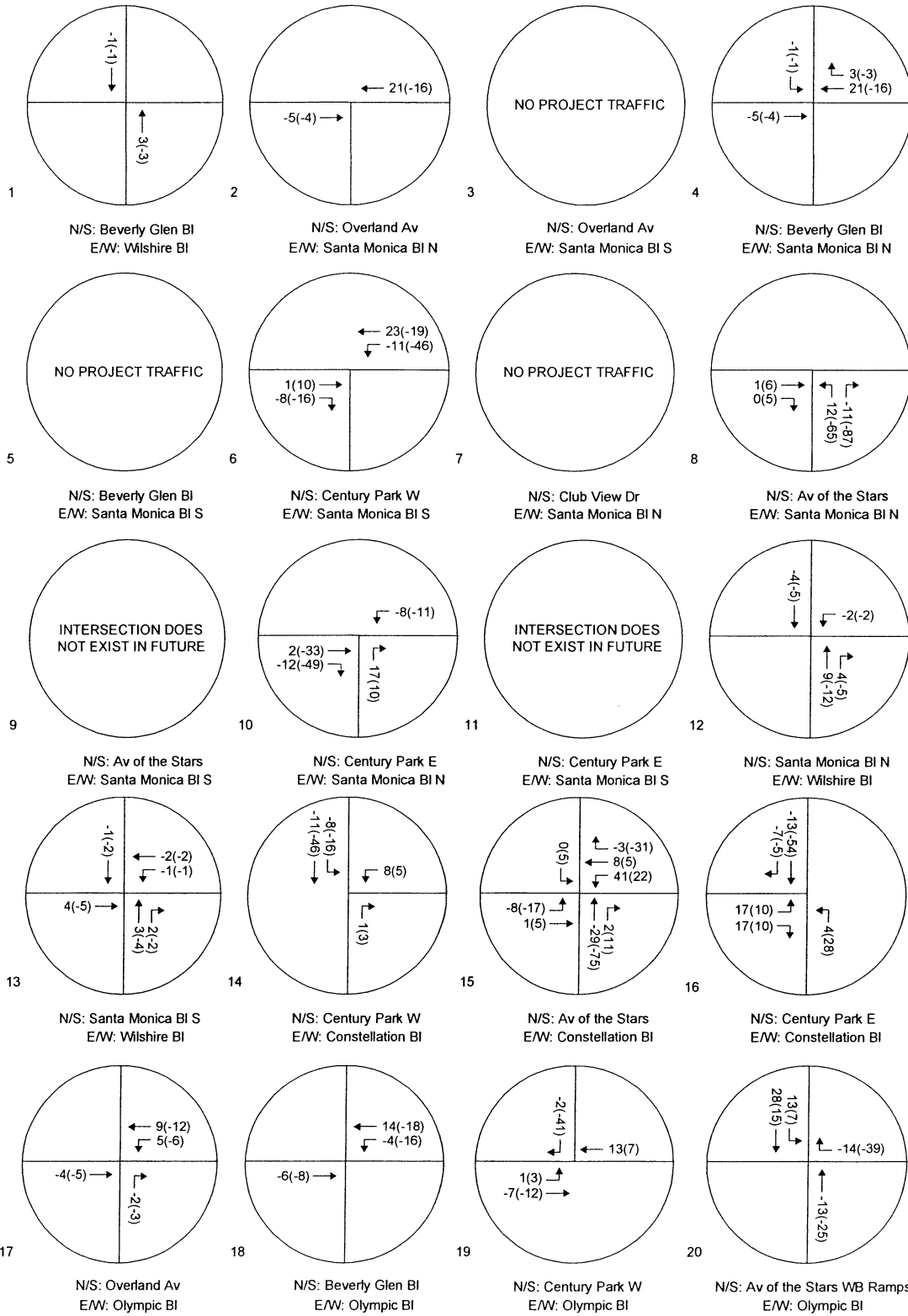


**FIGURE 7A  
 LOCAL INBOUND TRIP DISTRIBUTION**



**FIGURE 7B**  
**LOCAL OUTBOUND TRIP DISTRIBUTION**

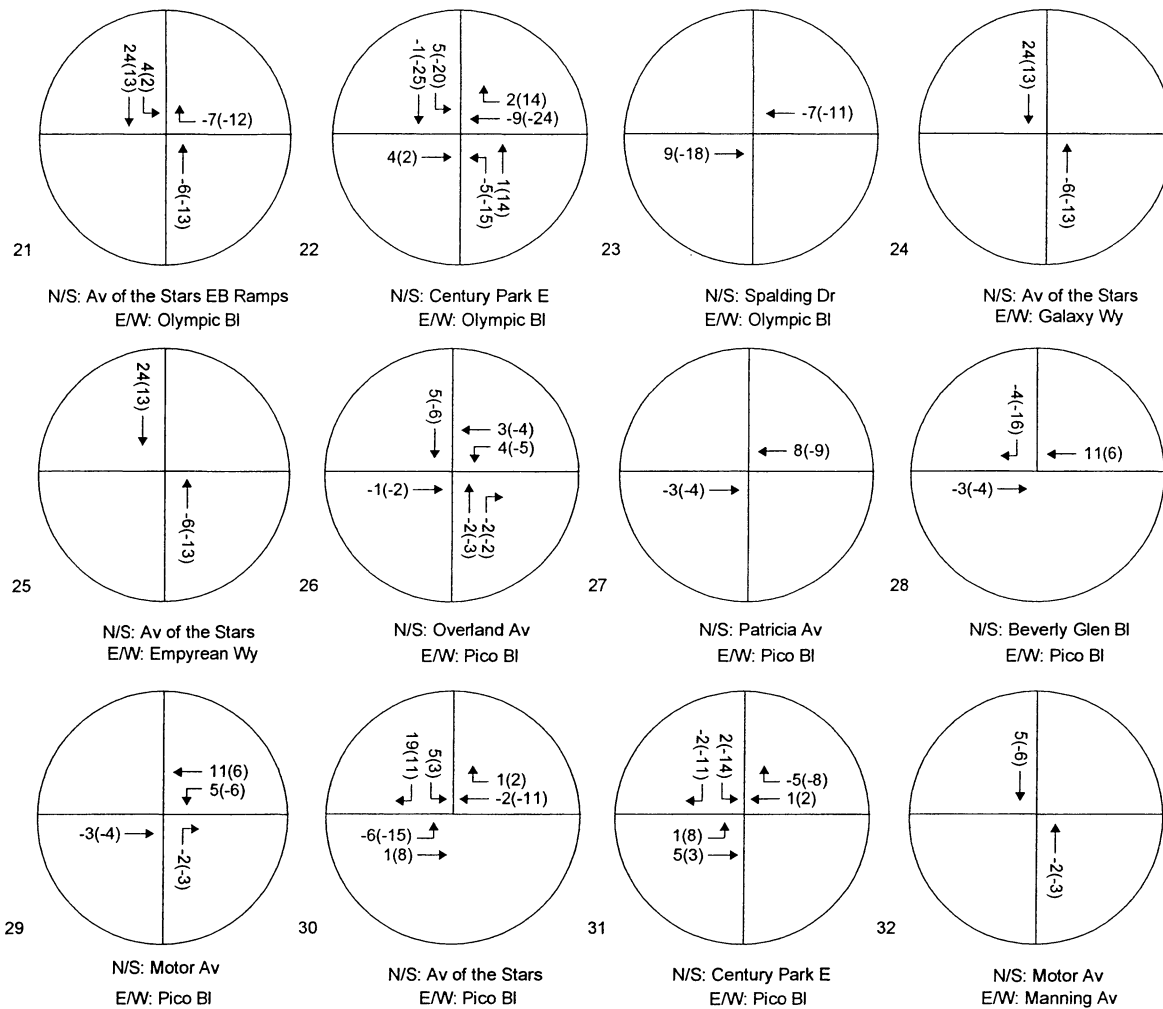




NOTE: XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES

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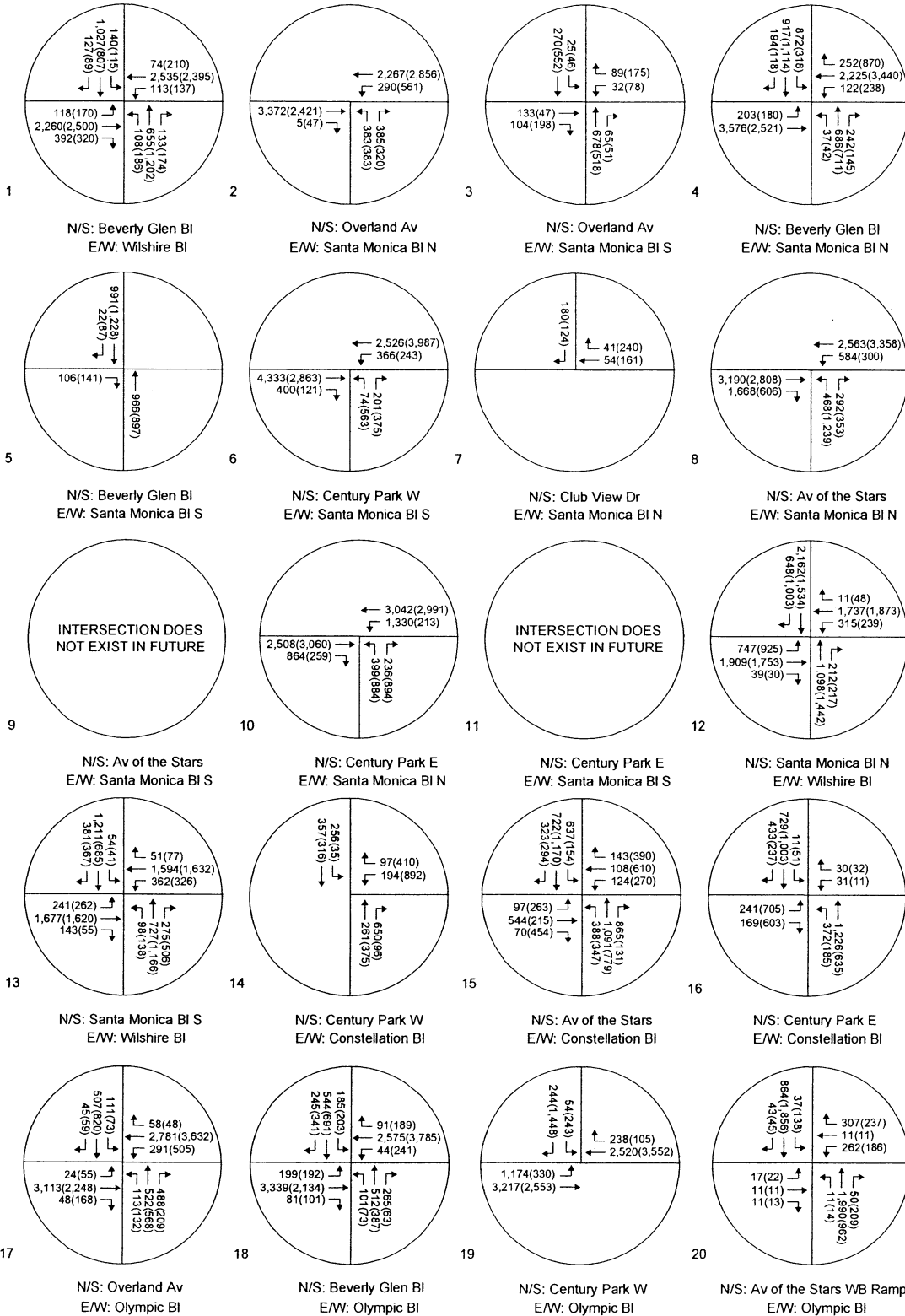
**FIGURE 8 (1 OF 2)  
PROJECT ONLY YEAR 2010 PEAK HOUR TRAFFIC VOLUMES**



NOTE: XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES

**KAKU ASSOCIATES**

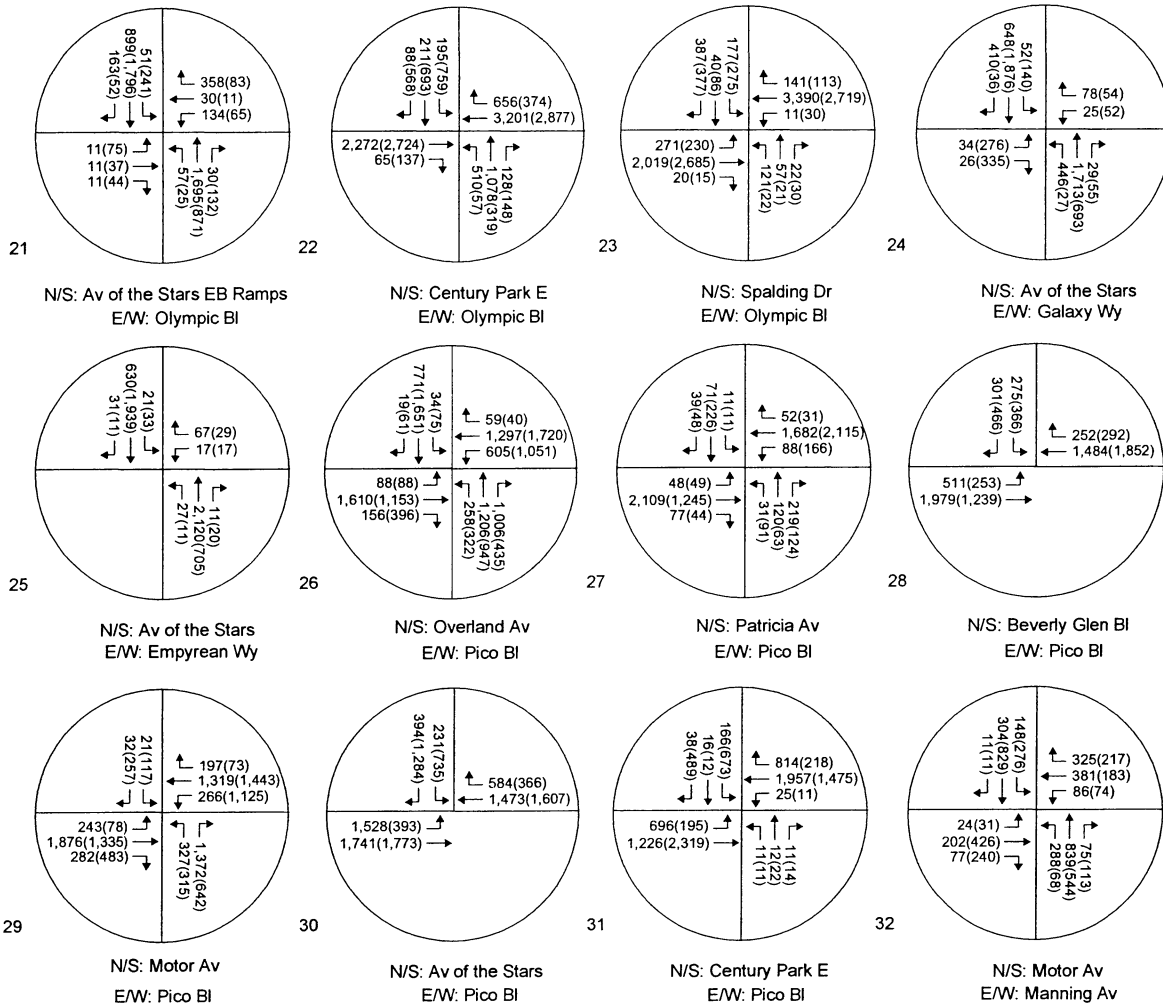
FIGURE 8 (2 OF 2)  
PROJECT ONLY YEAR 2010 PEAK HOUR TRAFFIC VOLUMES



NOTE: XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES

**KAKU ASSOCIATES**

**FIGURE 9 (1 OF 2)  
CUMULATIVE PLUS PROJECT YEAR 2010  
PEAK HOUR TRAFFIC VOLUMES**



NOTE: XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES

**KAKU ASSOCIATES**

**FIGURE 9 (2 OF 2)  
CUMULATIVE PLUS PROJECT YEAR 2010  
PEAK HOUR TRAFFIC VOLUMES**

#### IV. INTERSECTION TRAFFIC IMPACT ANALYSIS

The traffic impact analysis compares the projected levels of service at each study intersection under the cumulative base and cumulative plus project conditions to estimate the incremental increase in the V/C ratio caused by the proposed project. This provides the information needed to assess the potential impact of the project using significance criteria established by LADOT.

#### CRITERIA FOR DETERMINATION OF SIGNIFICANT TRAFFIC IMPACT

##### City of Los Angeles

The City of Los Angeles has established threshold criteria used to determine significant traffic impact of a proposed project within its jurisdiction. Under the LADOT guidelines, an intersection would be significantly impacted with an increase in V/C ratio equal to or greater than 0.04 for intersections operating at LOS C, equal to or greater than 0.02 for intersections operating at LOS D, and equal to or greater than 0.01 for intersections operating at LOS E or F after the addition of project traffic. Intersections operating at LOS A or B after the addition of the project traffic are not considered significantly impacted regardless of the increase in V/C ratio. The following summarizes the impact criteria:

| <u>LOS</u> | <u>Final V/C Ratio</u> | <u>Project-related Increase in V/C</u> |
|------------|------------------------|--|
| C          | >0.700 - 0.800         | equal to or greater than 0.0400        |
| D          | > 0.800 - 0.900        | equal to or greater than 0.0200        |
| E or F     | > 0.900                | equal to or greater than 0.0100        |

##### City of Beverly Hills

Since the three intersections of North Santa Monica Boulevard/Wilshire Boulevard, Little Santa Monica/Wilshire Boulevard, and Spalding Drive/Olympic Boulevard fall under the City of Beverly Hills jurisdiction, the City of Beverly Hills threshold criteria was used to determine if these three

intersections would be significantly impacted. Under the City of Beverly Hills guidelines, an intersection would be significantly impacted with an increase in V/C ratio equal to or greater than 0.04 for intersections operating at LOS D and equal to or greater than 0.02 for intersections operating at LOS E or F after the addition of project traffic. The following summarizes the impact criteria:

| <u>LOS</u> | <u>Final V/C Ratio</u> | <u>Project-related Increase in V/C</u> |
|------------|------------------------|--|
| D          | > 0.800 - 0.900        | equal to or greater than 0.0400        |
| E or F     | > 0.900                | equal to or greater than 0.0200        |

### **CUMULATIVE BASE TRAFFIC CONDITIONS**

The year 2010 cumulative base peak hour traffic volumes were analyzed to determine the projected V/C ratio and level of service for each of the analyzed intersections. Table 5 summarizes the future levels of service. As indicated in Table 5, 17 of the study intersections are projected to operate at levels of service E or F during the a.m. or p.m. peak hours or both.

### **CUMULATIVE PLUS PROJECT TRAFFIC CONDITIONS**

The resulting cumulative plus project peak hour traffic volumes, illustrated in Figure 9, were analyzed to determine the projected future operating conditions with the addition of the proposed project traffic. The results of the cumulative plus project analysis are also presented in Table 5. Like the cumulative base conditions, it can be seen that 17 of the study intersections are projected to operate at LOS E or F during the a.m. or p.m. peak hours or both.

### **PROJECT IMPACTS**

Table 5 shows that, using the criteria for determination of significant impacts, the proposed project would not create significant traffic impacts at any of the study intersections during either the a.m. or p.m. peak hours. No mitigation measures would therefore be required.

**TABLE 5  
FUTURE INTERSECTION LEVEL OF SERVICE ANALYSIS**

| Intersection                                      | Peak Hour | Cumulative Base (Year 2010) |       | Cumulative Plus Project (Year 2010) |       | Project Increase in V/C | Significant Project Impact |    |
|---|-----------|-----------------------------|-------|-------------------------------------|-------|-------------------------|----------------------------|----|
|   |           | V/C or Delay                | LOS   | V/C or Delay                        | LOS   |                         |                            |    |
| *1 Beverly Glen Blvd & Wilshire Blvd              | A.M.      | 1.075                       | F     | 1.074                               | F     | -0.001                  | NO                         |    |
|   | P.M.      | 1.193                       | F     | 1.192                               | F     | -0.001                  | NO                         |    |
| *2 Overland Ave & Santa Monica Blvd (N)           | A.M.      | 1.162                       | F     | 1.161                               | F     | -0.001                  | NO                         |    |
|   | P.M.      | 1.129                       | F     | 1.129                               | F     | 0.000                   | NO                         |    |
| *3 Overland Ave & Santa Monica Blvd (S)           | A.M.      | 0.367                       | A     | 0.367                               | A     | 0.000                   | NO                         |    |
|   | P.M.      | 0.514                       | A     | 0.514                               | A     | 0.000                   | NO                         |    |
| *4 Beverly Glen Blvd & Santa Monica Blvd (N)      | A.M.      | 1.199                       | F     | 1.197                               | F     | -0.002                  | NO                         |    |
|   | P.M.      | 1.232                       | F     | 1.228                               | F     | -0.004                  | NO                         |    |
| 5 Beverly Glen Blvd & Santa Monica Blvd (S) [3]   | A.M.      | 0.401                       | A     | 0.401                               | A     | 0.000                   | NO                         |    |
|   | P.M.      | 0.503                       | A     | 0.503                               | A     | 0.000                   | NO                         |    |
| *6 Century Park West & Santa Monica Blvd (S)      | A.M.      | 1.111                       | F     | 1.106                               | F     | -0.005                  | NO                         |    |
|   | P.M.      | 1.057                       | F     | 1.052                               | F     | -0.005                  | NO                         |    |
| 7 Club View Dr & Santa Monica Blvd (N) [3]        | A.M.      | 0.183                       | A     | 0.183                               | A     | 0.000                   | NO                         |    |
|   | P.M.      | 0.350                       | A     | 0.350                               | A     | 0.000                   | NO                         |    |
| *8 Avenue of the Stars & Santa Monica Blvd (N)    | A.M.      | 1.414                       | F     | 1.417                               | F     | 0.003                   | NO                         |    |
|   | P.M.      | 1.024                       | F     | 1.007                               | F     | -0.017                  | NO                         |    |
| *9 Avenue of the Stars & Santa Monica Blvd (S)    | A.M.      |                             |       | [1]                                 |       |                         |                            |    |
|   | P.M.      |                             |       |                                     |       |                         |                            |    |
| *10 Century Park East & Santa Monica Blvd (N)     | A.M.      | 1.184                       | F     | 1.174                               | F     | -0.010                  | NO                         |    |
|   | P.M.      | 0.870                       | D     | 0.860                               | D     | -0.010                  | NO                         |    |
| *11 Century Park East & Santa Monica Blvd (S)     | A.M.      |                             |       | [1]                                 |       |                         |                            |    |
|   | P.M.      |                             |       |                                     |       |                         |                            |    |
| 12 Santa Monica Blvd (N) & Wilshire Blvd [2]      | (CMA)     | A.M.                        | 1.586 | F                                   | 1.585 | F                       | -0.001                     | NO |
|   |           | (ICU)                       | 1.358 | F                                   | 1.356 | F                       | -0.002                     | NO |
|   | (CMA)     | P.M.                        | 1.586 | F                                   | 1.582 | F                       | -0.004                     | NO |
|   |           | (ICU)                       | 1.276 | F                                   | 1.272 | F                       | -0.004                     | NO |
| 13 Santa Monica Blvd (S) & Wilshire Blvd [2]      | (CMA)     | A.M.                        | 1.575 | F                                   | 1.575 | F                       | 0.000                      | NO |
|   |           | (ICU)                       | 1.454 | F                                   | 1.454 | F                       | 0.000                      | NO |
|   | (CMA)     | P.M.                        | 1.333 | F                                   | 1.329 | F                       | -0.004                     | NO |
|   |           | (ICU)                       | 1.245 | F                                   | 1.242 | F                       | -0.003                     | NO |
| *14 Century Park West & Constellation Blvd        | A.M.      | 0.612                       | B     | 0.611                               | B     | -0.001                  | NO                         |    |
|   | P.M.      | 0.410                       | A     | 0.401                               | A     | -0.009                  | NO                         |    |
| *15 Avenue of the Stars & Constellation Blvd      | A.M.      | 0.773                       | C     | 0.798                               | C     | 0.025                   | NO                         |    |
|   | P.M.      | 0.874                       | D     | 0.851                               | D     | -0.023                  | NO                         |    |
| *16 Century Park East & Constellation Blvd        | A.M.      | 0.548                       | A     | 0.553                               | A     | 0.005                   | NO                         |    |
|   | P.M.      | 0.633                       | B     | 0.638                               | B     | 0.005                   | NO                         |    |
| *17 Overland Ave & Olympic Blvd                   | A.M.      | 1.629                       | F     | 1.631                               | F     | 0.002                   | NO                         |    |
|   | P.M.      | 1.534                       | F     | 1.529                               | F     | -0.005                  | NO                         |    |
| *18 Beverly Glen Blvd & Olympic Blvd              | A.M.      | 1.067                       | F     | 1.062                               | F     | -0.005                  | NO                         |    |
|   | P.M.      | 1.070                       | F     | 1.067                               | F     | -0.003                  | NO                         |    |
| *19 Century Park West & Olympic Blvd              | A.M.      | 0.960                       | E     | 0.964                               | E     | 0.004                   | NO                         |    |
|   | P.M.      | 1.304                       | F     | 1.290                               | F     | -0.014                  | NO                         |    |
| *20 Avenue of the Stars & Olympic Blvd (WB Ramps) | A.M.      | 0.597                       | A     | 0.594                               | A     | -0.003                  | NO                         |    |
|   | P.M.      | 0.527                       | A     | 0.505                               | A     | -0.022                  | NO                         |    |

**TABLE 5  
FUTURE INTERSECTION LEVEL OF SERVICE ANALYSIS**

| Intersection                                      | Peak Hour | Cumulative Base (Year 2010) |       | Cumulative Plus Project (Year 2010) |       | Project Increase in V/C | Significant Project Impact |    |
|---|-----------|-----------------------------|-------|-------------------------------------|-------|-------------------------|----------------------------|----|
|   |           | V/C or Delay                | LOS   | V/C or Delay                        | LOS   |                         |                            |    |
| *21 Avenue of the Stars & Olympic Blvd (EB Ramps) | A.M.      | 0.517                       | A     | 0.514                               | A     | -0.003                  | NO                         |    |
|   | P.M.      | 0.459                       | A     | 0.459                               | A     | 0.000                   | NO                         |    |
| *22 Century Park East & Olympic Blvd              | A.M.      | 0.934                       | E     | 0.934                               | E     | 0.000                   | NO                         |    |
|   | P.M.      | 0.975                       | E     | 0.972                               | E     | -0.003                  | NO                         |    |
| **23 Spalding Dr & Olympic Blvd [2]               | (CMA)     | A.M.                        | 1.212 | F                                   | 1.211 | F                       | -0.001                     | NO |
|   |           | (ICU)                       | 1.324 | F                                   | 1.323 | F                       | -0.001                     | NO |
|   | (CMA)     | P.M.                        | 1.025 | F                                   | 1.023 | F                       | -0.002                     | NO |
|   |           | (ICU)                       | 1.085 | F                                   | 1.083 | F                       | -0.002                     | NO |
| *24 Avenue of the Stars & Galaxy Way              | A.M.      | 0.447                       | A     | 0.447                               | A     | 0.000                   | NO                         |    |
|   | P.M.      | 0.649                       | B     | 0.652                               | B     | 0.003                   | NO                         |    |
| 25 Avenue of the Stars & Empyrean Way [3]         | A.M.      | 0.545                       | A     | 0.543                               | A     | -0.002                  | NO                         |    |
|   | P.M.      | 0.468                       | A     | 0.471                               | A     | 0.003                   | NO                         |    |
| *26 Overland Ave & Pico Blvd                      | A.M.      | 1.472                       | F     | 1.472                               | F     | 0.000                   | NO                         |    |
|   | P.M.      | 1.453                       | F     | 1.447                               | F     | -0.006                  | NO                         |    |
| *27 Patricia Ave & Pico Blvd                      | A.M.      | 0.788                       | C     | 0.791                               | C     | 0.003                   | NO                         |    |
|   | P.M.      | 0.719                       | C     | 0.718                               | C     | -0.001                  | NO                         |    |
| *28 Beverly Glen Blvd & Pico Blvd                 | A.M.      | 0.860                       | D     | 0.863                               | D     | 0.003                   | NO                         |    |
|   | P.M.      | 0.732                       | C     | 0.730                               | C     | -0.002                  | NO                         |    |
| *29 Motor Ave & Pico Blvd                         | A.M.      | 1.438                       | F     | 1.436                               | F     | -0.002                  | NO                         |    |
|   | P.M.      | 1.449                       | F     | 1.443                               | F     | -0.006                  | NO                         |    |
| *30 Avenue of the Stars & Pico Blvd               | A.M.      | 1.061                       | F     | 1.060                               | F     | -0.001                  | NO                         |    |
|   | P.M.      | 0.934                       | E     | 0.933                               | E     | -0.001                  | NO                         |    |
| *31 Century Park East & Pico Blvd                 | A.M.      | 0.819                       | D     | 0.816                               | D     | -0.003                  | NO                         |    |
|   | P.M.      | 0.781                       | C     | 0.776                               | C     | -0.005                  | NO                         |    |
| *32 Motor Ave & Manning Ave                       | A.M.      | 1.076                       | F     | 1.075                               | F     | -0.001                  | NO                         |    |
|   | P.M.      | 0.873                       | D     | 0.869                               | D     | -0.004                  | NO                         |    |

Notes:

\* Intersection is currently operating under ATSAC & ATCS system.

\*\* Intersection is currently operating under ATSAC system only.

[1] Intersection will not exist in the future with the construction of Santa Monica Parkway.

[2] Intersection under City of Beverly Hills jurisdiction. Analyzed using both Critical Movement Analysis (CMA) methodology used by City of Los Angeles, and Intersection Capacity Utilization (ICU) methodology used by City of Beverly Hills to determine intersection V/C ratio.

[3] Unsignalized Intersection



## V. LOCAL STREET IMPACT ANALYSIS

This chapter presents an analysis of the potential for project impacts on local residential street segments in the vicinity of the project.

### CRITERIA FOR DETERMINATION OF SIGNIFICANT NEIGHBORHOOD TRAFFIC IMPACT

The City of Los Angeles considers a project's impact on a local residential street to be significant if the following criteria are met:

| <u>Projected Average<br/>Daily Traffic with<br/>Project (Final ADT)</u> | <u>Project-related Increase in ADT</u> |
|---|--|
| 0 to 999  | 16% or more of final ADT               |
| 1,000 to 1,999  | 12% or more of final ADT               |
| 2,000 to 2,999  | 10% or more of final ADT               |
| 3,000 or more   | 8% or more of final ADT                |

### IMPACT ANALYSIS

As indicated in Table 4, the proposed project would generate a net reduction of approximately 1,636 daily trips from the estimated level of daily trips generated by the existing uses. Since the proposed project would generate fewer daily trips than the existing land uses, the project would not have a significant impact on local residential streets.



## VI. REGIONAL TRANSPORTATION SYSTEM IMPACT ANALYSIS

This section presents an analysis of potential impacts on the regional transportation system. This analysis was conducted in accordance with the procedures outlined in the *2004 Congestion Management Program (CMP) for Los Angeles County* (Los Angeles County Metropolitan Transportation Authority, 2004). The CMP requires that, when an environmental impact report is prepared for a project, traffic and transit impact analyses be conducted for select regional facilities based on the quantity of project traffic expected to use those facilities.

### REGIONAL TRAFFIC IMPACT ANALYSIS

The CMP guidelines require that the first issue to be addressed is the determination of the geographic scope of the study area. The criteria for determining the study area for CMP arterial monitoring intersections and for freeway monitoring locations are:

- All CMP arterial monitoring intersections where the proposed project will add 50 or more trips during either the a.m. or p.m. peak hours of adjacent street traffic.
- All CMP mainline freeway monitoring locations where the proposed project will add 150 or more trips, in either direction, during either the a.m. or p.m. peak hours.

### Arterial Monitoring Stations

The two closest CMP arterial monitoring stations to the project site are also study intersections and are:

- Beverly Glen Boulevard and Wilshire Boulevard – The project is expected to add approximately two trips in the a.m. peak hour and to remove four trips in the p.m. peak hour at this CMP monitoring intersection.

- Santa Monica Boulevard (North) and Wilshire Boulevard. – The project is expected to add approximately one trip in the a.m. peak hour and to remove 24 trips in the p.m. peak hour at this CMP monitoring intersection.

Since this amounts to fewer than 50 vehicle trips traversing through the monitoring stations, no further analysis of CMP arterial intersections is therefore required and CMP arterial intersection impacts are considered to be insignificant.

### **Freeways**

The closest CMP freeway monitoring stations to the project site are the Santa Monica Freeway (I-10) east of Overland Avenue and the San Diego Freeway (I-405) north of Venice Boulevard. Based on the project distribution patterns shown on Figure 6, approximately 30% of the project trips would be distributed to the freeways: 9% to/from the east on the I-10, 11% to/from the west on the I-10, 5% to/from the north on the San Diego Freeway, and 5% to/from the south on the San Diego Freeway.

Based on the trip generation estimates shown in Table 4, the project is projected to result in a net increase of approximately four additional trips on the Santa Monica Freeway to/from both the east and west and a net increase of about two additional trips on the San Diego Freeway to/from both the north and south during the a.m. peak hour. During the p.m. peak hour, a net decrease in trips is projected. Since fewer than 150 trips would be added in either direction during the a.m. or p.m. peak hours at any of the freeway segments in the vicinity of the study area, no further analysis of the freeway segments is required and freeway impacts are considered to be less than significant.

### **REGIONAL TRANSIT IMPACT ANALYSIS**

Potential increases in transit person trips generated by the proposed project were estimated as follows. Section D.8.4 of the CMP provides a methodology for estimating the number of transit trips expected to result from a proposed project based on the projected number of vehicle trips. This methodology assumes an average vehicle ridership (AVR) factor of 1.4 in order to estimate the number of person trips to and from the project and then provides guidance regarding the

percent of person trips assigned to public transit depending on the type of use (commercial/other versus residential) and the proximity to transit services. The nearest designated CMP transit corridor is Santa Monica Boulevard. Since the project site is located approximately one-quarter mile from these services, the CMP guidelines estimate that approximately 5% of project person trips may use public transit to travel to and from the site.

As discussed in Chapter III and shown in Table 4, the proposed project is expected to generate a net increase of approximately 48 vehicles during the a.m. peak hour and a net decrease of about 154 vehicles during the p.m. peak hour. Applying the AVR factor of 1.4 to the estimated vehicle trips results in an estimated increase of approximately 67 and a net decrease of about 216 person trips during the a.m. and p.m. peak hours, respectively. Finally, assuming the 5% transit mode split suggested in the CMP, this results in the conclusion that the project could add approximately three new transit person trips in the a.m. peak hour and negative transit person trips in the p.m. peak hour. At this level of increase, project-related impacts on the regional transit system would be less than significant.



## **VII. SITE ACCESS ANALYSIS**

### **EXISTING SITE ACCESS CONDITIONS**

The project site includes private driveway easements and a private alley for vehicular access to the adjacent lots to the north and east of the site. These easements and alley are located on the easterly and northerly portions of the site. The private alley currently serves a number of uses, including vehicles traveling to/from from the truck tunnel exit and the parking garage serving 10100 Santa Monica Boulevard and other properties to the north, vehicles traveling to/from the Watt Tower garages to the north of the project site, vehicles traveling to/from the Watt Tower loading dock and delivery parking area immediately east of the project site, vehicles traveling to/from the parking lot serving the existing restaurant on the project site, and vehicles parking on other portions of the project site. The alley intersects Constellation Boulevard along the eastern edge of the project site.

The site also currently contains driveways accessing the existing bank building parking lot and the drive-through bank facility.

### **PROJECT ACCESS PLAN**

The proposed project would have the following three vehicular access points:

- The main driveway along Constellation Boulevard would lead to the central plaza and the drop-off areas at the main entrances of each of the residential structures. Valet services and a concierge would be located at each building entrance.
- A driveway located along the eastern boundary of the site approximately 100 feet east of the main driveway would provide access to the project's below-grade parking. This project driveway would provide vehicular access to the project site via the existing private alley. The existing alley would be widened and reconfigured to align with the eastern boundary of the project site.

- A driveway located on Avenue of the Stars along the northern boundary of the project site would provide access to the underground parking and to the central plaza and drop-off areas. This driveway would be accessible from northbound Avenue of the Stars with access restricted to right turns in and right turns out only.

The existing driveways would all be removed.

## **LEVEL OF SERVICE ANALYSIS AT PROJECT ACCESS POINTS**

A level of service analysis was conducted to evaluate the ability of the project access plan to accommodate the anticipated traffic levels at the access points.

For the purpose of determining the traffic volumes at the existing intersection of the private alley and Constellation Boulevard, manual turning movement traffic counts were conducted for two hours in the morning (7 - 9 a.m.) and two hours in the afternoon (4 - 6 p.m.) on Thursday, August 5, 2004. This manual count data is presented in Appendix F. The traffic count data was broken down into the various types of vehicles and land uses that the alley serves. Traffic for the following land uses was counted:

- Vehicles in and out of the restaurant parking lot immediately adjacent to Constellation Boulevard
- Vehicles to and from the Watt loading dock and delivery parking area
- Vehicles to and from the truck tunnel and the 10100 Santa Monica Boulevard garage
- Vehicles to and from the alley between the 10100 Santa Monica Boulevard garage and the Watt garage
- Vehicles currently utilizing surface parking on the project site

For the future with project driveway analysis, peak hour turning movements in and out of the private alley contributed by all the above-mentioned categories were included except for the vehicles in and out of the restaurant parking lot and the vehicles currently utilizing surface parking on the project site, since these uses would be replaced by the proposed project.



For each of the driveways, through traffic on Constellation Boulevard or Avenue of the Stars was increased for both ambient growth and related projects as discussed in Chapter III and project-generated traffic was added. Year 2010 projected turning movements at the access points are illustrated in Figure 10.

All three driveway locations for the proposed project would be unsignalized and stop-controlled at the driveways. All of the locations were analyzed using the “Two-Way Stop” methodology from the 2000 Highway Capacity Manual (HCM). The HCM methodology determines the average vehicle delay to find the corresponding LOS based on the definitions in Table 6. Level of service worksheets for the driveway analysis are included in Appendix G.

As Table 7 indicates, all of the locations are projected to operate with acceptable levels of service in the future with project conditions.

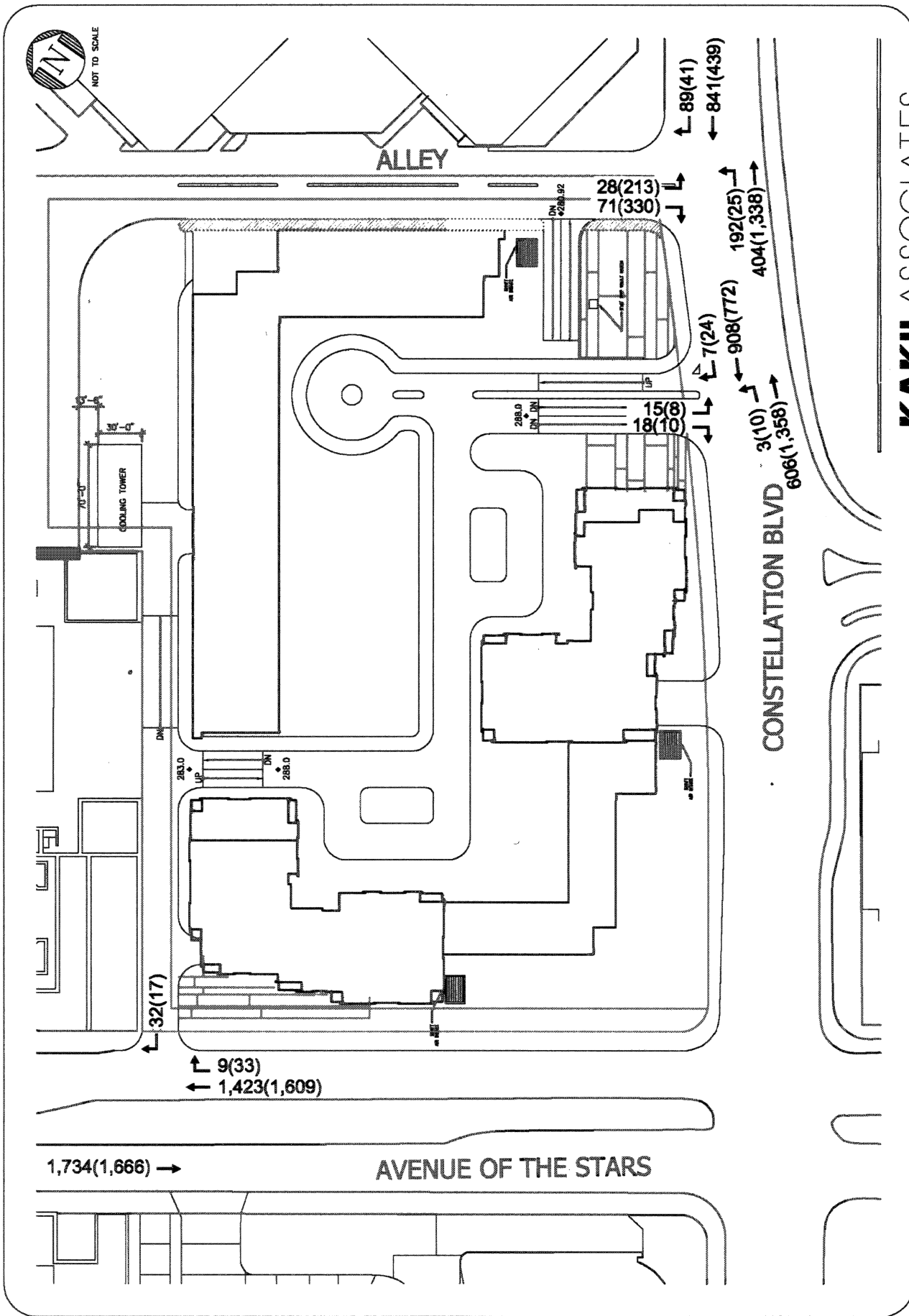


FIGURE 10  
FUTURE PEAK HOUR TRAFFIC VOLUMES AT THE THREE SITE ACCESS POINTS

**TABLE 6**  
**LEVEL OF SERVICE DEFINITIONS FOR**  
**STOP-CONTROLLED INTERSECTIONS**

| <b>Level of Service</b> | <b>Average Total Delay<br/>(seconds/vehicle)</b> |
|-------------------------|--|
| A                       | $\leq 10.0$                                      |
| B                       | $> 10.0$ and $\leq 15.0$                         |
| C                       | $> 15.0$ and $\leq 25.0$                         |
| D                       | $> 25.0$ and $\leq 35.0$                         |
| E                       | $> 35.0$ and $\leq 50.0$                         |
| F                       | $> 50.0$   |

Source: Transportation Research Board, *Highway Capacity Manual, Special Report 209, 2000.*

**TABLE 7  
FUTURE DRIVEWAY LEVEL OF SERVICE ANALYSIS**

| Intersection                            | Peak Hour | Cumulative plus Project |     |
|---|-----------|-------------------------|-----|
|   |           | Delay [a]               | LOS |
| 1 Private Alley & Constellation Blvd    | A.M.      | 22.7                    | C   |
|   | P.M.      | 32.2                    | D   |
| 2 Avenue of Stars & Project Driveway    | A.M.      | 16.6                    | C   |
|   | P.M.      | 18.0                    | C   |
| 3 Project Driveway & Constellation Blvd | A.M.      | 12.1                    | B   |
|   | P.M.      | 12.7                    | B   |

Notes:

[a] Alley and project driveway approaches would be controlled by stop signs. Analysis conducted using *Highway Capacity Manual* stop-controlled methodology. Average vehicular delay in seconds is reported for the stop-controlled approach.

## VIII. PARKING ANALYSIS

The parking analysis for the proposed project was conducted in two ways. First, the proposed parking supply was compared to potential project parking requirements according to the City of Los Angeles Zoning Municipal Code. Second, a demand analysis was conducted to determine whether the project would provide sufficient parking to accommodate projected peak parking demands.

Based on the Los Angeles CEQA Threshold Guide, a project would normally be considered to have a significant impact on parking if the project provides less parking than needed as determined through an analysis of demand from the project. Therefore under this guidance, the proposed project is considered to have a significant parking impact if the number of spaces required to accommodate project activities exceeds the number of parking spaces provided.

### CODE REQUIREMENT

Parking for residents of the project would be provided at a ratio of two spaces per unit plus guest parking. Under the Los Angeles Municipal Code (LAMC), Section 12.21.A.4(a), each multiple unit dwelling with more than three rooms is required to provide two spaces per each dwelling unit. Under this criterion, the parking required for a 483-unit development would be 966 spaces. In addition, the City Planning Department's "Residential Parking Policy for Division of Land—No. AA 2000-1" establishes a standard for new condominiums and condominium conversions of two spaces/unit plus 0.25 space/unit for guest parking in non-parking congested areas or 0.5 space/unit for guest parking in parking congested areas. Using this policy of two spaces/unit plus 0.5 space/unit for guest parking results in a requirement of 1,208 parking spaces. The project would meet code requirements by providing a total of 1,208 spaces within an on-site four-level subterranean structure.

## PARKING DEMAND ANALYSIS

Parking demand ratios from the *Parking Generation, 3<sup>rd</sup> Edition* (Institute of Transportation Engineers, 2004) indicate that residential condominiums generate an average peak parking demand of 1.46 vehicles per dwelling unit. Parking utilization surveys separately conducted at ten multifamily residential developments in Southern California<sup>5</sup> found a peak parking demand range of between 0.66 and 1.43 spaces per dwelling unit, with the lower values tending to correlate to developments with a higher percentage of smaller units.

Both sources indicate peak parking demand ratios that are lower than the City code requirement. At 1.46 vehicles per unit, the proposed project would generate a demand for 705 parking spaces. The project would provide a total of 1,208 spaces, satisfying the code requirement and exceeding the projected demand. Therefore, no significant parking impacts are anticipated.

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<sup>5</sup> Kaku Associates, *Residential Parking Demand Study, Southern California Coastal Zone*, June 2001. Eleven apartment and condominium complexes were evaluated in the study, with occupancy surveys completed at ten of the eleven sites.

## IX. SUMMARY AND CONCLUSIONS

This study was undertaken to analyze the potential traffic impacts of the proposed residential project located at 10131 Constellation Boulevard in the Century City area of the City of Los Angeles. The following summarizes the results of this analysis:

- The proposed project consists of construction of 483 residential condominium units in the form of three structures, replacing the existing office, bank and drive-through bank facility, and restaurant uses.
- The project site is located on the northeast corner of Avenue of the Stars and Constellation Boulevard. The project would provide three vehicular access points, two from Constellation Boulevard including a valet at the project's central plaza, and a restricted right turn in and right turn out only from Avenue of the Stars. These vehicular access points will serve four levels of subterranean parking.
- After consideration of trips generated by existing uses on the project site, the project is expected to generate a net increase of approximately 48 trips during the a.m. peak hour and a net decrease of approximately 154 trips during the p.m. peak hour.
- After applying the significant impact criteria to the level of service analysis for future without and with project traffic, it was determined that the project would not create a significant impact at any of the study intersections. Similarly, no significant CMP intersection, freeway, or transit impacts are anticipated. Since the project results in a net decrease in daily trips, no significant impacts on local streets are anticipated. No mitigation measures would therefore be required.
- According to the City of Los Angeles Municipal Code and the City Planning Department's "Residential Parking Policy for Division of Land—No. AA 2000-1," the proposed project would require 1,208 parking spaces including guest spaces. The Project would meet code and demand requirements by providing a total of 1,208 spaces within an on-site four-level subterranean structure. No significant parking impacts are anticipated.





## REFERENCES

*2000 Highway Capacity Manual*, Transportation Research Board, 2000.

*Congestion Management Program For Los Angeles County*, Los Angeles County Metropolitan Transportation Authority, July 22, 2004.

*Parking Generation, 3<sup>rd</sup> Edition*, Institute of Transportation Engineers, 2004.

*Residential Parking Demand Study, Southern California Coastal Zone*, Kaku Associates, June 2001.

*Santa Monica Boulevard Transit Parkway Project Environmental Assessment/Final Environmental Impact Report*, July 1999.

*Traffic Analysis for 35-Unit Condominium Project Located at the Southeast Corner of Wilshire Boulevard and Comstock Avenue in Westwood Village*, Crain & Associates, November 2004.

*Traffic Impact Study for Office, Commercial and Cultural Use Project at 2000 Avenue of the Stars, Century City*, Crain & Associates, June 2002.

*Traffic Study Policies and Procedures*, City of Los Angeles Department of Transportation, March 2002.

*Trip Generation, 7th Edition*, Institute of Transportation Engineers, 2003.



**APPENDIX A**  
**INTERSECTION LANE CONFIGURATIONS**

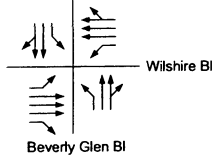


# INTERSECTION LANE CONFIGURATIONS

## EXISTING BASE YEAR (2005) CONDITIONS

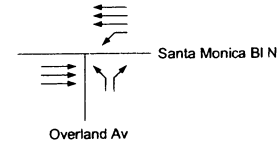
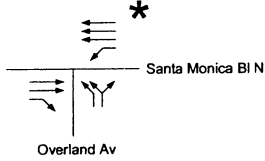
## FUTURE CONDITIONS

1. Beverly Glen BI & Wilshire BI

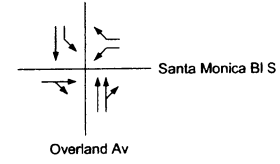
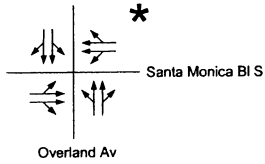


Same As Existing Conditions

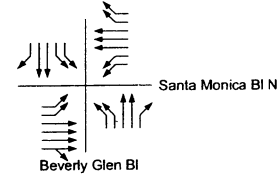
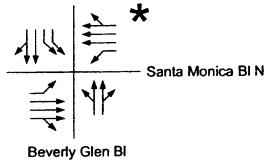
2. Overland Av & Santa Monica BI N



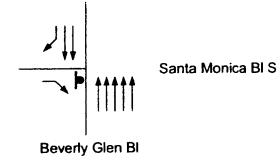
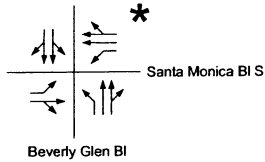
3. Overland Av & Santa Monica BI S



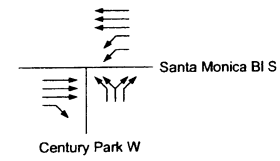
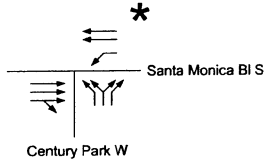
4. Beverly Glen BI & Santa Monica BI N



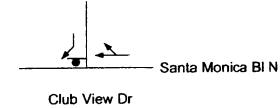
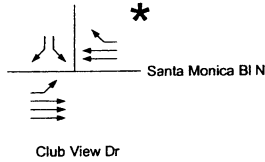
5. Beverly Glen BI & Santa Monica BI S



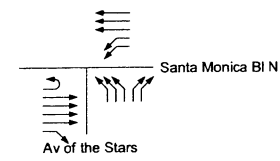
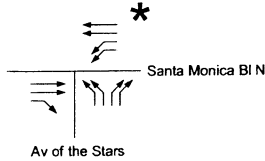
6. Century Park W & Santa Monica BI S



7. Club View Dr & Santa Monica BI N



8. Av of the Stars & Santa Monica BI N



### NOTE:

- \* Lane configuration prior to the construction of Santa Monica Transit Parkway Project.
- ◻ Stop Controlled

# INTERSECTION LANE CONFIGURATIONS

|  | EXISTING BASE YEAR<br>(2005) CONDITIONS         | FUTURE<br>CONDITIONS                           |
|--|---|--|
| 9. Av of the Stars & Santa Monica BI S | <p>Santa Monica BI S</p> <p>Av of the Stars</p> | Intersection Does Not Exist In Future          |
| 10. Century Park E & Santa Monica BI N | <p>Santa Monica BI N</p> <p>Century Park E</p>  | <p>Santa Monica BI N</p> <p>Century Park E</p> |
| 11. Century Park E & Santa Monica BI S | <p>Santa Monica BI S</p> <p>Overland Av</p>     | Intersection Does Not Exist In Future          |
| 12. Santa Monica BI N & Wilshire BI    | <p>Wilshire BI</p> <p>Santa Monica BI N</p>     | Same As Existing Conditions                    |
| 13. Santa Monica BI S & Wilshire BI    | <p>Wilshire BI</p> <p>Santa Monica BI S</p>     | Same As Existing Conditions                    |
| 14. Century Park W & Constellation BI  | <p>Constellation BI</p> <p>Century Park W</p>   | Same As Existing Conditions                    |
| 15. Av of the Stars & Constellation BI | <p>Constellation BI</p> <p>Av of the Stars</p>  | <p>Constellation BI</p> <p>Av of the Stars</p> |
| 16. Century Park E & Constellation BI  | <p>Constellation BI</p> <p>Century Park E</p>   | Same As Existing Conditions                    |

**NOTE:**

\* Lane configuration prior to the construction of Santa Monica Transit Parkway Project.

# INTERSECTION LANE CONFIGURATIONS

|   | <u>EXISTING BASE YEAR<br/>(2005) CONDITIONS</u>                              | <u>FUTURE<br/>CONDITIONS</u> |
|---|--|------------------------------|
| 17. Overland Av & Olympic BI                | <p style="text-align: center;">Overland Av<br/>Olympic BI</p>                | Same As Existing Conditions  |
| 18. Beverly Glen BI & Olympic BI            | <p style="text-align: center;">[1]<br/>Beverly Glen BI<br/>Olympic BI</p>    | Same As Existing Conditions  |
| 19. Century Park W & Olympic BI             | <p style="text-align: center;">Century Park W<br/>Olympic BI</p>             | Same As Existing Conditions  |
| 20. Av of the Stars & Olympic BI (WB Ramps) | <p style="text-align: center;">Av of the Stars<br/>Olympic BI (WB Ramps)</p> | Same As Existing Conditions  |
| 21. Av of the Stars & Olympic BI (EB Ramps) | <p style="text-align: center;">Av of the Stars<br/>Olympic BI (EB Ramps)</p> | Same As Existing Conditions  |
| 22. Century Park E & Olympic BI             | <p style="text-align: center;">Century Park E<br/>Olympic BI</p>             | Same As Existing Conditions  |
| 23. Spalding Dr & Olympic BI                | <p style="text-align: center;">[1]<br/>Spalding Dr<br/>Olympic BI</p>        | Same As Existing Conditions  |
| 24. Av of the Stars & Galaxy Wy             | <p style="text-align: center;">Av of the Stars<br/>Galaxy Wy</p>             | Same As Existing Conditions  |

**NOTE:**

[1] - Functions as a separate lane, although not striped.

# INTERSECTION LANE CONFIGURATIONS

|                                   | EXISTING BASE YEAR<br>(2005) CONDITIONS | FUTURE<br>CONDITIONS        |
|-----------------------------------|---|-----------------------------|
| 25. Av of the Stars & Empyrean Wy | <p>Av of the Stars</p>                  | Same As Existing Conditions |
| 26. Overland Av & Pico Bl         | <p>Overland Av</p>                      | Same As Existing Conditions |
| 27. Patricia Av & Pico Bl         | <p>Patricia Av</p>                      | Same As Existing Conditions |
| 28. Beverly Glen Bl & Pico Bl     | <p>Beverly Glen Bl</p>                  | Same As Existing Conditions |
| 29. Motor Av & Pico Bl            | <p>Motor Av</p>                         | Same As Existing Conditions |
| 30. Av of the Stars & Pico Bl     | <p>Av of the Stars</p>                  | Same As Existing Conditions |
| 31. Century Park E & Pico Bl      | <p>Century Park E</p>                   | Same As Existing Conditions |
| 32. Motor Av & Manning Av         | <p>Motor Av</p>                         | Same As Existing Conditions |

**LEGEND**

▣ Stop Controlled



## **APPENDIX B**

### **JUSTIFICATION FOR USING HISTORICAL TRAFFIC COUNTS**



## JUSTIFICATION FOR USING HISTORICAL TRAFFIC COUNTS

The main issue with respect to conducting new traffic counts at the intersection locations selected for the traffic study is the ongoing construction of Santa Monica Parkway. Santa Monica Parkway is an approximately 2.5-mile roadway combining North Santa Monica Boulevard and Little Santa Monica Boulevard from Beverly Glen Boulevard in the west to Century Park East in east, north of the proposed project site.

To justify the use of historical traffic counts from *2000 Avenue of the Stars Traffic Study*, June 2002, Kaku Associates conducted a comparison study of the historical traffic counts and new traffic counts conducted on Thursday, February 24, 2005, at the locations mentioned below:

- Avenue of the Stars & North Santa Monica Boulevard
- Avenue of the Stars & Little Santa Monica Boulevard
- Century Park East & North Santa Monica Boulevard
- Century Park East & Little Santa Monica Boulevard

Peak hour traffic volumes at the above-mentioned locations were used to derive segment volumes along North Santa Monica Boulevard and Little Santa Monica Boulevard.

### COMPARISON RESULTS

#### **Segment between Avenue of the Stars and Century Park East**

##### **Year 2001 (2000 Avenue of the Stars, Tuesday, March 27, 2001 count)**

| Segment*  | Peak Hour | Traveling West | Traveling East | Total       |
|---|-----------|----------------|----------------|-------------|
| Segment volume for N. Santa Monica Bl.<br>+ Little Santa Monica Bl. | A.M.      | 2,532          | 2,561          | <b>5093</b> |
|   | P.M.      | 2,710          | 2,321          | <b>5031</b> |

##### **Year 2005 (Thursday, February 24, 2005 count)**

| Segment*  | Peak Hour | Traveling West | Traveling East | Total       |
|---|-----------|----------------|----------------|-------------|
| Segment volume for N. Santa Monica Bl.<br>+ Little Santa Monica Bl. | A.M.      | 1,866          | 1,505          | <b>3371</b> |
|   | P.M.      | 1,934          | 1,912          | <b>3846</b> |

#### **Percentage reduction of traffic in the proposed Santa Monica Parkway corridor related to construction**

| Segment*  | Peak Hour | Traveling West | Traveling East | Total      |
|---|-----------|----------------|----------------|------------|
| Segment volume for N. Santa Monica Bl.<br>+ Little Santa Monica Bl. | A.M.      | 26%            | 41%            | <b>34%</b> |
|   | P.M.      | 29%            | 18%            | <b>24%</b> |

## Segment between Century Park West and Avenue of the Stars

Year 2001 Volumes (2000 Avenue of the Stars, Tuesday, March 27 and Wednesday, March 28, 2001 counts)

| Segment   | Peak Hour | Traveling West | Traveling East | Total       |
|---|-----------|----------------|----------------|-------------|
| Segment volume for N. Santa Monica Bl.<br>+ Little Santa Monica Bl. | A.M.      | 2,132          | 3,484          | <b>5616</b> |
|   | P.M.      | 3,144          | 2,461          | <b>5605</b> |

Year 2005 (Thursday, February 24, 2005 count)

| Segment   | Peak Hour | Traveling West | Traveling East | Total       |
|---|-----------|----------------|----------------|-------------|
| Segment volume for N. Santa Monica Bl.<br>+ Little Santa Monica Bl. | A.M.      | 1,654          | 1,830          | <b>3484</b> |
|   | P.M.      | 2,264          | 1,752          | <b>4016</b> |

Percentage reduction of traffic in the proposed Santa Monica Parkway corridor related to construction

| Segment   | Peak Hour | Traveling West | Traveling East | Total      |
|---|-----------|----------------|----------------|------------|
| Segment volume for N. Santa Monica Bl.<br>+ Little Santa Monica Bl. | A.M.      | 22%            | 47%            | <b>38%</b> |
|   | P.M.      | 28%            | 29%            | <b>28%</b> |

\* For the purpose of comparison, segment volumes of North Santa Monica Boulevard and Little Santa Monica Boulevard are combined to compare them more realistically to the 2005 segment volumes, which were conducted during the construction of Santa Monica Parkway.

The above results show that there has been a considerable, albeit temporary, reduction of traffic at these segments along North Santa Monica Boulevard and Little Santa Monica Boulevard. The reduction in traffic at these locations would also translate to temporary shifts of traffic to other major east-west roadways north and south of North Santa Monica Boulevard and Little Santa Monica Boulevard such as Wilshire Boulevard, Olympic Boulevard, etc.

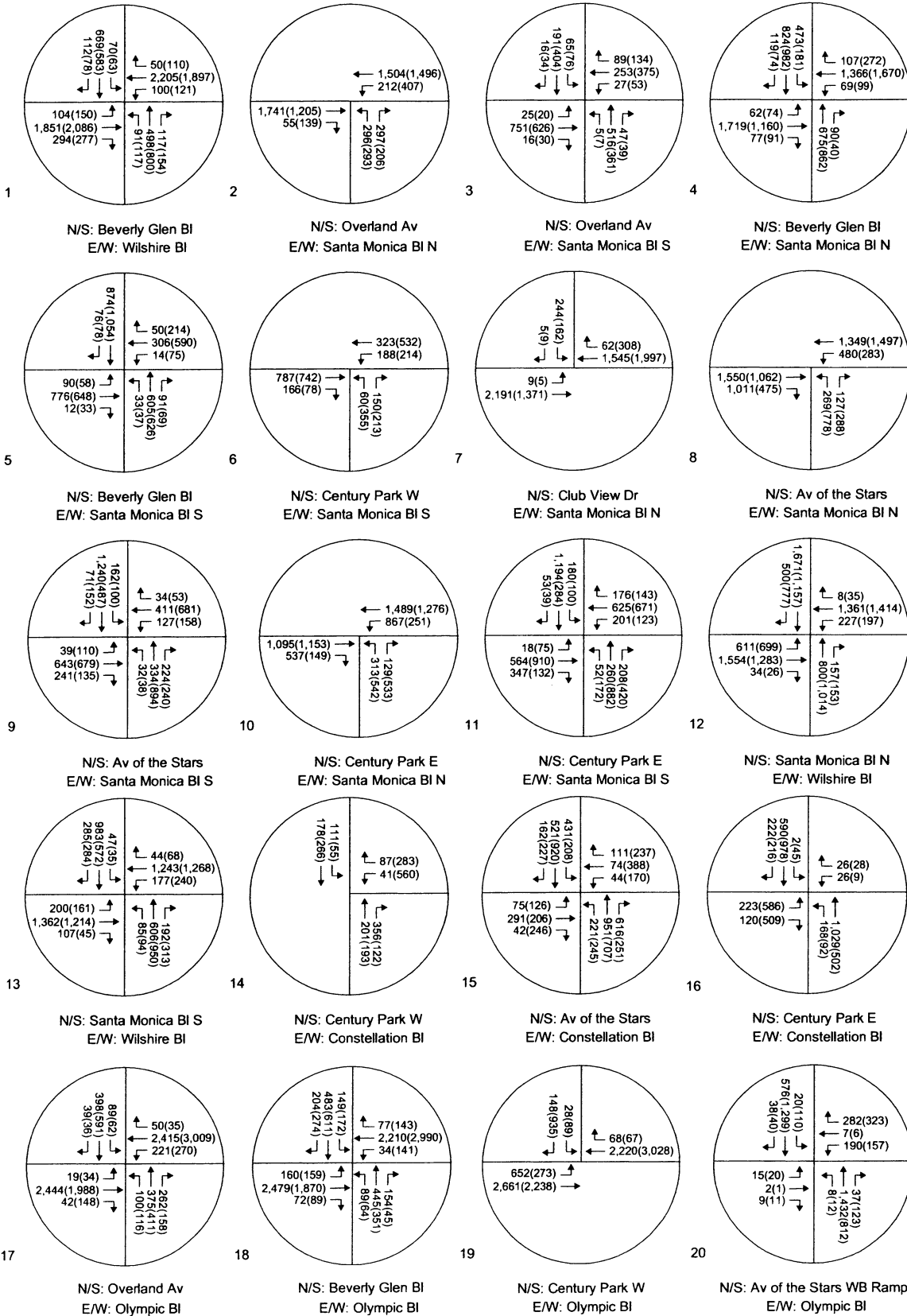
## CONCLUSION

The above comparison results favor using historical traffic count data collected prior to the start of Santa Monica Parkway construction as opposed to conducting new traffic counts at the selected intersection locations while construction is underway.

**APPENDIX C**

**YEAR 2001 TRAFFIC VOLUME DATA AT STUDY INTERSECTIONS**

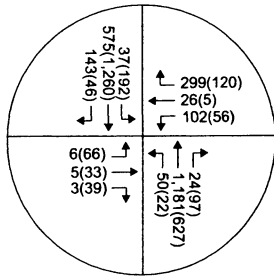




NOTE: XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES

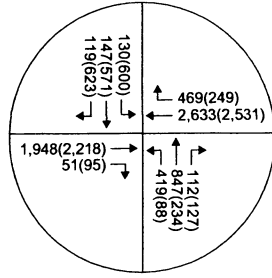
**KAKU ASSOCIATES**

# APPENDIX C (1 OF 2) EXISTING BASE YEAR 2001 PEAK HOUR TRAFFIC VOLUMES



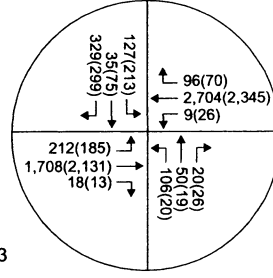
21

N/S: Av of the Stars EB Ramps  
E/W: Olympic Bl



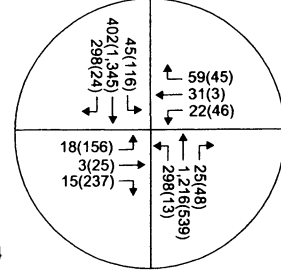
22

N/S: Century Park E  
E/W: Olympic Bl



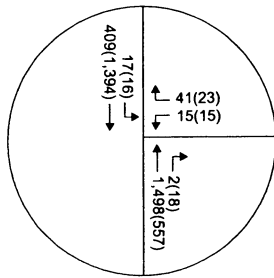
23

N/S: Spalding Dr  
E/W: Olympic Bl



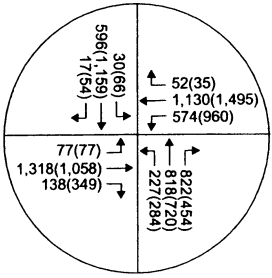
24

N/S: Av of the Stars  
E/W: Galaxy Wy



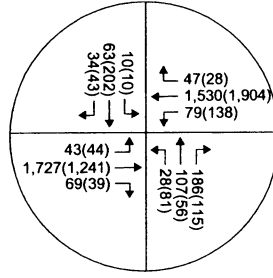
25

N/S: Av of the Stars  
E/W: Empyrean Wy



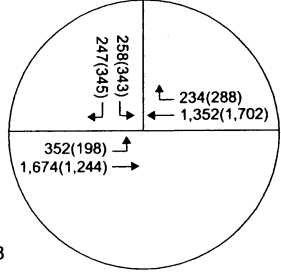
26

N/S: Overland Av  
E/W: Pico Bl



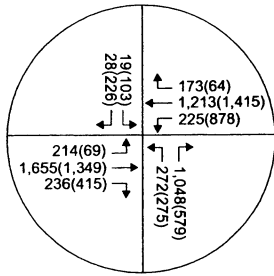
27

N/S: Patricia Av  
E/W: Pico Bl



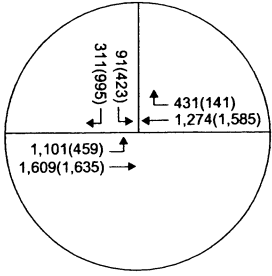
28

N/S: Beverly Glen Bl  
E/W: Pico Bl



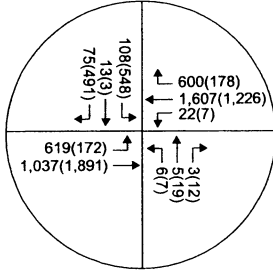
29

N/S: Motor Av  
E/W: Pico Bl



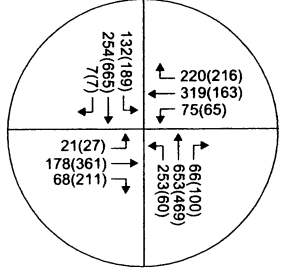
30

N/S: Av of the Stars  
E/W: Pico Bl



31

N/S: Century Park E  
E/W: Pico Bl



32

N/S: Motor Av  
E/W: Manning Av

NOTE: XXX(XXX) - AM(PM) PEAK HOUR TRAFFIC VOLUMES

**KAKU ASSOCIATES**

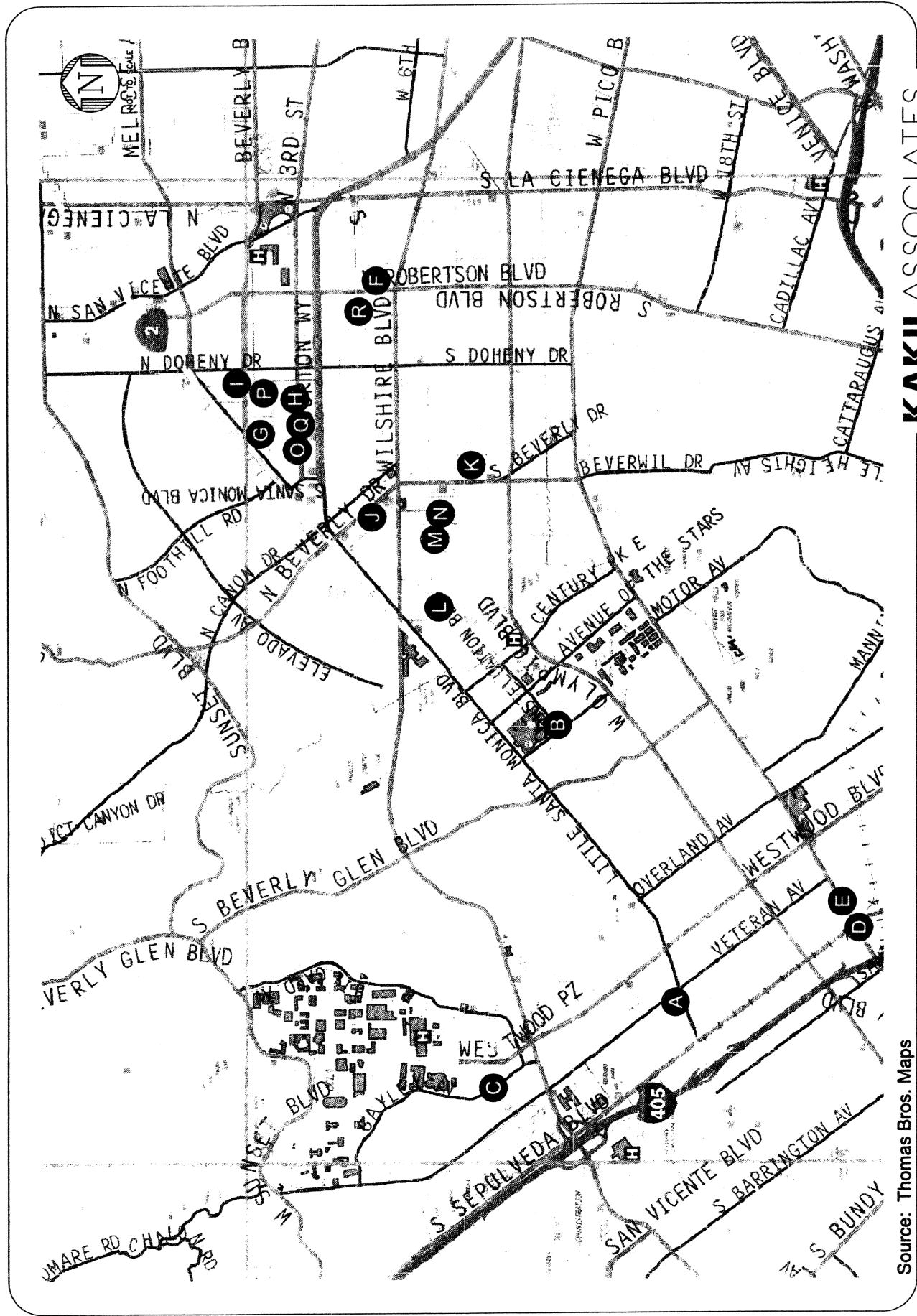
APPENDIX C (2 OF 2)  
EXISTING BASE YEAR 2001 PEAK HOUR TRAFFIC VOLUMES



**APPENDIX D**

**RELATED PROJECTS CONSTRUCTED BETWEEN 2001 AND 2005**





Source: Thomas Bros. Maps

**KAKU ASSOCIATES**

**APPENDIX D  
APPROXIMATE LOCATIONS OF RELATED PROJECTS BUILT SINCE 2002**

APPENDIX - D  
TRIP GENERATION ESTIMATES FOR PROJECTS BUILT SINCE 2002

| Proj #       | Address                       | Jurisdiction  | Size                    | Unit  | Description  | Daily Trips                 |                   | AM Peak Hour Trips |                   | PM Peak Hour Trips  |                    |                       |
|--------------|-------------------------------|---------------|-------------------------|-------|--|-----------------------------|-------------------|--------------------|-------------------|---------------------|--------------------|-----------------------|
|              |                               |               |                         |       |  | In                          | Out               | In                 | Out               | In                  | Out                | Total                 |
| A            | 10991 Santa Monica Boulevard  | Los Angeles   | 6                       | Pumps | Gas Station with Convenience Market [1]  | 977                         | 30                | 30                 | 60                | 53                  | 52                 | 105                   |
| B            | 10270 Constellation Boulevard | Los Angeles   | 791                     | KSF   | General Office [2][3]  | 7,868                       | 993               | 123                | 1,116             | 171                 | 833                | 1,004                 |
| C            | 1050 Gayley Avenue            | Los Angeles   | 19<br>(0.937)<br>(10.5) | KSF   | Whole Foods Supermarket<br>Movie Theater (Existing removed)<br>Restaurant (Existing removed) | 2,119<br>(1,687)<br>(1,369) | 38<br>(9)<br>(50) | 24<br>0<br>(47)    | 62<br>(9)<br>(97) | 100<br>(73)<br>(62) | 96<br>(68)<br>(54) | 196<br>(141)<br>(136) |
|              |                               |               |                         |       | Subtotal   | 1,060                       | 130               | 18                 | 148               | 26                  | 124                | 150                   |
| D            | 11110 W Pico Boulevard        | Los Angeles   | 74.653                  | KSF   | General Office [1]   | 1,150                       | 48                | 46                 | 94                | 46                  | 43                 | 89                    |
| E            | 11021 W Pico Boulevard        | Los Angeles   | N/A                     |       | Fast Food Restaurant with Drive Thru [1]   | 135                         | 2                 | 8                  | 10                | 8                   | 4                  | 12                    |
| F            | 143-149 N. Arnaz Drive        | Beverly Hills | 23                      | DU    | Condominiums [1]   | 1,977                       | 248               | 34                 | 282               | 46                  | 222                | 268                   |
| G            | 407 N. Maple Drive            | Beverly Hills | 206.705                 | KSF   | General Office, Medical Center [1]   | 35                          | 1                 | 2                  | 3                 | 2                   | 1                  | 3                     |
| H            | 338 N. Palm Drive             | Beverly Hills | 6                       | DU    | Condominiums [1]   | 224                         | 3                 | 14                 | 17                | 13                  | 7                  | 20                    |
| I            | 450-460 N. Palm Drive         | Beverly Hills | 38                      | DU    | Condominiums [3]   | 201                         | 3                 | 2                  | 5                 | 5                   | 7                  | 12                    |
| J            | 326 N. Rodeo Drive            | Beverly Hills | 4.55                    | KSF   | Retail [3]   | 59                          | 1                 | 3                  | 4                 | 3                   | 2                  | 5                     |
| K            | 345 S. Reeves Drive           | Beverly Hills | 10                      | DU    | Condominiums [3]   | 117                         | 2                 | 7                  | 9                 | 7                   | 4                  | 11                    |
| L            | 137-147 Spalding Drive        | Beverly Hills | 20                      | DU    | Condominiums [3]   | 59                          | 1                 | 3                  | 4                 | 3                   | 2                  | 5                     |
| M            | 132 S. Crescent Drive         | Beverly Hills | 10                      | DU    | Condominiums [3]   | 94                          | 1                 | 6                  | 7                 | 6                   | 3                  | 9                     |
| N            | 132 S. Maple Drive            | Beverly Hills | 16                      | DU    | Condominiums [3]   | 183                         | 21                | 3                  | 24                | 15                  | 73                 | 88                    |
| O            | 9350 Civic Center Drive       | Beverly Hills | 7.6                     | KSF   | General Office [3]   | 199                         | 3                 | 12                 | 15                | 12                  | 6                  | 18                    |
| P            | 411 N. Oakhurst Drive         | Beverly Hills | 34                      | DU    | Condominiums [3]   | 1,053                       | 129               | 18                 | 147               | 28                  | 134                | 162                   |
| Q            | 331 N. Maple Drive            | Beverly Hills | 74                      | KSF   | General Office [3]   | 223                         | 5                 | 6                  | 11                | 6                   | 4                  | 11                    |
| R            | 214-226 N. Clark Drive        | Beverly Hills | 64                      | DU    | Senior Housing [3]   |                             |                   |                    |                   |                     |                    |                       |
| <b>TOTAL</b> |                               |               |                         |       |  | <b>14,677</b>               | <b>1,600</b>      | <b>312</b>         | <b>1,912</b>      | <b>415</b>          | <b>1,495</b>       | <b>1,891</b>          |

Notes:

[1] Source: Table 8, Traffic Study Condominium Project - Wilshire Bl & Comstock Ave, Westwood Village, Crain & Associates, November 2004.

[2] DEIR, Century City Project, October 1996.

[3] "Traffic Impact Study for Office, Commercial and Cultural Use Project at 2000 Avenue of the Stars, Century City," Table 8, Crain & Associates, June 2002.

**APPENDIX E**  
**INTERSECTION LEVEL OF SERVICE WORKSHEETS**



**Existing (Estimated 2005)**





## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  AM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND |            |            | SOUTHBOUND |            |            | WESTBOUND  |             |           | EASTBOUND  |             |            |
|--------------|------------|------------|------------|------------|------------|------------|------------|-------------|-----------|------------|-------------|------------|
|              | LT         | TH         | RT         | LT         | TH         | RT         | LT         | TH          | RT        | LT         | TH          | RT         |
| EXISTING     | 96         | 537        | 124        | 74         | 762        | 119        | 106        | 2338        | 53        | 110        | 1962        | 312        |
| AMBIENT      |            |            |            |            |            |            |            |             |           |            |             |            |
| RELATED      |            |            |            |            |            |            |            |             |           |            |             |            |
| PROJECT      |            |            |            |            |            |            |            |             |           |            |             |            |
| <b>TOTAL</b> | <b>96</b>  | <b>537</b> | <b>124</b> | <b>74</b>  | <b>762</b> | <b>119</b> | <b>106</b> | <b>2338</b> | <b>53</b> | <b>110</b> | <b>1962</b> | <b>312</b> |
| LANE         | ↙   ↕   ↘  | ↙   ↕   ↘  | ↙   ↕   ↘  | ↙   ↕   ↘  | ↙   ↕   ↘  | ↙   ↕   ↘  | ↙   ↕   ↘  | ↙   ↕   ↘   | ↙   ↕   ↘ | ↙   ↕   ↘  | ↙   ↕   ↘   | ↙   ↕   ↘  |
|              | 1   0   1  | 0   1   0  | 1   0   0  | 1   0   1  | 0   1   0  | 1   0   0  | 1   0   2  | 0   1   0   | 0   1   0 | 1   0   3  | 0   0   0   | 1   0   0  |
| SIGNAL       | Phasing    |            | RTOR       | Phasing    |            | RTOR       | Phasing    |             | RTOR      | Phasing    |             | RTOR       |
|              | Perm       |            | Auto       | Perm       |            | Auto       | Prot-Fix   |             | OLA       | Prot-Fix   |             | Auto       |

### Critical Movements Diagram

|  |  |  |  |
|--|--|--|--|
|  | <b>SouthBound</b><br>A: <input type="text" value="441"/><br>B: <input type="text" value="74"/> |  |  |
| <b>EastBound</b><br>A: <input type="text" value="654"/><br>B: <input type="text" value="110"/> | ↑<br>(North arrow pointing up)   | <b>WestBound</b><br>A: <input type="text" value="797"/><br>B: <input type="text" value="106"/> |  |
| <b>NorthBound</b><br>A: <input type="text" value="331"/><br>B: <input type="text" value="96"/> |  |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  |   |
|--|---|
|  | <b>V/C RATIO</b> <b>LOS</b><br>0.00 - 0.60      A<br>0.61 - 0.70      B<br>0.71 - 0.80      C<br>0.81 - 0.90      D<br>0.91 - 1.00      E |
|--|---|

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{96 + 441 + 797 + 110}{*1425} = 0.943 - 0.03 = 0.913$$

ATCS  
LOS = E

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|--|--|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |  |  |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |  |  |
| EXISTING                          | 329        | 0  | 315  | 0          | 0  | 0    | 225       | 1633 | 0    | 0         | 2038 | 66   |  |  |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| TOTAL                             | 329        | 0  | 315  | 0          | 0  | 0    | 225       | 1633 | 0    | 0         | 2038 | 66   |  |  |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |  |  |
|                                   | Perm       |    | Auto | Perm       |    | Auto | Prot-Fix  |      | Auto | Perm      |      | Auto |  |  |

### Critical Movements Diagram

|            |   |
|------------|---|
| SouthBound |   |
| A:         | 0 |
| B:         | 0 |

|           |      |
|-----------|------|
| EastBound |      |
| A:        | 1019 |
| B:        | 0    |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 544 |
| B:        | 225 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 322 |
| B:         | 322 |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

---

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$VIC = \frac{322 + 0 + 225 + 1019}{*1425} = 1.029$$

*MCS*  
= 1.029 - 0.03 = 0.999

LOS = *F*  
= E

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND  |     |    | SOUTHBOUND  |     |    | WESTBOUND  |     |    | EASTBOUND  |     |    |   |   |   |
|----------|---|-----|----|---|-----|----|--|-----|----|--|-----|----|---|---|---|
|          | LT  | TH  | RT | LT  | TH  | RT | LT   | TH  | RT | LT   | TH  | RT |   |   |   |
| EXISTING | 5   | 562 | 50 | 69  | 210 | 17 | 29   | 268 | 94 | 27   | 796 | 17 |   |   |   |
| AMBIENT  |   |     |    |   |     |    |  |     |    |  |     |    |   |   |   |
| RELATED  |   |     |    |   |     |    |  |     |    |  |     |    |   |   |   |
| PROJECT  |   |     |    |   |     |    |  |     |    |  |     |    |   |   |   |
| TOTAL    | 5   | 562 | 50 | 69  | 210 | 17 | 29   | 268 | 94 | 27   | 796 | 17 |   |   |   |
| LANE     | 0   | 1   | 0  | 0   | 1   | 0  | 0  | 0   | 1  | 0  | 0   | 1  | 0 | 0 |   |
|          | ↙   | ↕   | ↘  | ↙   | ↕   | ↘  | ↙  | ↕   | ↘  | ↙  | ↕   | ↘  | ↙ | ↕ | ↘ |
| SIGNAL   | Phasing <input type="text" value="Split"/> RTOR <input type="text" value="Auto"/> |     |    | Phasing <input type="text" value="Split"/> RTOR <input type="text" value="Auto"/> |     |    | Phasing <input type="text" value="Perm"/> RTOR <input type="text" value="Auto"/> |     |    | Phasing <input type="text" value="Perm"/> RTOR <input type="text" value="Auto"/> |     |    |   |   |   |

### Critical Movements Diagram

|            |                                  |
|------------|----------------------------------|
| SouthBound |                                  |
| A:         | <input type="text" value="227"/> |
| B:         | <input type="text" value="69"/>  |

|           |                                  |
|-----------|----------------------------------|
| EastBound |                                  |
| A:        | <input type="text" value="434"/> |
| B:        | <input type="text" value="27"/>  |

↑

|           |                                  |
|-----------|----------------------------------|
| WestBound |                                  |
| A:        | <input type="text" value="239"/> |
| B:        | <input type="text" value="29"/>  |

|            |                                  |
|------------|----------------------------------|
| NorthBound |                                  |
| A:         | <input type="text" value="309"/> |
| B:         | <input type="text" value="5"/>   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  | VIC RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

---

**Results**

North/South Critical Movements = A(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

VIC =  $\frac{309 + 227 + 29 + 434}{*1425} = 0.631 - 1.03 = 0.601$       LOS = B

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |      |      |           |      |      |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 0          | 716 | 95   | 551        | 873 | 129  | 73        | 1485 | 119  | 69        | 2012 | 82   |
| AMBIENT                           |            |     |      |            |     |      |           |      |      |           |      |      |
| RELATED                           |            |     |      |            |     |      |           |      |      |           |      |      |
| PROJECT                           |            |     |      |            |     |      |           |      |      |           |      |      |
| TOTAL                             | 0          | 716 | 95   | 551        | 873 | 129  | 73        | 1485 | 119  | 69        | 2012 | 82   |
| LANE                              |            |     |      |            |     |      |           |      |      |           |      |      |
|                                   | 0          | 1   | 0    | 2          | 0   | 1    | 1         | 0    | 2    | 1         | 0    | 2    |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |     | Auto | Prot-Fix   |     | Auto | perm      |      | Auto | perm      |      | Auto |

### Critical Movements Diagram

|   |   |   |  |
|---|---|---|--|
|   | <b>SouthBound</b><br>A: <input type="text" value="501"/><br>B: <input type="text" value="303"/> |   |  |
| <b>EastBound</b><br>A: <input type="text" value="698"/><br>B: <input type="text" value="69"/> |   | <b>WestBound</b><br>A: <input type="text" value="535"/><br>B: <input type="text" value="73"/> |  |
|   | <b>NorthBound</b><br>A: <input type="text" value="406"/><br>B: <input type="text" value="0"/>   |   |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

---

**Results**

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

VIC =  $\frac{406 + 303 + 73 + 698}{*1425} = 0.969$  LOS = E

*ATSAC*  
= 0.939

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |     |      |           |     |      |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|-----|------|-----------|-----|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |     |      | EASTBOUND |     |      |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH  | RT   | LT        | TH  | RT   |
| EXISTING                          | 35         | 641 | 96   | 0          | 926 | 81   | 15        | 324 | 53   | 95        | 823 | 13   |
| AMBIENT                           |            |     |      |            |     |      |           |     |      |           |     |      |
| RELATED                           |            |     |      |            |     |      |           |     |      |           |     |      |
| PROJECT                           |            |     |      |            |     |      |           |     |      |           |     |      |
| TOTAL                             | 35         | 641 | 96   | 0          | 926 | 81   | 15        | 324 | 53   | 95        | 823 | 13   |
| LANE                              | ↙          | ↕   | ↗    | ↙          | ↕   | ↗    | ↙         | ↕   | ↗    | ↙         | ↕   | ↗    |
|                                   | 1          | 0   | 1    | 0          | 1   | 0    | 1         | 0   | 1    | 1         | 0   | 0    |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |     | RTOR | Phasing   |     | RTOR |
|                                   | Perm       |     | Auto | Perm       |     | Auto | Prot-Fix  |     | Auto | Prot-Fix  |     | Auto |

### Critical Movements Diagram

|                                     |   |                                     |
|-------------------------------------|---|-------------------------------------|
| EastBound                           | ↑ | WestBound                           |
| A: <input type="text" value="836"/> |   | A: <input type="text" value="189"/> |
| B: <input type="text" value="95"/>  |   | B: <input type="text" value="15"/>  |

|                                     |   |                                     |
|-------------------------------------|---|-------------------------------------|
| SouthBound                          | ↓ | NorthBound                          |
| A: <input type="text" value="504"/> |   | A: <input type="text" value="369"/> |
| B: <input type="text" value="0"/>   |   | B: <input type="text" value="35"/>  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

VIC =  $\frac{35 + 504 + 15 + 836}{*1425} = 0.905 - 0.05 = 0.875$       LOS = ~~A~~ = D

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |                                    |    |                                   |                                    |    |                                   |                                   |     |                                   |                                   |     |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|------------------------------------|----|-----------------------------------|------------------------------------|----|-----------------------------------|-----------------------------------|-----|-----------------------------------|-----------------------------------|-----|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND                         |    |                                   | SOUTHBOUND                         |    |                                   | WESTBOUND                         |     |                                   | EASTBOUND                         |     |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | LT                                 | TH | RT                                | LT                                 | TH | RT                                | LT                                | TH  | RT                                | LT                                | TH  | RT                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING                          | 90                                 | 0  | 159                               | 0                                  | 0  | 0                                 | 199                               | 359 | 0                                 | 0                                 | 866 | 385                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT                           |                                    |    |                                   |                                    |    |                                   |                                   |     |                                   |                                   |     |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |                                    |    |                                   |                                    |    |                                   |                                   |     |                                   |                                   |     |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |                                    |    |                                   |                                    |    |                                   |                                   |     |                                   |                                   |     |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 90                                 | 0  | 159                               | 0                                  | 0  | 0                                 | 199                               | 359 | 0                                 | 0                                 | 866 | 385                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE                              |                                    |    |                                   |                                    |    |                                   |                                   |     |                                   |                                   |     |                                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | 1                                  | 0  | 0                                 | 0                                  | 0  | 1                                 | 1                                 | 0   | 0                                 | 0                                 | 0   | 0                                 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 |
| SIGNAL                            | Phasing                            |    | RTOR                              | Phasing                            |    | RTOR                              | Phasing                           |     | RTOR                              | Phasing                           |     | RTOR                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | <input type="text" value="Split"/> |    | <input type="text" value="Auto"/> | <input type="text" value="Split"/> |    | <input type="text" value="Auto"/> | <input type="text" value="Perm"/> |     | <input type="text" value="Auto"/> | <input type="text" value="Perm"/> |     | <input type="text" value="Auto"/> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

|  |   |  |                  |            |
|--|---|--|------------------|------------|
|  | <b>SouthBound</b><br>A: <input type="text" value="0"/><br>B: <input type="text" value="0"/> |  |                  |            |
| <b>EastBound</b><br>A: <input type="text" value="417"/><br>B: <input type="text" value="0"/> |   | <b>WestBound</b><br>A: <input type="text" value="180"/><br>B: <input type="text" value="199"/> | <b>V/C RATIO</b> | <b>LOS</b> |
|  |   |  | 0.00 - 0.60      | A          |
|  |   |  | 0.61 - 0.70      | B          |
|  |   |  | 0.71 - 0.80      | C          |
|  |   |  | 0.81 - 0.90      | D          |
|  |   |  | 0.91 - 1.00      | E          |
|  |   |  |                  |            |
| A = Adjusted Through/Right Volume<br>B = Adjusted Left Volume<br>* = ATSAC Benefit           |   |  |                  |            |
| <b>Results</b>   |   |  |                  |            |
| North/South Critical Movements = A(N/B) + A(S/B)   |   |  |                  |            |
| West/East Critical Movements = B(W/B) + A(E/B)   |   |  |                  |            |
| $V/C = \frac{83 + 0 + 199 + 417}{*1425} = 0.421 - 0.00 \text{ LOS} = A$ = 0.391              |   |  |                  |            |

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **AM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND |       |       | SOUTHBOUND |       |       | WESTBOUND |       |       | EASTBOUND |       |       |
|----------|------------|-------|-------|------------|-------|-------|-----------|-------|-------|-----------|-------|-------|
|          | LT         | TH    | RT    | LT         | TH    | RT    | LT        | TH    | RT    | LT        | TH    | RT    |
| EXISTING | 0          | 0     | 0     | 259        | 0     | 5     | 0         | 1638  | 66    | 10        | 2322  | 0     |
| AMBIENT  |            |       |       |            |       |       |           |       |       |           |       |       |
| RELATED  |            |       |       |            |       |       |           |       |       |           |       |       |
| PROJECT  |            |       |       |            |       |       |           |       |       |           |       |       |
| TOTAL    | 0          | 0     | 0     | 259        | 0     | 5     | 0         | 1638  | 66    | 10        | 2322  | 0     |
| LANE     | ↙ ↕ ↘      | ↙ ↕ ↘ | ↙ ↕ ↘ | ↙ ↕ ↘      | ↙ ↕ ↘ | ↙ ↕ ↘ | ↙ ↕ ↘     | ↙ ↕ ↘ | ↙ ↕ ↘ | ↙ ↕ ↘     | ↙ ↕ ↘ | ↙ ↕ ↘ |
|          | 0 0 0      | 0 0 0 | 0 0 0 | 1 0 0      | 0 0 0 | 1 0 0 | 0 0 2     | 0 0 1 | 0 0 1 | 1 0 3     | 0 0 0 | 0 0 0 |
| SIGNAL   | Phasing    |       | RTOR  | Phasing    |       | RTOR  | Phasing   |       | RTOR  | Phasing   |       | RTOR  |
|          | Perm       |       | Auto  | Perm       |       | Auto  | Perm      |       | Auto  | Perm      |       | Auto  |

### Critical Movements Diagram

|  |   |                  |            |
|--|---|------------------|------------|
|  | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <input type="text" value="5"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="259"/> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>EastBound</b><br/>                 A: <input type="text" value="774"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="10"/> </div> <div style="text-align: center; margin: 0 10px;">                 ↑<br/>                  <br/>                 ↑             </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>WestBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="819"/><br/>                 B: <input type="text" value="0"/> </div> </div> <div style="border: 1px solid black; padding: 5px;"> <b>NorthBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div> |                  |            |
|  |   | <b>V/C RATIO</b> | <b>LOS</b> |
|  |   | 0.00 - 0.60      | A          |
|  |   | 0.61 - 0.70      | B          |
|  |   | 0.71 - 0.80      | C          |
|  |   | 0.81 - 0.90      | D          |
|  |   | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 259 + 819 + 10}{*1500} = 0.655 - 0.03 = 0.625$  LOS = B

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND  |  |  | SOUTHBOUND  |    |    | WESTBOUND |      |    | EASTBOUND |      |      |
|----------|---|--|--|---|----|----|-----------|------|----|-----------|------|------|
|          | LT  | TH   | RT   | LT  | TH | RT | LT        | TH   | RT | LT        | TH   | RT   |
| EXISTING | 285   | 0  | 168  | 0   | 0  | 0  | 777       | 1447 | 0  | 0         | 1675 | 1072 |
| AMBIENT  |   |  |  |   |    |    |           |      |    |           |      |      |
| RELATED  |   |  |  |   |    |    |           |      |    |           |      |      |
| PROJECT  |   |  |  |   |    |    |           |      |    |           |      |      |
| TOTAL    | 285   | 0  | 168  | 0   | 0  | 0  | 777       | 1447 | 0  | 0         | 1675 | 1072 |
| LANE     | <br>2 0 0 0 0 2 0   | <br>0 0 0 0 0 0 0  | <br>2 0 2 0 0 0 0  | <br>0 0 2 0 0 1 0   |    |    |           |      |    |           |      |      |
| SIGNAL   | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="OLA"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="OLA"/> |    |    |           |      |    |           |      |      |

### Critical Movements Diagram

|   |   |  |  |
|---|---|--|--|
|   | <b>SouthBound</b><br>A: <input type="text" value="0"/><br>B: <input type="text" value="0"/>   |  |  |
| <b>EastBound</b><br>A: <input type="text" value="1072"/><br>B: <input type="text" value="0"/> |   | <b>WestBound</b><br>A: <input type="text" value="724"/><br>B: <input type="text" value="427"/> |  |
|   | <b>NorthBound</b><br>A: <input type="text" value="0"/><br>B: <input type="text" value="157"/> |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$VIC = \frac{157 + 0 + 427 + 1072}{*1425} = 1.092 - 0.08 = 1.012 \quad LOS = F$$



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |            |            |            |             |           |            |            |           |           |            |            |
|-----------------------------------|------------|------------|------------|------------|-------------|-----------|------------|------------|-----------|-----------|------------|------------|
|                                   | NORTHBOUND |            |            | SOUTHBOUND |             |           | WESTBOUND  |            |           | EASTBOUND |            |            |
|                                   | LT         | TH         | RT         | LT         | TH          | RT        | LT         | TH         | RT        | LT        | TH         | RT         |
| EXISTING                          | 34         | 354        | 237        | 172        | 1314        | 75        | 135        | 436        | 36        | 41        | 682        | 255        |
| AMBIENT                           |            |            |            |            |             |           |            |            |           |           |            |            |
| RELATED                           |            |            |            |            |             |           |            |            |           |           |            |            |
| PROJECT                           |            |            |            |            |             |           |            |            |           |           |            |            |
| <b>TOTAL</b>                      | <b>34</b>  | <b>354</b> | <b>237</b> | <b>172</b> | <b>1314</b> | <b>75</b> | <b>135</b> | <b>436</b> | <b>36</b> | <b>41</b> | <b>682</b> | <b>255</b> |
| LANE                              |            |            |            |            |             |           |            |            |           |           |            |            |
|                                   | 1          | 0          | 3          | 1          | 0           | 2         | 1          | 0          | 1         | 1         | 0          | 3          |
| SIGNAL                            | Phasing    |            | RTOR       | Phasing    |             | RTOR      | Phasing    |            | RTOR      | Phasing   |            | RTOR       |
|                                   | Perm       |            | Auto       | Perm       |             | Auto      | Prot-Fix   |            | Auto      | Prot-Fix  |            | Auto       |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 463 |
| B:         | 172 |

↑

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 236 |
| B:        | 135 |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{34 + 463 + 135 + 255}{*1425} = 0.552 - 0.03$  LOS = A

*ATSAC = 0.522*

## INTERSECTION DATA SUMMARY SHEET

|             |   |             |   |                |   |
|-------------|---|-------------|---|----------------|---|
| N/S:        | Century Park E                            | W/E:        | Santa Monica Bl (N)                       | I/S No:        | 10  |
| AM/PM:      | <b>AM</b>                                 | Comments:   | Existing Year 2005                        |                |   |
| COUNT DATE: | <input style="width: 80px;" type="text"/> | STUDY DATE: | <input style="width: 80px;" type="text"/> | GROWTH FACTOR: | <input style="width: 80px;" type="text"/> |

|              | NORTHBOUND  |                   |  | SOUTHBOUND        |  |          | WESTBOUND   |             |          | EASTBOUND |             |            |
|--------------|---|-------------------|--|-------------------|--|----------|---|-------------|----------|-----------|-------------|------------|
|              | LT  | TH                | RT   | LT                | TH   | RT       | LT  | TH          | RT       | LT        | TH          | RT         |
| EXISTING     | 332   | 0                 | 137  | 0                 | 0  | 0        | 919   | 1863        | 0        | 0         | 1226        | 569        |
| AMBIENT      |   |                   |  |                   |  |          |   |             |          |           |             |            |
| RELATED      |   |                   |  |                   |  |          |   |             |          |           |             |            |
| PROJECT      |   |                   |  |                   |  |          |   |             |          |           |             |            |
| <b>TOTAL</b> | <b>332</b>  | <b>0</b>          | <b>137</b>   | <b>0</b>          | <b>0</b>   | <b>0</b> | <b>919</b>  | <b>1863</b> | <b>0</b> | <b>0</b>  | <b>1226</b> | <b>569</b> |
| LANE         | <br>1 0 0 0 0 1 1   | <br>0 0 0 0 0 0 0 | <br>2 0 2 0 0 0 0  | <br>0 0 2 0 0 1 0 |  |          |   |             |          |           |             |            |
| SIGNAL       | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="OLA"/> |                   | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |          | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="OLA"/> |             |          |           |             |            |

### Critical Movements Diagram

|  |   |  |   |
|--|---|--|---|
|  | <b>SouthBound</b><br>A: <input style="width: 60px;" type="text" value="0"/><br>B: <input style="width: 60px;" type="text" value="0"/> |  |   |
| <b>EastBound</b><br>A: <input style="width: 60px;" type="text" value="613"/><br>B: <input style="width: 60px;" type="text" value="0"/> |   | <b>WestBound</b><br>A: <input style="width: 60px;" type="text" value="932"/><br>B: <input style="width: 60px;" type="text" value="505"/> | <b>V/C RATIO</b> <b>LOS</b><br>0.00 - 0.60    A<br>0.61 - 0.70    B<br>0.71 - 0.80    C<br>0.81 - 0.90    D<br>0.91 - 1.00    E |
| A = Adjusted Through/Right Volume<br>B = Adjusted Left Volume<br>* = ATSAC Benefit   |   |  |   |

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{183 + 0 + 505 + 613}{*1425} = 0.843 - 0.03 \text{ (ATSAC)} = 0.813 \text{ LOS} = D$$

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  AM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND   |  |  | SOUTHBOUND   |      |    | WESTBOUND |     |     | EASTBOUND |     |     |
|----------|--|--|--|--|------|----|-----------|-----|-----|-----------|-----|-----|
|          | LT   | TH   | RT   | LT   | TH   | RT | LT        | TH  | RT  | LT        | TH  | RT  |
| EXISTING | 55   | 276  | 220  | 191  | 1266 | 56 | 213       | 663 | 187 | 19        | 598 | 368 |
| AMBIENT  |  |  |  |  |      |    |           |     |     |           |     |     |
| RELATED  |  |  |  |  |      |    |           |     |     |           |     |     |
| PROJECT  |  |  |  |  |      |    |           |     |     |           |     |     |
| TOTAL    | 55   | 276  | 220  | 191  | 1266 | 56 | 213       | 663 | 187 | 19        | 598 | 368 |
| LANE     |  |  |  |  |      |    |           |     |     |           |     |     |
| SIGNAL   | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |      |    |           |     |     |           |     |     |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 661 |
| B:         | 191 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 368 |
| B:        | 19  |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 425 |
| B:        | 213 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 220 |
| B:         | 55  |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{55 + 661 + 213 + 368}{*1425} = 0.840 - 0.803 = 0.810$  LOS = D

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|                 | NORTHBOUND                        |     |                                   | SOUTHBOUND |                                   |     | WESTBOUND                         |      |                                    | EASTBOUND |                                   |    |
|-----------------|-----------------------------------|-----|-----------------------------------|------------|-----------------------------------|-----|-----------------------------------|------|------------------------------------|-----------|-----------------------------------|----|
|                 | LT                                | TH  | RT                                | LT         | TH                                | RT  | LT                                | TH   | RT                                 | LT        | TH                                | RT |
| <b>EXISTING</b> | 0                                 | 884 | 179                               | 0          | 1903                              | 530 | 333                               | 1446 | 8                                  | 648       | 1652                              | 36 |
| <b>AMBIENT</b>  |                                   |     |                                   |            |                                   |     |                                   |      |                                    |           |                                   |    |
| <b>RELATED</b>  |                                   |     |                                   |            |                                   |     |                                   |      |                                    |           |                                   |    |
| <b>PROJECT</b>  |                                   |     |                                   |            |                                   |     |                                   |      |                                    |           |                                   |    |
| <b>TOTAL</b>    | 0                                 | 884 | 179                               | 0          | 1903                              | 530 | 333                               | 1446 | 8                                  | 648       | 1652                              | 36 |
| <b>LANE</b>     |                                   |     |                                   |            |                                   |     |                                   |      |                                    |           |                                   |    |
| <b>SIGNAL</b>   | Phasing                           |     | RTOR                              |            | Phasing                           |     | RTOR                              |      | Phasing                            |           | RTOR                              |    |
|                 | <input type="text" value="Perm"/> |     | <input type="text" value="Auto"/> |            | <input type="text" value="Perm"/> |     | <input type="text" value="Auto"/> |      | <input type="text" value="Split"/> |           | <input type="text" value="Auto"/> |    |

### Critical Movements Diagram

|  |   |  |  |
|--|---|--|--|
|  | <b>SouthBound</b><br>A: <input type="text" value="634"/><br>B: <input type="text" value="0"/> |  |  |
| <b>EastBound</b><br>A: <input type="text" value="826"/><br>B: <input type="text" value="648"/> |   | <b>WestBound</b><br>A: <input type="text" value="485"/><br>B: <input type="text" value="333"/> |  |
|  | <b>NorthBound</b><br>A: <input type="text" value="442"/><br>B: <input type="text" value="0"/> |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$V/C = \frac{0 + 634 + 485 + 826}{1425} = 1.365$

LOS = F

Existing AM Year 2005

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #12 Santa Monica BL (N) & Wilshire Bl

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.232  
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

| 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   |   |   | Prot+Permit |   |   | Prot+Permit |   |   |   |   |   |   |
| Rights:     | Include     |   |   | Include     |   |   | Include     |   |   | Include     |   |   |   |   |   |   |
| Min. Green: | 0           | 0 | 0 | 0           | 0 | 0 | 0           | 0 | 0 | 0           | 0 | 0 |   |   |   |   |
| Lanes:      | 0           | 0 | 2 | 0           | 1 | 1 | 2           | 0 | 1 | 1           | 0 | 1 | 0 | 2 | 1 | 0 |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 0    | 884  | 179  | 0    | 1903 | 530  | 648  | 1652 | 36   | 333  | 1446 | 8    |
| 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    | 884  | 179  | 0    | 1903 | 530  | 648  | 1652 | 36   | 333  | 1446 | 8    |
| 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    | 884  | 179  | 0    | 1903 | 530  | 648  | 1652 | 36   | 333  | 1446 | 8    |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced Vol: | 0    | 884  | 179  | 0    | 1903 | 530  | 648  | 1652 | 36   | 333  | 1446 | 8    |
| 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 |
| Final Vol.:  | 0    | 884  | 179  | 0    | 1903 | 530  | 648  | 1652 | 36   | 333  | 1446 | 8    |

Saturation Flow Module:

|             |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Sat/Lane:   | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 2.00 | 1.00 | 0.00 | 3.00 | 1.00 | 2.00 | 1.96 | 0.04 | 1.00 | 2.98 | 0.02 |
| Final Sat.: | 0    | 3200 | 1600 | 0    | 4800 | 1600 | 2880 | 3132 | 68   | 1600 | 4774 | 26   |

Capacity Analysis Module:

|             |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Vol/Sat:    | 0.00 | 0.28 | 0.11 | 0.00 | 0.40 | 0.33 | 0.23 | 0.53 | 0.53 | 0.21 | 0.30 | 0.30 |
| Crit Moves: | **** |      |      | **** |      |      | **** |      |      | **** |      |      |

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## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND   |                 |  | SOUTHBOUND      |  |                 | WESTBOUND  |                 |  | EASTBOUND       |  |                 |                 |
|--------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|--|-----------------|-----------------|
|              | LT   | TH              | RT   | LT              | TH   | RT              | LT   | TH              | RT   | LT              | TH   | RT              |                 |
| EXISTING     | 90   | 658             | 204  | 50              | 1104   | 302             | 188  | 1412            | 47   | 212             | 1462   | 113             |                 |
| AMBIENT      |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |                 |
| RELATED      |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |                 |
| PROJECT      |  |                 |  |                 |  |                 |  |                 |  |                 |  |                 |                 |
| <b>TOTAL</b> | <b>90</b>  | <b>658</b>      | <b>204</b>   | <b>50</b>       | <b>1104</b>  | <b>302</b>      | <b>188</b>   | <b>1412</b>     | <b>47</b>  | <b>212</b>      | <b>1462</b>  | <b>113</b>      |                 |
| LANE         | ↔ ↕ ↑ ↕ ↕ ↕ ↕ ↕  | ↔ ↕ ↑ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↑ ↕ ↕ ↕ ↕ ↕  | ↔ ↕ ↑ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↑ ↕ ↕ ↕ ↕ ↕  | ↔ ↕ ↑ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↑ ↕ ↕ ↕ ↕ ↕  | ↔ ↕ ↑ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↑ ↕ ↕ ↕ ↕ ↕  | ↔ ↕ ↑ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↑ ↕ ↕ ↕ ↕ ↕  | ↔ ↕ ↑ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↑ ↕ ↕ ↕ ↕ ↕ |
|              | 1 0 2 0 0 1 0  | 1 0 1 0 1 0 0   | 1 0 1 0 1 0 0  | 1 0 2 0 1 0 0   | 1 0 1 0 1 0 0  | 1 0 2 0 1 0 0   | 1 0 1 0 1 0 0  | 1 0 1 0 1 0 0   | 1 0 1 0 1 0 0  | 1 0 1 0 1 0 0   | 1 0 1 0 1 0 0  | 1 0 1 0 1 0 0   |                 |
| SIGNAL       | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |                 | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |                 | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |                 | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |                 | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |                 | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |                 |                 |

### Critical Movements Diagram

|            |                                  |
|------------|----------------------------------|
| SouthBound |                                  |
| A:         | <input type="text" value="703"/> |
| B:         | <input type="text" value="50"/>  |

↑

|           |                                  |
|-----------|----------------------------------|
| WestBound |                                  |
| A:        | <input type="text" value="486"/> |
| B:        | <input type="text" value="188"/> |

|           |                                  |
|-----------|----------------------------------|
| EastBound |                                  |
| A:        | <input type="text" value="788"/> |
| B:        | <input type="text" value="212"/> |

|            |                                  |
|------------|----------------------------------|
| NorthBound |                                  |
| A:         | <input type="text" value="329"/> |
| B:         | <input type="text" value="90"/>  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{90 + 703 + 188 + 788}{1375} = 1.287$       LOS = F

Existing AM Year 2005

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #13 Santa Monica Bl (S) & Wilshire Bl
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.205
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green (0-0-0), and Lanes (1-0-2-0-1).

Volume Module: Table with 12 columns representing traffic volumes and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns representing saturation flow and adjustment factors. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns representing capacity and critical moves. Rows include Vol/Sat and Crit Moves.

\*\*\*\*\*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |    |      |           |    |      |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|----|------|-----------|----|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |
| EXISTING                          | 0          | 213 | 645  | 327        | 189 | 0    | 76        | 0  | 118  | 0         | 0  | 0    |
| AMBIENT                           |            |     |      |            |     |      |           |    |      |           |    |      |
| RELATED                           |            |     |      |            |     |      |           |    |      |           |    |      |
| PROJECT                           |            |     |      |            |     |      |           |    |      |           |    |      |
| TOTAL                             | 0          | 213 | 645  | 327        | 189 | 0    | 76        | 0  | 118  | 0         | 0  | 0    |
| LANE                              |            |     |      |            |     |      |           |    |      |           |    |      |
|                                   | 0          | 0   | 2    | 1          | 0   | 3    | 2         | 0  | 0    | 0         | 0  | 0    |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |
|                                   | Perm       |     | OLA  | Prot-Fix   |     | Auto | Perm      |    | Auto | Perm      |    | Auto |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 63  |
| B:         | 327 |

|           |   |
|-----------|---|
| EastBound |   |
| A:        | 0 |
| B:        | 0 |

|           |    |
|-----------|----|
| WestBound |    |
| A:        | 0  |
| B:        | 42 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 645 |
| B:         | 0   |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{645 + 327 + 42 + 0}{*1425} = 0.642 - 0.03 \text{ LOS} = B$$

*\* 705*  
*= 0.612*



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |      |      |            |     |      |           |     |      |           |     |      |   |   |   |   |   |
|-----------------------------------|------------|------|------|------------|-----|------|-----------|-----|------|-----------|-----|------|---|---|---|---|---|
|                                   | NORTHBOUND |      |      | SOUTHBOUND |     |      | WESTBOUND |     |      | EASTBOUND |     |      |   |   |   |   |   |
|                                   | LT         | TH   | RT   | LT         | TH  | RT   | LT        | TH  | RT   | LT        | TH  | RT   |   |   |   |   |   |
| EXISTING                          | 413        | 1008 | 653  | 457        | 552 | 440  | 47        | 148 | 118  | 113       | 317 | 67   |   |   |   |   |   |
| AMBIENT                           |            |      |      |            |     |      |           |     |      |           |     |      |   |   |   |   |   |
| RELATED                           |            |      |      |            |     |      |           |     |      |           |     |      |   |   |   |   |   |
| PROJECT                           |            |      |      |            |     |      |           |     |      |           |     |      |   |   |   |   |   |
| TOTAL                             | 413        | 1008 | 653  | 457        | 552 | 440  | 47        | 148 | 118  | 113       | 317 | 67   |   |   |   |   |   |
| LANE                              |            |      |      |            |     |      |           |     |      |           |     |      |   |   |   |   |   |
|                                   | 2          | 0    | 2    | 0          | 0   | 1    | 0         | 2   | 0    | 0         | 1   | 0    | 2 | 0 | 0 | 1 | 0 |
| SIGNAL                            | Phasing    |      | RTOR | Phasing    |     | RTOR | Phasing   |     | RTOR | Phasing   |     | RTOR |   |   |   |   |   |
|                                   | Prot-Fix   |      | Auto | Prot-Fix   |     | Auto | Prot-Var  |     | Auto | Prot-Var  |     | Auto |   |   |   |   |   |

### Critical Movements Diagram

|  |  |                  |            |
|--|--|------------------|------------|
|  | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                     A: <input type="text" value="440"/><br/>                     B: <input type="text" value="251"/> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>EastBound</b><br/>                     A: <input type="text" value="159"/><br/>                     B: <input type="text" value="113"/> </div> <div style="text-align: center;"> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>WestBound</b><br/>                     A: <input type="text" value="74"/><br/>                     B: <input type="text" value="47"/> </div> </div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-top: 5px;"> <b>NorthBound</b><br/>                     A: <input type="text" value="629"/><br/>                     B: <input type="text" value="227"/> </div> |                  |            |
|  |  | <b>V/C RATIO</b> | <b>LOS</b> |
|  |  | 0.00 - 0.60      | A          |
|  |  | 0.61 - 0.70      | B          |
|  |  | 0.71 - 0.80      | C          |
|  |  | 0.81 - 0.90      | D          |
|  |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{629 + 251 + 47 + 159}{*1375} = 0.720 - 0.03 = 0.690$       LOS = ~~A~~ = B

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |      |      |            |     |      |           |    |      |           |    |      |  |
|-----------------------------------|------------|------|------|------------|-----|------|-----------|----|------|-----------|----|------|--|
|                                   | NORTHBOUND |      |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |  |
|                                   | LT         | TH   | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |  |
| EXISTING                          | 248        | 1091 | 0    | 2          | 625 | 235  | 27        | 0  | 28   | 236       | 0  | 136  |  |
| AMBIENT                           |            |      |      |            |     |      |           |    |      |           |    |      |  |
| RELATED                           |            |      |      |            |     |      |           |    |      |           |    |      |  |
| PROJECT                           |            |      |      |            |     |      |           |    |      |           |    |      |  |
| TOTAL                             | 248        | 1091 | 0    | 2          | 625 | 235  | 27        | 0  | 28   | 236       | 0  | 136  |  |
| LANE                              |            |      |      |            |     |      |           |    |      |           |    |      |  |
| SIGNAL                            | Phasing    |      | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |  |
|                                   | Perm       |      | Auto | Perm       |     | Auto | Perm      |    | Auto | Perm      |    | Auto |  |

### Critical Movements Diagram

|  |   |   |  |
|--|---|---|--|
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="313"/><br/>                 B: <input type="text" value="2"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="55"/><br/>                 B: <input type="text" value="27"/> </div>    |  |
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="75"/><br/>                 B: <input type="text" value="130"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="364"/><br/>                 B: <input type="text" value="248"/> </div> |  |
|  |   |   |  |

|  | V/C RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{248 + 313 + 55 + 130}{*1500} = 0.427 - 0.03 \text{ LOS} = A$$

*ATSAC = 0.397*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|------|------|-----------|------|------|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |      |      | EASTBOUND |      |      |   |   |   |   |   |   |   |   |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH   | RT   | LT        | TH   | RT   |   |   |   |   |   |   |   |   |
| EXISTING                          | 106        | 407 | 447  | 98         | 426 | 41   | 255       | 2573 | 59   | 20        | 2691 | 45   |   |   |   |   |   |   |   |   |
| AMBIENT                           |            |     |      |            |     |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |
| RELATED                           |            |     |      |            |     |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |
| PROJECT                           |            |     |      |            |     |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |
| TOTAL                             | 106        | 407 | 447  | 98         | 426 | 41   | 255       | 2573 | 59   | 20        | 2691 | 45   |   |   |   |   |   |   |   |   |
| LANE                              |            |     |      |            |     |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |
|                                   | 1          | 0   | 0    | 0          | 1   | 0    | 0         | 0    | 1    | 0         | 3    | 0    | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |   |   |   |   |   |   |   |   |
|                                   | Perm       |     | Auto | Perm       |     | Auto | Prot-Fix  |      | Auto | Prot-Fix  |      | Auto |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 467 |
| B:         | 98  |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 912 |
| B:        | 20  |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 858 |
| B:        | 255 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 854 |
| B:         | 106 |

|  |  |  |                  |            |
|--|--|--|------------------|------------|
|  |  |  | <u>V/C RATIO</u> | <u>LOS</u> |
|  |  |  | 0.00 - 0.60      | A          |
|  |  |  | 0.61 - 0.70      | B          |
|  |  |  | 0.71 - 0.80      | C          |
|  |  |  | 0.81 - 0.90      | D          |
|  |  |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{854 + 98 + 255 + 912}{*1425} = 1.417 - 0.03 = 1.387$  LOS = F

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |  |               |  |               |  |               |  |               |  |               |  |               |
|-----------------------------------|--|---------------|--|---------------|--|---------------|--|---------------|--|---------------|--|---------------|
|                                   | NORTHBOUND   |               |  | SOUTHBOUND    |  |               | WESTBOUND  |               |  | EASTBOUND     |  |               |
|                                   | LT   | TH            | RT   | LT            | TH   | RT            | LT   | TH            | RT   | LT            | TH   | RT            |
| EXISTING                          | 94   | 472           | 163  | 158           | 512  | 216           | 36   | 2383          | 82   | 170           | 2900   | 76            |
| AMBIENT                           |  |               |  |               |  |               |  |               |  |               |  |               |
| RELATED                           |  |               |  |               |  |               |  |               |  |               |  |               |
| PROJECT                           |  |               |  |               |  |               |  |               |  |               |  |               |
| TOTAL                             | 94   | 472           | 163  | 158           | 512  | 216           | 36   | 2383          | 82   | 170           | 2900   | 76            |
| LANE                              | ↵ ↕ ↑ ↗ ↘ ↙ ↚  | ↵ ↕ ↑ ↗ ↘ ↙ ↚ | ↵ ↕ ↑ ↗ ↘ ↙ ↚  | ↵ ↕ ↑ ↗ ↘ ↙ ↚ | ↵ ↕ ↑ ↗ ↘ ↙ ↚  | ↵ ↕ ↑ ↗ ↘ ↙ ↚ | ↵ ↕ ↑ ↗ ↘ ↙ ↚  | ↵ ↕ ↑ ↗ ↘ ↙ ↚ | ↵ ↕ ↑ ↗ ↘ ↙ ↚  | ↵ ↕ ↑ ↗ ↘ ↙ ↚ | ↵ ↕ ↑ ↗ ↘ ↙ ↚  | ↵ ↕ ↑ ↗ ↘ ↙ ↚ |
|                                   | 1 0 2 0 0 1 0  | 1 0 2 0 0 1 0 | 1 0 2 0 0 1 0  | 1 0 2 0 0 1 0 | 1 0 2 0 0 1 0  | 1 0 3 0 0 1 0 | 1 0 3 0 0 1 0  | 1 0 3 0 0 1 0 | 1 0 3 0 0 1 0  | 1 0 3 0 0 1 0 | 1 0 3 0 0 1 0  |               |
| SIGNAL                            | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |               | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |               | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |               | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |               | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |               | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |               |

### Critical Movements Diagram

|   |  |   |                  |            |
|---|--|---|------------------|------------|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="256"/><br/>                 B: <input type="text" value="158"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="794"/><br/>                 B: <input type="text" value="36"/> </div> | <u>V/C RATIO</u> | <u>LOS</u> |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="967"/><br/>                 B: <input type="text" value="170"/> </div>  | ↑  |   | 0.00 - 0.60      | A          |
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="236"/><br/>                 B: <input type="text" value="94"/> </div> |   | 0.61 - 0.70      | B          |
|   |  |   | 0.71 - 0.80      | C          |
|   |  |   | 0.81 - 0.90      | D          |
|   |  |   | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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**Results**

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{236 + 158 + 36 + 967}{*1375} = 0.946 - 0.03 = 0.916$  LOS = E

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 0          | 0  | 0    | 30         | 0  | 190  | 0         | 2359 | 72   | 959       | 2825 | 0    |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL                             | 0          | 0  | 0    | 30         | 0  | 190  | 0         | 2359 | 72   | 959       | 2825 | 0    |
| LANE                              | ↙          | ↘  | ↕    | ↙          | ↘  | ↕    | ↙         | ↘    | ↕    | ↙         | ↘    | ↕    |
|                                   | 0          | 0  | 0    | 2          | 0  | 0    | 0         | 3    | 0    | 2         | 0    | 0    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |    | Auto | Perm       |    | OLA  | Perm      |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="17"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="942"/><br/>                 B: <input type="text" value="527"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input type="text" value="786"/><br/>                 B: <input type="text" value="0"/> </div> | ↑ | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 NorthBound<br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div> | <table border="0"> <tr> <th>V/C RATIO</th> <th>LOS</th> </tr> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
|---|---|---|---|--|---|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| V/C RATIO   | LOS   |   |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60   | A   |   |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70   | B   |   |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80   | C   |   |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90   | D   |   |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00   | E   |   |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 17 + 786 + 527}{*1425} = 0.863$  <sup>ATSAC</sup> <sub>0.103</sub> LOS = D  
 = 0.378

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |      |      |            |     |      |           |    |      |           |    |      |  |
|-----------------------------------|------------|------|------|------------|-----|------|-----------|----|------|-----------|----|------|--|
|                                   | NORTHBOUND |      |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |  |
|                                   | LT         | TH   | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |  |
| EXISTING                          | 8          | 1578 | 39   | 21         | 633 | 40   | 201       | 7  | 418  | 16        | 2  | 10   |  |
| AMBIENT                           |            |      |      |            |     |      |           |    |      |           |    |      |  |
| RELATED                           |            |      |      |            |     |      |           |    |      |           |    |      |  |
| PROJECT                           |            |      |      |            |     |      |           |    |      |           |    |      |  |
| TOTAL                             | 8          | 1578 | 39   | 21         | 633 | 40   | 201       | 7  | 418  | 16        | 2  | 10   |  |
| LANE                              |            |      |      |            |     |      |           |    |      |           |    |      |  |
| SIGNAL                            | Phasing    |      | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |  |
|                                   | Perm       |      | Auto | Perm       |     | Auto | Perm      |    | Auto | Perm      |    | Auto |  |

### Critical Movements Diagram

|                                    |  |                                     |  |                                     |
|------------------------------------|--|-------------------------------------|--|-------------------------------------|
|                                    |  | SouthBound                          |  |                                     |
|                                    |  | A: <input type="text" value="224"/> |  |                                     |
|                                    |  | B: <input type="text" value="21"/>  |  |                                     |
| EastBound                          |  | ↑                                   |  | WestBound                           |
| A: <input type="text" value="18"/> |  |                                     |  | A: <input type="text" value="418"/> |
| B: <input type="text" value="16"/> |  |                                     |  | B: <input type="text" value="201"/> |
|                                    |  | NorthBound                          |  |                                     |
|                                    |  | A: <input type="text" value="539"/> |  |                                     |
|                                    |  | B: <input type="text" value="8"/>   |  |                                     |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{539 + 21 + 418 + 16}{*1500} = 0.593 - 0.03 = 0.563$  LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND                                   |   |  | SOUTHBOUND                                |  |   | WESTBOUND                                    |   |  | EASTBOUND                                 |  |   |
|--------------|--|---|--|---|--|---|--|---|--|---|--|---|
|              | LT   | TH  | RT   | LT  | TH   | RT  | LT   | TH  | RT   | LT  | TH   | RT  |
| EXISTING     | 53   | 1312                                      | 25   | 54  | 617  | 152                                       | 108  | 28  | 317  | 6   | 5  | 3   |
| AMBIENT      |  |   |  |   |  |   |  |   |  |   |  |   |
| RELATED      |  |   |  |   |  |   |  |   |  |   |  |   |
| PROJECT      |  |   |  |   |  |   |  |   |  |   |  |   |
| <b>TOTAL</b> | <b>53</b>                                    | <b>1312</b>                               | <b>25</b>  | <b>54</b>                                 | <b>617</b>                                   | <b>152</b>                                | <b>108</b>                                   | <b>28</b>                                 | <b>317</b>                                   | <b>6</b>                                  | <b>5</b>                                     | <b>3</b>                                  |
| LANE         | ↙ ↑ ↘<br>1 0 2 0 1 0 0                       | ↙ ↑ ↘<br>2 0 2 0 1 0 0                    | ↙ ↑ ↘<br>0 0 0 1 0 1 0                           | ↙ ↑ ↘<br>0 1 0 0 1 0 0                    |  |   |  |   |  |   |  |   |
| SIGNAL       | Phasing<br><input type="text" value="Perm"/> | RTOR<br><input type="text" value="Auto"/> | Phasing<br><input type="text" value="Prot-Fix"/> | RTOR<br><input type="text" value="Auto"/> | Phasing<br><input type="text" value="Perm"/> | RTOR<br><input type="text" value="Auto"/> | Phasing<br><input type="text" value="Perm"/> | RTOR<br><input type="text" value="Auto"/> | Phasing<br><input type="text" value="Perm"/> | RTOR<br><input type="text" value="Auto"/> | Phasing<br><input type="text" value="Perm"/> | RTOR<br><input type="text" value="Auto"/> |

### Critical Movements Diagram

|   |   |   |   |   |  |                              |
|---|---|---|---|---|--|------------------------------|
| SouthBound<br>A: <input type="text" value="256"/><br>B: <input type="text" value="30"/> | EastBound<br>A: <input type="text" value="8"/><br>B: <input type="text" value="6"/> | WestBound<br>A: <input type="text" value="227"/><br>B: <input type="text" value="108"/> | NorthBound<br>A: <input type="text" value="446"/><br>B: <input type="text" value="53"/> | ↑ | V/C RATIO<br>0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 | LOS<br>A<br>B<br>C<br>D<br>E |
|---|---|---|---|---|--|------------------------------|

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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**Results**

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{446 + 30 + 227 + 6}{*1425} = 0.428 - 0.03 = 0.398$ 
ATCS  
LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |        |        |            |        |        |           |        |        |           |        |        |
|-----------------------------------|------------|--------|--------|------------|--------|--------|-----------|--------|--------|-----------|--------|--------|
|                                   | NORTHBOUND |        |        | SOUTHBOUND |        |        | WESTBOUND |        |        | EASTBOUND |        |        |
|                                   | LT         | TH     | RT     | LT         | TH     | RT     | LT        | TH     | RT     | LT        | TH     | RT     |
| EXISTING                          | 444        | 968    | 119    | 138        | 165    | 126    | 0         | 2917   | 497    | 0         | 2084   | 54     |
| AMBIENT                           |            |        |        |            |        |        |           |        |        |           |        |        |
| RELATED                           |            |        |        |            |        |        |           |        |        |           |        |        |
| PROJECT                           |            |        |        |            |        |        |           |        |        |           |        |        |
| TOTAL                             | 444        | 968    | 119    | 138        | 165    | 126    | 0         | 2917   | 497    | 0         | 2084   | 54     |
| LANE                              | ↙<br>2     | ↑<br>0 | ↘<br>2 | ↙<br>2     | ↑<br>0 | ↘<br>2 | ↙<br>0    | ↑<br>0 | ↘<br>3 | ↙<br>0    | ↑<br>2 | ↘<br>0 |
|                                   |            |        | 1      |            |        | 0      |           |        | 1      |           |        | 1      |
|                                   |            |        | 0      |            |        | 0      |           |        | 0      |           |        | 0      |
| SIGNAL                            | Phasing    |        | RTOR   | Phasing    |        | RTOR   | Phasing   |        | RTOR   | Phasing   |        | RTOR   |
|                                   | Prot-Fix   |        | Auto   | Prot-Fix   |        | Auto   | Perm      |        | Auto   | Perm      |        | Auto   |

### Critical Movements Diagram

|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="83"/><br/>                 B: <input type="text" value="76"/> </div> |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
|---|--|--|---|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="713"/><br/>                 B: <input type="text" value="0"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input type="text" value="854"/><br/>                 B: <input type="text" value="0"/> </div>  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 NorthBound<br/>                 A: <input type="text" value="362"/><br/>                 B: <input type="text" value="244"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 ↑             </div> | <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">V/C RATIO</th> <th style="text-align: left;">LOS</th> </tr> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| V/C RATIO   | LOS  |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60   | A  |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70   | B  |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80   | C  |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90   | D  |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00   | E  |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{362 + 76 + 854 + 0}{*1425} = 0.837 - 0.03 = 0.807$  LOS = D



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |   |   |   |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|---|---|---|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |   |   |   |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |   |   |   |
| EXISTING                          | 112        | 53 | 21   | 135        | 37 | 349  | 10        | 2992 | 102  | 225       | 1829 | 19   |   |   |   |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |   |   |   |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |   |   |   |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |   |   |   |
| TOTAL                             | 112        | 53 | 21   | 135        | 37 | 349  | 10        | 2992 | 102  | 225       | 1829 | 19   |   |   |   |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |   |   |   |
|                                   | 0          | 0  | 0    | 0          | 1  | 0    | 0         | 1    | 0    | 1         | 0    | 2    | 0 | 1 | 0 |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |   |   |   |
|                                   | Perm       |    | Auto | Perm       |    | Auto | Perm      |      | Auto | Prot-Fix  |      | Auto |   |   |   |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 236 |
| B:         | 135 |

|   |  |
|---|--|
| ↑ |  |
|---|--|

|           |      |
|-----------|------|
| WestBound |      |
| A:        | 1031 |
| B:        | 10   |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 616 |
| B:        | 225 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 186 |
| B:         | 112 |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{112 + 236 + 1031 + 225}{*1425} = 1.056$       LOS = F

Existing AM Year 2005

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #23 Spalding Drive & Olympic Boulevard

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.173

Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: Spalding Drive Olympic Boulevard

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 Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 0 1 0 0 0 1 0 0 1 0 1 0 2 1 0

Volume Module:

Base Vol: 112 53 21 135 37 349 225 1829 19 10 2992 102

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: 112 53 21 135 37 349 225 1829 19 10 2992 102

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: 112 53 21 135 37 349 225 1829 19 10 2992 102

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 112 53 21 135 37 349 225 1829 19 10 2992 102

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

Final Vol.: 112 53 21 135 37 349 225 1829 19 10 2992 102

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

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: 0.61 0.28 0.11 0.78 0.22 1.00 1.00 2.97 0.03 1.00 2.90 0.10

Final Sat.: 963 456 181 1256 344 1600 1600 4751 49 1600 4642 158

Capacity Analysis Module:

Vol/Sat: 0.07 0.12 0.12 0.08 0.11 0.22 0.14 0.39 0.38 0.01 0.64 0.64

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*

\*\*\*\*\*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND   |             |  | SOUTHBOUND |   |            | WESTBOUND   |           |   | EASTBOUND |  |           |
|--------------|--|-------------|--|------------|---|------------|---|-----------|---|-----------|--|-----------|
|              | LT   | TH          | RT   | LT         | TH  | RT         | LT  | TH        | RT  | LT        | TH   | RT        |
| EXISTING     | 316  | 1349        | 27   | 48         | 433   | 316        | 23  | 33        | 63  | 19        | 3  | 16        |
| AMBIENT      |  |             |  |            |   |            |   |           |   |           |  |           |
| RELATED      |  |             |  |            |   |            |   |           |   |           |  |           |
| PROJECT      |  |             |  |            |   |            |   |           |   |           |  |           |
| <b>TOTAL</b> | <b>316</b>   | <b>1349</b> | <b>27</b>  | <b>48</b>  | <b>433</b>  | <b>316</b> | <b>23</b>   | <b>33</b> | <b>63</b>   | <b>19</b> | <b>3</b>   | <b>16</b> |
| LANE         | ↙ ↕ ↗  | ↙ ↕ ↗       | ↙ ↕ ↗  | ↙ ↕ ↗      | ↙ ↕ ↗   | ↙ ↕ ↗      | ↙ ↕ ↗   | ↙ ↕ ↗     | ↙ ↕ ↗   | ↙ ↕ ↗     | ↙ ↕ ↗  | ↙ ↕ ↗     |
|              | 2 0 2  | 0 1 0       | 0 0  | 1 0 2      | 0 1 0   | 0 0        | 1 0 0   | 0 0 1     | 0 0   | 2 0 0     | 0 0 1  | 0 0       |
| SIGNAL       | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |             | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Split"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Split"/> RTOR: <input type="text" value="Auto"/> |           | Phasing: <input type="text" value="Split"/> RTOR: <input type="text" value="Auto"/> |           | Phasing: <input type="text" value="Auto"/> RTOR: <input type="text" value="Auto"/> |           |

### Critical Movements Diagram

|   |  |  |   |                                     |
|---|--|--|---|-------------------------------------|
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="316"/><br/>                 B: <input type="text" value="48"/> </div> |  |   |                                     |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="10"/> </div> | <div style="text-align: center;">                 ↑<br/>                  <br/>                 ↑             </div>   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="63"/><br/>                 B: <input type="text" value="23"/> </div> | <b>V/C RATIO</b><br>0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 | <b>LOS</b><br>A<br>B<br>C<br>D<br>E |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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**Results**

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{459 + 48 + 63 + 10}{*1375} = 0.352 - 0.03 = 0.322$$
LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |                                   |      |                                   |                                   |     |                                   |                                   |    |                                   |                                   |    |                                   |  |
|-----------------------------------|-----------------------------------|------|-----------------------------------|-----------------------------------|-----|-----------------------------------|-----------------------------------|----|-----------------------------------|-----------------------------------|----|-----------------------------------|--|
|                                   | NORTHBOUND                        |      |                                   | SOUTHBOUND                        |     |                                   | WESTBOUND                         |    |                                   | EASTBOUND                         |    |                                   |  |
|                                   | LT                                | TH   | RT                                | LT                                | TH  | RT                                | LT                                | TH | RT                                | LT                                | TH | RT                                |  |
| EXISTING                          | 0                                 | 1648 | 2                                 | 18                                | 441 | 0                                 | 16                                | 0  | 43                                | 0                                 | 0  | 0                                 |  |
| AMBIENT                           |                                   |      |                                   |                                   |     |                                   |                                   |    |                                   |                                   |    |                                   |  |
| RELATED                           |                                   |      |                                   |                                   |     |                                   |                                   |    |                                   |                                   |    |                                   |  |
| PROJECT                           |                                   |      |                                   |                                   |     |                                   |                                   |    |                                   |                                   |    |                                   |  |
| TOTAL                             | 0                                 | 1648 | 2                                 | 18                                | 441 | 0                                 | 16                                | 0  | 43                                | 0                                 | 0  | 0                                 |  |
| LANE                              |                                   |      |                                   |                                   |     |                                   |                                   |    |                                   |                                   |    |                                   |  |
| SIGNAL                            | Phasing                           |      | RTOR                              | Phasing                           |     | RTOR                              | Phasing                           |    | RTOR                              | Phasing                           |    | RTOR                              |  |
|                                   | <input type="text" value="Perm"/> |      | <input type="text" value="Auto"/> | <input type="text" value="Perm"/> |     | <input type="text" value="Auto"/> | <input type="text" value="Perm"/> |    | <input type="text" value="Auto"/> | <input type="text" value="Perm"/> |    | <input type="text" value="Auto"/> |  |

### Critical Movements Diagram

|   |   |   |                                     |
|---|---|---|-------------------------------------|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="147"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="18"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="59"/><br/>                 B: <input type="text" value="16"/> </div> | <u>V/C RATIO</u><br>0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 | <u>LOS</u><br>A<br>B<br>C<br>D<br>E |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="0"/> </div>     |   |   |                                     |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="550"/><br/>                 B: <input type="text" value="0"/> </div>  |   |   |                                     |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

$V/C = \frac{550 + 18 + 59 + 0}{1500} = 0.418$

LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |       |       |            |       |       |           |       |       |           |       |       |
|-----------------------------------|------------|-------|-------|------------|-------|-------|-----------|-------|-------|-----------|-------|-------|
|                                   | NORTHBOUND |       |       | SOUTHBOUND |       |       | WESTBOUND |       |       | EASTBOUND |       |       |
|                                   | LT         | TH    | RT    | LT         | TH    | RT    | LT        | TH    | RT    | LT        | TH    | RT    |
| EXISTING                          | 241        | 985   | 871   | 32         | 650   | 25    | 608       | 1198  | 55    | 142       | 1397  | 146   |
| AMBIENT                           |            |       |       |            |       |       |           |       |       |           |       |       |
| RELATED                           |            |       |       |            |       |       |           |       |       |           |       |       |
| PROJECT                           |            |       |       |            |       |       |           |       |       |           |       |       |
| TOTAL                             | 241        | 985   | 871   | 32         | 650   | 25    | 608       | 1198  | 55    | 142       | 1397  | 146   |
| LANE                              | ↙ ↕ ↗      | ↕ ↗ ↘ | ↘ ↙ ↕ | ↙ ↕ ↗      | ↕ ↗ ↘ | ↘ ↙ ↕ | ↙ ↕ ↗     | ↕ ↗ ↘ | ↘ ↙ ↕ | ↙ ↕ ↗     | ↕ ↗ ↘ | ↘ ↙ ↕ |
|                                   | 2          | 0     | 1     | 0          | 0     | 2     | 0         | 0     | 2     | 1         | 0     | 0     |
|                                   | 0          | 1     | 0     | 0          | 1     | 0     | 0         | 1     | 0     | 0         | 1     | 0     |
|                                   | 0          | 0     | 2     | 0          | 0     | 1     | 0         | 0     | 1     | 0         | 0     | 1     |
|                                   | 0          | 0     | 0     | 0          | 0     | 0     | 0         | 0     | 0     | 0         | 0     | 0     |
| SIGNAL                            | Phasing    |       | RTOR  | Phasing    |       | RTOR  | Phasing   |       | RTOR  | Phasing   |       | RTOR  |
|                                   | Prot-Fix   |       | OLA   | Perm       |       | Auto  | Perm      |       | Auto  | Prot-Fix  |       | Auto  |

### Critical Movements Diagram

|  |  |                  |            |
|--|--|------------------|------------|
|  | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <input type="text" value="338"/><br/>                 B: <input type="text" value="32"/> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>EastBound</b><br/>                 A: <input type="text" value="514"/><br/>                 B: <input type="text" value="142"/> </div> <div style="text-align: center;"> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>WestBound</b><br/>                 A: <input type="text" value="599"/><br/>                 B: <input type="text" value="334"/> </div> </div> <div style="border: 1px solid black; padding: 5px;"> <b>NorthBound</b><br/>                 A: <input type="text" value="985"/><br/>                 B: <input type="text" value="133"/> </div> |                  |            |
|  |  | <b>V/C RATIO</b> | <b>LOS</b> |
|  |  | 0.00 - 0.60      | A          |
|  |  | 0.61 - 0.70      | B          |
|  |  | 0.71 - 0.80      | C          |
|  |  | 0.81 - 0.90      | D          |
|  |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{985 + 32 + 334 + 514}{*1375} = 1.286 - 0.03 = 1.256$  LOS = F

## INTERSECTION DATA SUMMARY SHEET

N/S:  WE:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND |     |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|----------|------------|-----|------|------------|----|------|-----------|------|------|-----------|------|------|
|          | LT         | TH  | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING | 30         | 113 | 197  | 11         | 67 | 36   | 84        | 1622 | 50   | 46        | 1831 | 73   |
| AMBIENT  |            |     |      |            |    |      |           |      |      |           |      |      |
| RELATED  |            |     |      |            |    |      |           |      |      |           |      |      |
| PROJECT  |            |     |      |            |    |      |           |      |      |           |      |      |
| TOTAL    | 30         | 113 | 197  | 11         | 67 | 36   | 84        | 1622 | 50   | 46        | 1831 | 73   |
| LANE     |            |     |      |            |    |      |           |      |      |           |      |      |
|          | 0          | 0   | 0    | 0          | 0  | 0    | 1         | 0    | 2    | 0         | 0    | 1    |
| SIGNAL   | Phasing    |     | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|          | Perm       |     | Auto | Perm       |    | Auto | Prot-Fix  |      | Auto | Perm      |      | Auto |

### Critical Movements Diagram

|            |                                  |
|------------|----------------------------------|
| SouthBound |                                  |
| A:         | <input type="text" value="114"/> |
| B:         | <input type="text" value="11"/>  |

|           |                                  |
|-----------|----------------------------------|
| EastBound |                                  |
| A:        | <input type="text" value="635"/> |
| B:        | <input type="text" value="46"/>  |

|           |                                  |
|-----------|----------------------------------|
| WestBound |                                  |
| A:        | <input type="text" value="811"/> |
| B:        | <input type="text" value="84"/>  |

|            |                                  |
|------------|----------------------------------|
| NorthBound |                                  |
| A:         | <input type="text" value="340"/> |
| B:         | <input type="text" value="30"/>  |

|  | <u>V/C RATIO</u> | <u>LOS</u> |
|--|------------------|------------|
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

#### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{340 + 11 + 811 + 46}{*1425} = 0.778$  <sup>ATSAC</sup> ~~0.08~~ <sub>= 0.748</sub> LOS = C

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 0          | 0  | 0    | 273        | 0  | 262  | 0         | 1433 | 248  | 373       | 1774 | 0    |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL                             | 0          | 0  | 0    | 273        | 0  | 262  | 0         | 1433 | 248  | 373       | 1774 | 0    |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |
|                                   | 0          | 0  | 0    | 1          | 0  | 0    | 0         | 2    | 0    | 1         | 0    | 3    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |    | Auto | Perm       |    | Auto | Perm      |      | Auto | Perm      |      | Auto |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 178 |
| B:         | 178 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 591 |
| B:        | 373 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 717 |
| B:        | 0   |

|            |   |
|------------|---|
| NorthBound |   |
| A:         | 0 |
| B:         | 0 |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 178 + 717 + 373}{1500} = 0.775$  <sup>ATSAC</sup>  $- 0.03$  LOS = C  
 $= 0.745$

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |                   |                   |                   |                   |    |      |           |      |      |           |      |      |
|-----------------------------------|-------------------|-------------------|-------------------|-------------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND        |                   |                   | SOUTHBOUND        |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT                | TH                | RT                | LT                | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 288               | 0                 | 1171              | 20                | 0  | 30   | 246       | 1286 | 183  | 227       | 1754 | 250  |
| AMBIENT                           |                   |                   |                   |                   |    |      |           |      |      |           |      |      |
| RELATED                           |                   |                   |                   |                   |    |      |           |      |      |           |      |      |
| PROJECT                           |                   |                   |                   |                   |    |      |           |      |      |           |      |      |
| TOTAL                             | 288               | 0                 | 1171              | 20                | 0  | 30   | 246       | 1286 | 183  | 227       | 1754 | 250  |
| LANE                              | <br>2 0 0 0 0 1 0 | <br>1 0 0 0 0 1 0 | <br>1 0 3 0 0 0 0 | <br>1 0 2 0 1 0 0 |    |      |           |      |      |           |      |      |
| SIGNAL                            | Phasing           |                   | RTOR              | Phasing           |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Split             |                   | OLA               | Split             |    | Auto | Prot-Fix  |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|            |    |
|------------|----|
| SouthBound |    |
| A:         | 0  |
| B:         | 20 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 668 |
| B:        | 227 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 429 |
| B:        | 246 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 925 |
| B:         | 158 |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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#### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{925 + 20 + 246 + 668}{*1375} = 1.282 - 0.02 = 1.252 \quad \text{LOS} = F$$



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 0          | 0  | 0    | 96         | 0  | 337  | 0         | 1350 | 457  | 1227      | 1706 | 0    |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL                             | 0          | 0  | 0    | 96         | 0  | 337  | 0         | 1350 | 457  | 1227      | 1706 | 0    |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |
|                                   | 0          | 0  | 0    | 2          | 0  | 0    | 0         | 2    | 0    | 2         | 0    | 3    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |    | Auto | Perm       |    | Auto | Perm      |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|            |    |
|------------|----|
| SouthBound |    |
| A:         | 0  |
| B:         | 53 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 602 |
| B:        | 0   |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$V/C = \frac{0 + 53 + 602 + 675}{*1425} = 0.863 - 0.03 \text{ (ATSAC)} = 0.833$

LOS = D

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |       |   |   |   |   |   |   |
|----------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|-------|---|---|---|---|---|---|
|          | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |       |   |   |   |   |   |   |
| EXISTING | 6          | 5  | 3    | 123        | 14 | 80   | 23        | 1703 | 706  | 656       | 1099 | 0    |       |   |   |   |   |   |   |
| AMBIENT  |            |    |      |            |    |      |           |      |      |           |      |      |       |   |   |   |   |   |   |
| RELATED  |            |    |      |            |    |      |           |      |      |           |      |      |       |   |   |   |   |   |   |
| PROJECT  |            |    |      |            |    |      |           |      |      |           |      |      |       |   |   |   |   |   |   |
| TOTAL    | 6          | 5  | 3    | 123        | 14 | 80   | 23        | 1703 | 706  | 656       | 1099 | 0    |       |   |   |   |   |   |   |
| LANE     | 0          | 1  | 0    | 0          | 1  | 0    | 1         | 0    | 3    | 0         | 0    | 1    | 2     | 0 | 2 | 0 | 1 | 0 | 0 |
|          | ↙ ↕ ↘      |    |      | ↙ ↕ ↘      |    |      | ↙ ↕ ↘     |      |      | ↙ ↕ ↘     |      |      | ↙ ↕ ↘ |   |   |   |   |   |   |
| SIGNAL   | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |       |   |   |   |   |   |   |
|          | Perm       |    | Auto | Prot-Fix   |    | OLA  | Perm      |      | Auto | Prot-Fix  |      | Auto |       |   |   |   |   |   |   |

### Critical Movements Diagram

|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="72"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="72"/> </div> |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
|---|--|--|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="366"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="361"/> </div>                   | <div style="border: 1px solid black; padding: 20px; width: 100px; height: 100px; margin: 0 auto;"> <div style="text-align: center;">↑</div> </div>   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="670"/><br/>                 B: <input type="text" value="23"/> </div> | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">V/C RATIO</th> <th style="text-align: left;">LOS</th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| V/C RATIO   | LOS  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60   | A  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70   | B  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80   | C  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90   | D  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00   | E  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| <p>A = Adjusted Through/Right Volume<br/>                 B = Adjusted Left Volume<br/>                 * = ATSAC Benefit</p>   |  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| <p><b>Results</b></p> <p>North/South Critical Movements = A(N/B) + B(S/B)</p> <p>West/East Critical Movements = A(W/B) + B(E/B)</p> <p style="text-align: center;">                 VIC = <math>\frac{7 + 72 + 670 + 361}{*1375} = 0.737 - 0.03 = 0.707</math> LOS = C             </p> |  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND   |  |  | SOUTHBOUND   |            |          | WESTBOUND |            |            | EASTBOUND |            |           |
|--------------|--|--|--|--|------------|----------|-----------|------------|------------|-----------|------------|-----------|
|              | LT   | TH   | RT   | LT   | TH         | RT       | LT        | TH         | RT         | LT        | TH         | RT        |
| EXISTING     | 268  | 752  | 70   | 140  | 276        | 7        | 80        | 338        | 233        | 22        | 189        | 72        |
| AMBIENT      |  |  |  |  |            |          |           |            |            |           |            |           |
| RELATED      |  |  |  |  |            |          |           |            |            |           |            |           |
| PROJECT      |  |  |  |  |            |          |           |            |            |           |            |           |
| <b>TOTAL</b> | <b>268</b>   | <b>752</b>   | <b>70</b>  | <b>140</b>   | <b>276</b> | <b>7</b> | <b>80</b> | <b>338</b> | <b>233</b> | <b>22</b> | <b>189</b> | <b>72</b> |
| LANE         | <br>1 0 1 0 0 1 0  | <br>1 0 0 0 1 0 0  | <br>1 0 0 0 1 0 0  | <br>1 0 1 0 0 1 0  |            |          |           |            |            |           |            |           |
| SIGNAL       | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |            |          |           |            |            |           |            |           |

### Critical Movements Diagram

|  |   |  |
|--|---|--|
| EastBound<br>A: <input type="text" value="189"/><br>B: <input type="text" value="22"/>   | ↑<br>SouthBound<br>A: <input type="text" value="283"/><br>B: <input type="text" value="140"/> | WestBound<br>A: <input type="text" value="571"/><br>B: <input type="text" value="80"/> |
| NorthBound<br>A: <input type="text" value="752"/><br>B: <input type="text" value="268"/> |   |  |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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#### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{752 + 140 + 571 + 22}{*1500} = 0.920$       LOS = E

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |  |  |   |  |     |    |           |      |     |           |      |     |
|-----------------------------------|--|--|---|--|-----|----|-----------|------|-----|-----------|------|-----|
|                                   | NORTHBOUND   |  |   | SOUTHBOUND   |     |    | WESTBOUND |      |     | EASTBOUND |      |     |
|                                   | LT   | TH   | RT  | LT   | TH  | RT | LT        | TH   | RT  | LT        | TH   | RT  |
| EXISTING                          | 124  | 895  | 163   | 67   | 632 | 83 | 128       | 2012 | 117 | 159       | 2212 | 294 |
| AMBIENT                           |  |  |   |  |     |    |           |      |     |           |      |     |
| RELATED                           |  |  |   |  |     |    |           |      |     |           |      |     |
| PROJECT                           |  |  |   |  |     |    |           |      |     |           |      |     |
| TOTAL                             | 124  | 895  | 163   | 67   | 632 | 83 | 128       | 2012 | 117 | 159       | 2212 | 294 |
| LANE                              | <br>1 0 1 0 1 0 0  | <br>1 0 1 0 1 0 0  | <br>1 0 2 0 1 0 0   | <br>1 0 3 0 0 1 0  |     |    |           |      |     |           |      |     |
| SIGNAL                            | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="OLA"/> | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |     |    |           |      |     |           |      |     |

### Critical Movements Diagram

|  |   |  |  |
|--|---|--|--|
|  | <b>SouthBound</b><br>A: <input type="text" value="358"/><br>B: <input type="text" value="67"/>  |  |  |
| <b>EastBound</b><br>A: <input type="text" value="737"/><br>B: <input type="text" value="159"/> |   | <b>WestBound</b><br>A: <input type="text" value="710"/><br>B: <input type="text" value="128"/> |  |
|  | <b>NorthBound</b><br>A: <input type="text" value="529"/><br>B: <input type="text" value="124"/> |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

**Results**

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{529 + 67 + 710 + 159}{*1425} = 0.958$  ATCS -0.03 LOS = E  
= 0.922

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |  |   |   |  |  |          |   |             |  |           |   |            |
|-----------------------------------|--|---|---|--|--|----------|---|-------------|--|-----------|---|------------|
|                                   | NORTHBOUND   |   |   | SOUTHBOUND   |  |          | WESTBOUND                               |             |  | EASTBOUND |   |            |
|                                   | LT   | TH  | RT  | LT   | TH   | RT       | LT                                      | TH          | RT   | LT        | TH                                      | RT         |
| EXISTING                          | 322  | 0   | 218   | 0  | 0  | 0        | 431                                     | 1763        | 0  | 0         | 1331                                    | 164        |
| AMBIENT                           |  |   |   |  |  |          |   |             |  |           |   |            |
| RELATED                           |  |   |   |  |  |          |   |             |  |           |   |            |
| PROJECT                           |  |   |   |  |  |          |   |             |  |           |   |            |
| <b>TOTAL</b>                      | <b>322</b>   | <b>0</b>  | <b>218</b>  | <b>0</b>   | <b>0</b>                                   | <b>0</b> | <b>431</b>                              | <b>1763</b> | <b>0</b>                                       | <b>0</b>  | <b>1331</b>                             | <b>164</b> |
| LANE                              | <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="1"/> | <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> | <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="3"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> | <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> |  |          |   |             |  |           |   |            |
| SIGNAL                            | Phasing: <input type="text" value="Perm"/>   |   | RTOR: <input type="text" value="Auto"/>   |  | Phasing: <input type="text" value="Perm"/> |          | RTOR: <input type="text" value="Auto"/> |             | Phasing: <input type="text" value="Prot-Fix"/> |           | RTOR: <input type="text" value="Auto"/> |            |

### Critical Movements Diagram

|  |  |  |   |                                     |
|--|--|--|---|-------------------------------------|
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div>  |  |   |                                     |
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> </div>  |  |   |                                     |
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="666"/><br/>                 B: <input type="text" value="0"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="588"/><br/>                 B: <input type="text" value="431"/> </div> | <b>V/C RATIO</b><br>0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 | <b>LOS</b><br>A<br>B<br>C<br>D<br>E |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{270 + 0 + 431 + 666}{*1425} = 0.889 - 0.03 = 0.859$  LOS = D

*ATCS*  
 = 0.859

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND  |   |  | SOUTHBOUND   |  |  | WESTBOUND  |  |  | EASTBOUND  |  |  |
|--------------|---|---|--|--|--|--|--|--|--|--|--|--|
|              | LT  | TH  | RT   | LT   | TH   | RT   | LT   | TH   | RT   | LT   | TH   | RT   |
| EXISTING     | 7   | 394   | 41   | 81   | 445  | 36   | 56   | 398  | 142  | 21   | 664  | 32   |
| AMBIENT      |   |   |  |  |  |  |  |  |  |  |  |  |
| RELATED      |   |   |  |  |  |  |  |  |  |  |  |  |
| PROJECT      |   |   |  |  |  |  |  |  |  |  |  |  |
| <b>TOTAL</b> | <b>7</b>  | <b>394</b>  | <b>41</b>  | <b>81</b>  | <b>445</b>   | <b>36</b>  | <b>56</b>  | <b>398</b>   | <b>142</b>   | <b>21</b>  | <b>664</b>   | <b>32</b>  |
| LANE         |   |   |  |  |  |  |  |  |  |  |  |  |
| SIGNAL       | Phasing: <input type="text" value="Split"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Split"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |

### Critical Movements Diagram

|   |  |  |  |  |  |
|---|--|--|--|--|--|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="322"/><br/>                 B: <input type="text" value="81"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="369"/><br/>                 B: <input type="text" value="21"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input type="text" value="382"/><br/>                 B: <input type="text" value="56"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 NorthBound<br/>                 A: <input type="text" value="225"/><br/>                 B: <input type="text" value="7"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 V/C RATIO    LOS<br/>                 0.00 - 0.60    A<br/>                 0.61 - 0.70    B<br/>                 0.71 - 0.80    C<br/>                 0.81 - 0.90    D<br/>                 0.91 - 1.00    E             </div> |
|---|--|--|--|--|--|

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSC Benefit

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### Results

North/South Critical Movements = A(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{225 + 322 + 56 + 369}{*1425} = 0.612 - 0.03 \text{ LOS} = \text{B}^A$$

*ATCS = 0.582*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND                                 |            |   | SOUTHBOUND                                     |             |   | WESTBOUND                                  |             |   | EASTBOUND                                  |             |   |
|--------------|--|------------|---|--|-------------|---|--|-------------|---|--|-------------|---|
|              | LT   | TH         | RT                                      | LT   | TH          | RT                                      | LT   | TH          | RT                                      | LT   | TH          | RT                                      |
| EXISTING     | 0  | 914        | 42                                      | 201  | 1041        | 83                                      | 105  | 1942        | 330                                     | 83   | 1279        | 96                                      |
| AMBIENT      |  |            |   |  |             |   |  |             |   |  |             |   |
| RELATED      |  |            |   |  |             |   |  |             |   |  |             |   |
| PROJECT      |  |            |   |  |             |   |  |             |   |  |             |   |
| <b>TOTAL</b> | <b>0</b>                                   | <b>914</b> | <b>42</b>                               | <b>201</b>                                     | <b>1041</b> | <b>83</b>                               | <b>105</b>                                 | <b>1942</b> | <b>330</b>                              | <b>83</b>                                  | <b>1279</b> | <b>96</b>                               |
| LANE         | 0  | 1          | 0                                       | 0  | 1           | 0                                       | 1  | 0           | 2                                       | 0  | 1           | 0                                       |
| SIGNAL       | Phasing: <input type="text" value="Perm"/> |            | RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Prot-Fix"/> |             | RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> |             | RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> |             | RTOR: <input type="text" value="Auto"/> |

### Critical Movements Diagram

|           |                                  |
|-----------|----------------------------------|
| EastBound |                                  |
| A:        | <input type="text" value="458"/> |
| B:        | <input type="text" value="83"/>  |

|            |                                  |
|------------|----------------------------------|
| SouthBound |                                  |
| A:         | <input type="text" value="562"/> |
| B:         | <input type="text" value="111"/> |

|           |                                  |
|-----------|----------------------------------|
| WestBound |                                  |
| A:        | <input type="text" value="757"/> |
| B:        | <input type="text" value="105"/> |

|            |                                  |
|------------|----------------------------------|
| NorthBound |                                  |
| A:         | <input type="text" value="478"/> |
| B:         | <input type="text" value="0"/>   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  | V/C RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

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### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{478 + 111 + 757 + 83}{*1425} = 0.933 - 0.03 = 0.903$$

LOS = E

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  PM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |      |      |           |     |      |           |     |      |
|-----------------------------------|------------|-----|------|------------|------|------|-----------|-----|------|-----------|-----|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |      |      | WESTBOUND |     |      | EASTBOUND |     |      |
|                                   | LT         | TH  | RT   | LT         | TH   | RT   | LT        | TH  | RT   | LT        | TH  | RT   |
| EXISTING                          | 39         | 664 | 73   | 0          | 1117 | 83   | 80        | 625 | 227  | 61        | 687 | 35   |
| AMBIENT                           |            |     |      |            |      |      |           |     |      |           |     |      |
| RELATED                           |            |     |      |            |      |      |           |     |      |           |     |      |
| PROJECT                           |            |     |      |            |      |      |           |     |      |           |     |      |
| TOTAL                             | 39         | 664 | 73   | 0          | 1117 | 83   | 80        | 625 | 227  | 61        | 687 | 35   |
| LANE                              |            |     |      |            |      |      |           |     |      |           |     |      |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |      | RTOR | Phasing   |     | RTOR | Phasing   |     | RTOR |
|                                   | Perm       |     | Auto | Perm       |      | Auto | Prot-Fix  |     | Auto | Prot-Fix  |     | Auto |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 600 |
| B:         | 0   |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 722 |
| B:        | 61  |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 426 |
| B:        | 80  |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 369 |
| B:         | 39  |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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#### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{39 + 600 + 80 + 722}{*1425} = 0.941$$

*ATSAC*  
~~0.02~~ LOS = E  
 = 0.911



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |     |      |           |     |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|-----|------|-----------|-----|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |     |      | EASTBOUND |     |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH  | RT   | LT        | TH  | RT   |
| EXISTING                          | 551        | 0  | 226  | 0          | 0  | 0    | 227       | 602 | 0    | 0         | 809 | 119  |
| AMBIENT                           |            |    |      |            |    |      |           |     |      |           |     |      |
| RELATED                           |            |    |      |            |    |      |           |     |      |           |     |      |
| PROJECT                           |            |    |      |            |    |      |           |     |      |           |     |      |
| TOTAL                             | 551        | 0  | 226  | 0          | 0  | 0    | 227       | 602 | 0    | 0         | 809 | 119  |
| LANE                              |            |    |      |            |    |      |           |     |      |           |     |      |
|                                   | 1          | 0  | 0    | 0          | 0  | 0    | 1         | 0   | 2    | 0         | 2   | 0    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |     | RTOR | Phasing   |     | RTOR |
|                                   | Split      |    | Auto | Split      |    | Auto | Perm      |     | Auto | Perm      |     | Auto |

### Critical Movements Diagram

|  |   |  |  |
|--|---|--|--|
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div>     |  |  |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="309"/><br/>                 B: <input type="text" value="0"/> </div> |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="301"/><br/>                 B: <input type="text" value="227"/> </div> |  |
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="226"/><br/>                 B: <input type="text" value="303"/> </div> |  |  |

|  | VIC RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

VIC =  $\frac{303 + 0 + 227 + 309}{*1425} = 0.519 - 0.03$  LOS = A  
*ATCS = 0.489*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 0          | 0  | 0    | 172        | 0  | 10   | 0         | 2117 | 326  | 5         | 1453 | 0    |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL                             | 0          | 0  | 0    | 172        | 0  | 10   | 0         | 2117 | 326  | 5         | 1453 | 0    |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |
|                                   | 0          | 0  | 0    | 1          | 0  | 0    | 0         | 0    | 2    | 1         | 0    | 3    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |    | Auto | Perm       |    | Auto | Perm      |      | Auto | Perm      |      | Auto |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 10  |
| B:         | 172 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 484 |
| B:        | 5   |

|           |      |
|-----------|------|
| WestBound |      |
| A:        | 1059 |
| B:        | 0    |

|            |   |
|------------|---|
| NorthBound |   |
| A:         | 0 |
| B:         | 0 |

|  | VIC RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

**Results**

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

VIC =  $\frac{0 + 172 + 1059 + 5}{*1500} = 0.754 - 0.03$  LOS = C

*ATCS = 0.724*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |                   |                   |                   |                   |    |      |           |      |      |           |      |      |
|-----------------------------------|-------------------|-------------------|-------------------|-------------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND        |                   |                   | SOUTHBOUND        |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT                | TH                | RT                | LT                | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 825               | 0                 | 530               | 0                 | 0  | 0    | 346       | 1625 | 0    | 0         | 1148 | 504  |
| AMBIENT                           |                   |                   |                   |                   |    |      |           |      |      |           |      |      |
| RELATED                           |                   |                   |                   |                   |    |      |           |      |      |           |      |      |
| PROJECT                           |                   |                   |                   |                   |    |      |           |      |      |           |      |      |
| TOTAL                             | 825               | 0                 | 530               | 0                 | 0  | 0    | 346       | 1625 | 0    | 0         | 1148 | 504  |
| LANE                              | <br>2 0 0 0 0 2 0 | <br>0 0 0 0 0 0 0 | <br>2 0 2 0 0 0 0 | <br>0 0 2 0 0 1 0 |    |      |           |      |      |           |      |      |
| SIGNAL                            | Phasing           |                   | RTOR              | Phasing           |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm              |                   | OLA               | Perm              |    | Auto | Prot-Fix  |      | Auto | Prot-Fix  |      | OLA  |

### Critical Movements Diagram

|   |   |  |   |                                     |
|---|---|--|---|-------------------------------------|
|   | <b>SouthBound</b><br>A: <input type="text" value="0"/><br>B: <input type="text" value="0"/> |  |   |                                     |
| <b>EastBound</b><br>A: <input type="text" value="574"/><br>B: <input type="text" value="0"/>    |   | <b>WestBound</b><br>A: <input type="text" value="813"/><br>B: <input type="text" value="190"/> | <b>V/C RATIO</b><br>0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 | <b>LOS</b><br>A<br>B<br>C<br>D<br>E |
| <b>NorthBound</b><br>A: <input type="text" value="101"/><br>B: <input type="text" value="454"/> |   |  |   |                                     |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{454 + 0 + 813 + 0}{*1425} = 0.819 - 0.03 = 0.789$  LOS = **D**

*ATSAC*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND   |            |  | SOUTHBOUND |  |            | WESTBOUND  |            |  | EASTBOUND  |  |            |
|--------------|--|------------|--|------------|--|------------|--|------------|--|------------|--|------------|
|              | LT   | TH         | RT   | LT         | TH   | RT         | LT   | TH         | RT   | LT         | TH   | RT         |
| EXISTING     | 40   | 948        | 254  | 106        | 516  | 161        | 167  | 722        | 56   | 117        | 720  | 143        |
| AMBIENT      |  |            |  |            |  |            |  |            |  |            |  |            |
| RELATED      |  |            |  |            |  |            |  |            |  |            |  |            |
| PROJECT      |  |            |  |            |  |            |  |            |  |            |  |            |
| <b>TOTAL</b> | <b>40</b>  | <b>948</b> | <b>254</b>   | <b>106</b> | <b>516</b>   | <b>161</b> | <b>167</b>   | <b>722</b> | <b>56</b>  | <b>117</b> | <b>720</b>   | <b>143</b> |
| LANE         |  |            |  |            |  |            |  |            |  |            |  |            |
|              | 1  | 0          | 3  | 0          | 0  | 1          | 0  | 1          | 0  | 1          | 0  | 0          |
| SIGNAL       | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Auto"/> RTOR: <input type="text" value="Auto"/> |            |

### Critical Movements Diagram

|  |   |  |                  |            |
|--|---|--|------------------|------------|
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="226"/><br/>                 B: <input type="text" value="106"/> </div> |  |                  |            |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="240"/><br/>                 B: <input type="text" value="117"/> </div> |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="389"/><br/>                 B: <input type="text" value="167"/> </div> | <b>V/C RATIO</b> | <b>LOS</b> |
|  |   |  | 0.00 - 0.60      | A          |
|  |   |  | 0.61 - 0.70      | B          |
|  |   |  | 0.71 - 0.80      | C          |
|  |   |  | 0.81 - 0.90      | D          |
|  |   |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{316 + 106 + 389 + 117}{*1425} = 0.581$  ATCS -0.03 LOS = A  
= 0.551

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND  |   |   | SOUTHBOUND  |   |   | WESTBOUND   |   |   | EASTBOUND   |   |   |   |
|                                   | LT  | TH  | RT  | LT  | TH  | RT  | LT  | TH  | RT  | LT  | TH  | RT  |   |
| EXISTING                          | 575   | 0   | 565   | 0   | 0   | 0   | 266   | 1438  | 0   | 0   | 1469  | 158   |   |
| AMBIENT                           |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 575   | 0   | 565   | 0   | 0   | 0   | 266   | 1438  | 0   | 0   | 1469  | 158   |   |
| LANE                              | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> |
| SIGNAL                            | Phasing   |   | RTOR  | Phasing   |   | RTOR  | Phasing   |   | RTOR  | Phasing   |   | RTOR  |   |
|                                   | Perm  |   | OLA   | Perm  |   | Auto  | Prot-Fix  |   | Auto  | Prot-Fix  |   | OLA   |   |

### Critical Movements Diagram

|  |   |   |  |  |
|--|---|---|--|--|
|  |   | <b>SouthBound</b><br>A: <input type="text" value="0"/><br>B: <input type="text" value="0"/>     |  |  |
| <b>EastBound</b><br>A: <input type="text" value="735"/><br>B: <input type="text" value="0"/> | ↑ | <b>WestBound</b><br>A: <input type="text" value="719"/><br>B: <input type="text" value="146"/>  |  |  |
|  |   | <b>NorthBound</b><br>A: <input type="text" value="234"/><br>B: <input type="text" value="380"/> |  |  |

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$VIC = \frac{380 + 0 + 146 + 735}{*1425} = 0.815 - 0.03 \text{ LOS} = \text{D}$$

*ATCS*  
= 0.785

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |        |        |            |        |        |           |        |        |           |        |        |
|-----------------------------------|------------|--------|--------|------------|--------|--------|-----------|--------|--------|-----------|--------|--------|
|                                   | NORTHBOUND |        |        | SOUTHBOUND |        |        | WESTBOUND |        |        | EASTBOUND |        |        |
|                                   | LT         | TH     | RT     | LT         | TH     | RT     | LT        | TH     | RT     | LT        | TH     | RT     |
| EXISTING                          | 182        | 935    | 445    | 106        | 301    | 41     | 130       | 711    | 152    | 80        | 965    | 140    |
| AMBIENT                           |            |        |        |            |        |        |           |        |        |           |        |        |
| RELATED                           |            |        |        |            |        |        |           |        |        |           |        |        |
| PROJECT                           |            |        |        |            |        |        |           |        |        |           |        |        |
| TOTAL                             | 182        | 935    | 445    | 106        | 301    | 41     | 130       | 711    | 152    | 80        | 965    | 140    |
| LANE                              | ↙<br>1     | ↕<br>0 | ↗<br>2 | ↙<br>1     | ↕<br>0 | ↗<br>0 | ↙<br>1    | ↕<br>0 | ↗<br>1 | ↙<br>1    | ↕<br>0 | ↗<br>3 |
|                                   | ↖<br>0     | ↖<br>0 | ↖<br>1 | ↖<br>0     | ↖<br>1 | ↖<br>0 | ↖<br>0    | ↖<br>1 | ↖<br>0 | ↖<br>0    | ↖<br>0 | ↖<br>1 |
| SIGNAL                            | Phasing    |        | RTOR   | Phasing    |        | RTOR   | Phasing   |        | RTOR   | Phasing   |        | RTOR   |
|                                   | Perm       |        | Auto   | Perm       |        | Auto   | Perm      |        | Auto   | Prot-Fix  |        | Auto   |

### Critical Movements Diagram

|  |  |  |   |  |  |  |   |             |   |   |   |
|--|--|--|---|--|--|--|---|-------------|---|---|---|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="171"/><br/>                 B: <input type="text" value="106"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="322"/><br/>                 B: <input type="text" value="80"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input type="text" value="432"/><br/>                 B: <input type="text" value="130"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 NorthBound<br/>                 A: <input type="text" value="468"/><br/>                 B: <input type="text" value="182"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 ↑             </div> |             | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 V/C RATIO             </div> |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 LOS             </div> |
|  |  |  |   |  |  |  |   | 0.00 - 0.60 |   | A |   |
|  |  |  |   |  |  |  |   | 0.61 - 0.70 |   | B |   |
|  |  |  |   |  |  |  |   | 0.71 - 0.80 |   | C |   |
|  |  |  |   |  |  |  |   | 0.81 - 0.90 |   | D |   |
|  |  |  |   |  |  |  |   | 0.91 - 1.00 |   | E |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

**Results**

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{468 + 106 + 432 + 80}{*1425} = 0.692 - 0.03 = 0.662$$

LOS = B

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |      |      |            |         |     |           |      |         |           |      |    |         |   |      |   |   |   |   |   |   |
|-----------------------------------|------------|------|------|------------|---------|-----|-----------|------|---------|-----------|------|----|---------|---|------|---|---|---|---|---|---|
|                                   | NORTHBOUND |      |      | SOUTHBOUND |         |     | WESTBOUND |      |         | EASTBOUND |      |    |         |   |      |   |   |   |   |   |   |
|                                   | LT         | TH   | RT   | LT         | TH      | RT  | LT        | TH   | RT      | LT        | TH   | RT |         |   |      |   |   |   |   |   |   |
| EXISTING                          | 0          | 1191 | 241  | 0          | 1272    | 824 | 228       | 1505 | 37      | 741       | 1363 | 28 |         |   |      |   |   |   |   |   |   |
| AMBIENT                           |            |      |      |            |         |     |           |      |         |           |      |    |         |   |      |   |   |   |   |   |   |
| RELATED                           |            |      |      |            |         |     |           |      |         |           |      |    |         |   |      |   |   |   |   |   |   |
| PROJECT                           |            |      |      |            |         |     |           |      |         |           |      |    |         |   |      |   |   |   |   |   |   |
| TOTAL                             | 0          | 1191 | 241  | 0          | 1272    | 824 | 228       | 1505 | 37      | 741       | 1363 | 28 |         |   |      |   |   |   |   |   |   |
| LANE                              | 0          | 0    | 2    | 0          | 0       | 1   | 0         | 0    | 2       | 0         | 1    | 0  | 0       | 0 | 1    | 1 | 0 | 0 | 1 | 0 | 0 |
| SIGNAL                            | Phasing    |      | RTOR |            | Phasing |     | RTOR      |      | Phasing |           | RTOR |    | Phasing |   | RTOR |   |   |   |   |   |   |
|                                   | Perm       |      | Auto |            | Perm    |     | Auto      |      | Split   |           | Auto |    | Split   |   | Auto |   |   |   |   |   |   |

### Critical Movements Diagram

|            |                                  |   |  |            |                                  |
|------------|----------------------------------|---|--|------------|----------------------------------|
| SouthBound |                                  | ↑ |  | WestBound  |                                  |
| A:         | <input type="text" value="524"/> |   |  | A:         | <input type="text" value="514"/> |
| B:         | <input type="text" value="0"/>   |   |  | B:         | <input type="text" value="228"/> |
| EastBound  |                                  | ↑ |  | NorthBound |                                  |
| A:         | <input type="text" value="701"/> |   |  | A:         | <input type="text" value="596"/> |
| B:         | <input type="text" value="701"/> |   |  | B:         | <input type="text" value="0"/>   |

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + A(E/B)

VIC =  $\frac{596 + 0 + 514 + 701}{1425} = 1.271$       LOS = F

Existing PM Year 2005

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #12 Santa Monica BL (N) & Wilshire Bl

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.051  
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 180 Level Of Service: F  
 \*\*\*\*\*

| 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   |   |   | Prot+Permit |   |   | Prot+Permit |   |   |
| Rights:     | Include     |   |   | Include     |   |   | Include     |   |   | Include     |   |   |
| Min. Green: | 0           | 0 | 0 | 0           | 0 | 0 | 0           | 0 | 0 | 0           | 0 | 0 |
| Lanes:      | 0           | 0 | 2 | 0           | 0 | 2 | 1           | 1 | 0 | 1           | 0 | 2 |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 0    | 1191 | 241  | 0    | 1272 | 824  | 741  | 1363 | 28   | 228  | 1505 | 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    | 1191 | 241  | 0    | 1272 | 824  | 741  | 1363 | 28   | 228  | 1505 | 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:     | 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    | 1191 | 241  | 0    | 1272 | 824  | 741  | 1363 | 28   | 228  | 1505 | 37   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced Vol: | 0    | 1191 | 241  | 0    | 1272 | 824  | 741  | 1363 | 28   | 228  | 1505 | 37   |
| 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 |
| Final Vol.:  | 0    | 1191 | 241  | 0    | 1272 | 824  | 741  | 1363 | 28   | 228  | 1505 | 37   |

Saturation Flow Module:

|             |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Sat/Lane:   | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 2.00 | 1.00 | 0.00 | 2.43 | 1.57 | 2.00 | 1.96 | 0.04 | 1.00 | 2.93 | 0.07 |
| Final Sat.: | 0    | 3200 | 1600 | 0    | 3884 | 2516 | 2880 | 3136 | 64   | 1600 | 4685 | 115  |

Capacity Analysis Module:

|             |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Vol/Sat:    | 0.00 | 0.37 | 0.15 | 0.00 | 0.33 | 0.33 | 0.26 | 0.43 | 0.43 | 0.14 | 0.32 | 0.32 |
| Crit Moves: | **** |      |      | **** |      |      | **** |      |      | **** |      |      |

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## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |      |      |            |     |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|------------|------|------|------------|-----|------|-----------|------|------|-----------|------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND |      |      | SOUTHBOUND |     |      | WESTBOUND |      |      | EASTBOUND |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | LT         | TH   | RT   | LT         | TH  | RT   | LT        | TH   | RT   | LT        | TH   | RT   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING                          | 100        | 1060 | 332  | 37         | 625 | 301  | 254       | 1369 | 72   | 171       | 1369 | 48   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT                           |            |      |      |            |     |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |            |      |      |            |     |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |            |      |      |            |     |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 100        | 1060 | 332  | 37         | 625 | 301  | 254       | 1369 | 72   | 171       | 1369 | 48   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE                              |            |      |      |            |     |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | 1          | 0    | 2    | 0          | 0   | 1    | 0         | 1    | 0    | 1         | 0    | 1    | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| SIGNAL                            | Phasing    |      | RTOR | Phasing    |     | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | Prot-Fix   |      | Auto | Prot-Fix   |     | Auto | Prot-Fix  |      | Auto | Prot-Fix  |      | Auto |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="463"/><br/>                 B: <input type="text" value="37"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="709"/><br/>                 B: <input type="text" value="171"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="480"/><br/>                 B: <input type="text" value="254"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="530"/><br/>                 B: <input type="text" value="100"/> </div> |  | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>V/C RATIO</th> <th>LOS</th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
|--|--|--|---|--|---|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| V/C RATIO  | LOS  |  |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60  | A  |  |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70  | B  |  |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80  | C  |  |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90  | D  |  |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00  | E  |  |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{530 + 37 + 254 + 709}{1375} = 1.113 \quad LOS = F$$

Existing PM Year 2005

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #13 Santa Monica Bl (S) & Wilshire Bl
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.056
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns representing saturation flow factors like Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module: Table with 12 columns representing capacity analysis factors like Vol/Sat, Crit Moves.

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |    |      |           |    |      |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|----|------|-----------|----|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |
| EXISTING                          | 0          | 205 | 175  | 94         | 282 | 0    | 819       | 0  | 475  | 0         | 0  | 0    |
| AMBIENT                           |            |     |      |            |     |      |           |    |      |           |    |      |
| RELATED                           |            |     |      |            |     |      |           |    |      |           |    |      |
| PROJECT                           |            |     |      |            |     |      |           |    |      |           |    |      |
| TOTAL                             | 0          | 205 | 175  | 94         | 282 | 0    | 819       | 0  | 475  | 0         | 0  | 0    |
| LANE                              |            |     |      |            |     |      |           |    |      |           |    |      |
|                                   | 0          | 0   | 2    | 1          | 0   | 3    | 2         | 0  | 0    | 0         | 0  | 0    |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |
|                                   | Perm       |     | OLA  | Prot-Fix   |     | Auto | Perm      |    | Auto | Perm      |    | Auto |

### Critical Movements Diagram

|                                   |                                   |   |                                     |                                     |
|-----------------------------------|-----------------------------------|---|-------------------------------------|-------------------------------------|
| EastBound                         |                                   | ↑ | WestBound                           |                                     |
| A: <input type="text" value="0"/> | B: <input type="text" value="0"/> |   | A: <input type="text" value="214"/> | B: <input type="text" value="450"/> |

|             |     |
|-------------|-----|
| VIC RATIO   | LOS |
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$VIC = \frac{175 + 94 + 450 + 0}{*1425} = 0.435 - 0.03 = 0.405$$

LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND   |     |  | SOUTHBOUND |  |     | WESTBOUND  |     |  | EASTBOUND |  |     |
|----------|--|-----|--|------------|--|-----|--|-----|--|-----------|--|-----|
|          | LT   | TH  | RT   | LT         | TH   | RT  | LT   | TH  | RT   | LT        | TH   | RT  |
| EXISTING | 291  | 749 | 266  | 220        | 975  | 287 | 180  | 423 | 251  | 359       | 276  | 411 |
| AMBIENT  |  |     |  |            |  |     |  |     |  |           |  |     |
| RELATED  |  |     |  |            |  |     |  |     |  |           |  |     |
| PROJECT  |  |     |  |            |  |     |  |     |  |           |  |     |
| TOTAL    | 291  | 749 | 266  | 220        | 975  | 287 | 180  | 423 | 251  | 359       | 276  | 411 |
| LANE     |  |     |  |            |  |     |  |     |  |           |  |     |
| SIGNAL   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |     | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Prot-Var"/> RTOR: <input type="text" value="Auto"/> |     | Phasing: <input type="text" value="Prot-Var"/> RTOR: <input type="text" value="Auto"/> |     | Phasing: <input type="text" value="Prot-Var"/> RTOR: <input type="text" value="Auto"/> |           | Phasing: <input type="text" value="Prot-Var"/> RTOR: <input type="text" value="Auto"/> |     |

### Critical Movements Diagram

|            |                                  |
|------------|----------------------------------|
| SouthBound |                                  |
| A:         | <input type="text" value="421"/> |
| B:         | <input type="text" value="121"/> |

|           |                                  |
|-----------|----------------------------------|
| WestBound |                                  |
| A:        | <input type="text" value="212"/> |
| B:        | <input type="text" value="180"/> |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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#### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{160 + 421 + 212 + 359}{*1375} = 0.768 - 0.03 = 0.738$  LOS = C

*ATCS*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |         |     |           |    |         |           |      |     |
|-----------------------------------|------------|-----|------|------------|---------|-----|-----------|----|---------|-----------|------|-----|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |         |     | WESTBOUND |    |         | EASTBOUND |      |     |
|                                   | LT         | TH  | RT   | LT         | TH      | RT  | LT        | TH | RT      | LT        | TH   | RT  |
| EXISTING                          | 110        | 532 | 0    | 48         | 1037    | 229 | 10        | 0  | 30      | 621       | 0    | 598 |
| AMBIENT                           |            |     |      |            |         |     |           |    |         |           |      |     |
| RELATED                           |            |     |      |            |         |     |           |    |         |           |      |     |
| PROJECT                           |            |     |      |            |         |     |           |    |         |           |      |     |
| TOTAL                             | 110        | 532 | 0    | 48         | 1037    | 229 | 10        | 0  | 30      | 621       | 0    | 598 |
| LANE                              |            |     |      |            |         |     |           |    |         |           |      |     |
|                                   | 1          | 0   | 3    | 0          | 0       | 0   | 0         | 0  | 0       | 0         | 0    | 0   |
| SIGNAL                            | Phasing    |     | RTOR |            | Phasing |     | RTOR      |    | Phasing |           | RTOR |     |
|                                   | Perm       |     | Auto |            | Perm    |     | Auto      |    | Perm    |           | Auto |     |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 519 |
| B:         | 48  |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 329 |
| B:        | 342 |

|           |    |
|-----------|----|
| WestBound |    |
| A:        | 40 |
| B:        | 10 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 177 |
| B:         | 110 |

|  | VIC RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

#### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

VIC =  $\frac{110 + 519 + 40 + 342}{*1500} = 0.604$  *ATSAC*  $-0.03$  LOS = B  $= 0.574$

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |      |      |           |      |      |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 123        | 442 | 196  | 74         | 635 | 38   | 428       | 3274 | 43   | 36        | 2125 | 157  |
| AMBIENT                           |            |     |      |            |     |      |           |      |      |           |      |      |
| RELATED                           |            |     |      |            |     |      |           |      |      |           |      |      |
| PROJECT                           |            |     |      |            |     |      |           |      |      |           |      |      |
| TOTAL                             | 123        | 442 | 196  | 74         | 635 | 38   | 428       | 3274 | 43   | 36        | 2125 | 157  |
| LANE                              |            |     |      |            |     |      |           |      |      |           |      |      |
|                                   | 1          | 0   | 0    | 1          | 0   | 0    | 1         | 0    | 3    | 1         | 0    | 2    |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |     | Auto | Perm       |     | Auto | Prot-Fix  |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="673"/><br/>                 B: <input type="text" value="74"/> </div>  |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
|---|---|--|--|------------------|------------|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="761"/><br/>                 B: <input type="text" value="36"/> </div> |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="829"/><br/>                 B: <input type="text" value="428"/> </div> | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>V/C RATIO</u></th> <th style="text-align: left;"><u>LOS</u></th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | <u>V/C RATIO</u> | <u>LOS</u> | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| <u>V/C RATIO</u>  | <u>LOS</u>  |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60   | A   |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70   | B   |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80   | C   |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90   | D   |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00   | E   |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| <p>A = Adjusted Through/Right Volume<br/>                 B = Adjusted Left Volume<br/>                 * = ATSAC Benefit</p>   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="638"/><br/>                 B: <input type="text" value="123"/> </div> |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{123 + 673 + 428 + 761}{*1425} = 1.323 - 0.03$  LOS = F

*ATCS = 1.293*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  PM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |            |           |            |            |            |            |             |            |            |             |           |  |
|-----------------------------------|------------|------------|-----------|------------|------------|------------|------------|-------------|------------|------------|-------------|-----------|--|
|                                   | NORTHBOUND |            |           | SOUTHBOUND |            |            | WESTBOUND  |             |            | EASTBOUND  |             |           |  |
|                                   | LT         | TH         | RT        | LT         | TH         | RT         | LT         | TH          | RT         | LT         | TH          | RT        |  |
| EXISTING                          | 68         | 372        | 48        | 182        | 648        | 290        | 149        | 3400        | 152        | 169        | 2036        | 94        |  |
| AMBIENT                           |            |            |           |            |            |            |            |             |            |            |             |           |  |
| RELATED                           |            |            |           |            |            |            |            |             |            |            |             |           |  |
| PROJECT                           |            |            |           |            |            |            |            |             |            |            |             |           |  |
| <b>TOTAL</b>                      | <b>68</b>  | <b>372</b> | <b>48</b> | <b>182</b> | <b>648</b> | <b>290</b> | <b>149</b> | <b>3400</b> | <b>152</b> | <b>169</b> | <b>2036</b> | <b>94</b> |  |
| LANE                              |            |            |           |            |            |            |            |             |            |            |             |           |  |
| SIGNAL                            | Phasing    |            | RTOR      | Phasing    |            | RTOR       | Phasing    |             | RTOR       | Phasing    |             | RTOR      |  |
|                                   | Prot-Fix   |            | Auto      | Prot-Fix   |            | Auto       | Prot-Fix   |             | Auto       | Prot-Fix   |             | Auto      |  |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 324 |
| B:         | 182 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 679 |
| B:        | 169 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 888 |
| B:        | 149 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 186 |
| B:         | 68  |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{68 + 324 + 888 + 169}{*1375} = 0.984 - 0.03$  LOS = E  
*= 0.954* *ATCS*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  PM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND |          |          | SOUTHBOUND |          |             | WESTBOUND |             |           | EASTBOUND  |             |          |
|--------------|------------|----------|----------|------------|----------|-------------|-----------|-------------|-----------|------------|-------------|----------|
|              | LT         | TH       | RT       | LT         | TH       | RT          | LT        | TH          | RT        | LT         | TH          | RT       |
| EXISTING     | 0          | 0        | 0        | 94         | 0        | 1216        | 0         | 3216        | 71        | 335        | 2380        | 0        |
| AMBIENT      |            |          |          |            |          |             |           |             |           |            |             |          |
| RELATED      |            |          |          |            |          |             |           |             |           |            |             |          |
| PROJECT      |            |          |          |            |          |             |           |             |           |            |             |          |
| <b>TOTAL</b> | <b>0</b>   | <b>0</b> | <b>0</b> | <b>94</b>  | <b>0</b> | <b>1216</b> | <b>0</b>  | <b>3216</b> | <b>71</b> | <b>335</b> | <b>2380</b> | <b>0</b> |
| LANE         |            |          |          |            |          |             |           |             |           |            |             |          |
|              | 0          | 0        | 0        | 2          | 0        | 0           | 0         | 0           | 3         | 0          | 0           | 1        |
| SIGNAL       | Phasing    |          | RTOR     | Phasing    |          | RTOR        | Phasing   |             | RTOR      | Phasing    |             | RTOR     |
|              | Perm       |          | Auto     | Perm       |          | OLA         | Perm      |             | Auto      | Prot-Fix   |             | Auto     |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 485 |
| B:         | 52  |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 793 |
| B:        | 184 |

|           |      |
|-----------|------|
| WestBound |      |
| A:        | 1072 |
| B:        | 0    |

|            |   |
|------------|---|
| NorthBound |   |
| A:         | 0 |
| B:         | 0 |

|  |  |                  |            |
|--|--|------------------|------------|
|  |  | <u>V/C RATIO</u> | <u>LOS</u> |
|  |  | 0.00 - 0.60      | A          |
|  |  | 0.61 - 0.70      | B          |
|  |  | 0.71 - 0.80      | C          |
|  |  | 0.81 - 0.90      | D          |
|  |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 485 + 1072 + 184}{*1425} = 1.152 - 0.03 = 1.122$  LOS = F

*ATCS*



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND                                   |   |  | SOUTHBOUND                                |  |   | WESTBOUND                                    |   |  | EASTBOUND                                 |  |   |
|--------------|--|---|--|---|--|---|--|---|--|---|--|---|
|              | LT   | TH  | RT   | LT  | TH   | RT  | LT   | TH  | RT   | LT  | TH   | RT  |
| EXISTING     | 13   | 871                                       | 130  | 117                                       | 1527   | 42  | 166  | 6   | 363  | 21  | 1  | 12  |
| AMBIENT      |  |   |  |   |  |   |  |   |  |   |  |   |
| RELATED      |  |   |  |   |  |   |  |   |  |   |  |   |
| PROJECT      |  |   |  |   |  |   |  |   |  |   |  |   |
| <b>TOTAL</b> | <b>13</b>                                    | <b>871</b>                                | <b>130</b>                                   | <b>117</b>                                | <b>1527</b>                                  | <b>42</b>                                 | <b>166</b>                                   | <b>6</b>                                  | <b>363</b>                                   | <b>21</b>                                 | <b>1</b>                                     | <b>12</b>                                 |
| LANE         |  |   |  |   |  |   |  |   |  |   |  |   |
| SIGNAL       | Phasing<br><input type="text" value="Perm"/> | RTOR<br><input type="text" value="Auto"/> | Phasing<br><input type="text" value="Perm"/> | RTOR<br><input type="text" value="Auto"/> | Phasing<br><input type="text" value="Perm"/> | RTOR<br><input type="text" value="Auto"/> | Phasing<br><input type="text" value="Perm"/> | RTOR<br><input type="text" value="Auto"/> | Phasing<br><input type="text" value="Perm"/> | RTOR<br><input type="text" value="Auto"/> | Phasing<br><input type="text" value="Perm"/> | RTOR<br><input type="text" value="Auto"/> |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 523 |
| B:         | 117 |

|           |    |
|-----------|----|
| EastBound |    |
| A:        | 22 |
| B:        | 21 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 363 |
| B:        | 166 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 334 |
| B:         | 13  |

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

VIC =  $\frac{13 + 523 + 363 + 21}{*1500} = 0.543$  LOS = A

*ATCS = 0.513*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND                                |            |  | SOUTHBOUND |   |           | WESTBOUND                              |          |   | EASTBOUND |  |           |
|--------------|---|------------|--|------------|---|-----------|--|----------|---|-----------|--|-----------|
|              | LT  | TH         | RT                                     | LT         | TH  | RT        | LT                                     | TH       | RT  | LT        | TH                                     | RT        |
| EXISTING     | 23  | 675        | 103                                    | 304        | 1386  | 49        | 59                                     | 5        | 127                                       | 70        | 35                                     | 41        |
| AMBIENT      |   |            |  |            |   |           |  |          |   |           |  |           |
| RELATED      |   |            |  |            |   |           |  |          |   |           |  |           |
| PROJECT      |   |            |  |            |   |           |  |          |   |           |  |           |
| <b>TOTAL</b> | <b>23</b>                                 | <b>675</b> | <b>103</b>                             | <b>304</b> | <b>1386</b>                                   | <b>49</b> | <b>59</b>                              | <b>5</b> | <b>127</b>                                | <b>70</b> | <b>35</b>                              | <b>41</b> |
| LANE         | ↔ ↑ ↕                                     | ↔ ↑ ↕      | ↔ ↑ ↕                                  | ↔ ↑ ↕      | ↔ ↑ ↕   | ↔ ↑ ↕     | ↔ ↑ ↕                                  | ↔ ↑ ↕    | ↔ ↑ ↕                                     | ↔ ↑ ↕     | ↔ ↑ ↕                                  | ↔ ↑ ↕     |
|              | 1 0 2                                     | 0 1 0      | 0 0 0                                  | 2 0 2      | 0 1 0   | 0 0 0     | 0 0 0                                  | 1 0 1    | 0 0 0                                     | 0 1 0     | 0 1 0                                  | 0 0 0     |
| SIGNAL       | Phasing <input type="text" value="Perm"/> |            | RTOR <input type="text" value="Auto"/> |            | Phasing <input type="text" value="Prot-Fix"/> |           | RTOR <input type="text" value="Auto"/> |          | Phasing <input type="text" value="Perm"/> |           | RTOR <input type="text" value="Auto"/> |           |

### Critical Movements Diagram

|  |   |  |  |
|--|---|--|--|
|  | <b>SouthBound</b><br>A: <input type="text" value="478"/><br>B: <input type="text" value="167"/> |  |  |
| <b>EastBound</b><br>A: <input type="text" value="73"/><br>B: <input type="text" value="70"/> | ↑   | <b>WestBound</b><br>A: <input type="text" value="96"/><br>B: <input type="text" value="59"/> |  |
|  | <b>NorthBound</b><br>A: <input type="text" value="259"/><br>B: <input type="text" value="23"/>  |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|             | VIC RATIO | LOS |
|-------------|-----------|-----|
| 0.00 - 0.60 | A         |     |
| 0.61 - 0.70 | B         |     |
| 0.71 - 0.80 | C         |     |
| 0.81 - 0.90 | D         |     |
| 0.91 - 1.00 | E         |     |

---

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

VIC =  $\frac{23 + 478 + 96 + 70}{*1425} = 0.398 - 0.03 = 0.368$  LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND |            |            | SOUTHBOUND |            |            | WESTBOUND |             |            | EASTBOUND |             |            |
|--------------|------------|------------|------------|------------|------------|------------|-----------|-------------|------------|-----------|-------------|------------|
|              | LT         | TH         | RT         | LT         | TH         | RT         | LT        | TH          | RT         | LT        | TH          | RT         |
| EXISTING     | 93         | 260        | 135        | 636        | 664        | 660        | 0         | 2709        | 264        | 0         | 2459        | 101        |
| AMBIENT      |            |            |            |            |            |            |           |             |            |           |             |            |
| RELATED      |            |            |            |            |            |            |           |             |            |           |             |            |
| PROJECT      |            |            |            |            |            |            |           |             |            |           |             |            |
| <b>TOTAL</b> | <b>93</b>  | <b>260</b> | <b>135</b> | <b>636</b> | <b>664</b> | <b>660</b> | <b>0</b>  | <b>2709</b> | <b>264</b> | <b>0</b>  | <b>2459</b> | <b>101</b> |
| LANE         |            |            |            |            |            |            |           |             |            |           |             |            |
|              | 2          | 0          | 2          | 0          | 1          | 0          | 0         | 0           | 3          | 0         | 1           | 0          |
| SIGNAL       | Phasing    |            | RTOR       | Phasing    |            | RTOR       | Phasing   |             | RTOR       | Phasing   |             | RTOR       |
|              | Prot-Fix   |            | Auto       | Prot-Fix   |            | Auto       | Perm      |             | Auto       | Perm      |             | Auto       |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 363 |
| B:         | 350 |

↑

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 743 |
| B:        | 0   |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 853 |
| B:        | 0   |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 135 |
| B:         | 51  |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

**Results**

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{135 + 350 + 0 + 853}{*1425} = 0.869 - 0.03 = 0.839$  LOS = D

*ATCS*

## INTERSECTION DATA SUMMARY SHEET

|             |  |             |   |                |                                 |
|-------------|--|-------------|---|----------------|---------------------------------|
| N/S:        | <input type="text" value="Spalding Dr"/> | W/E:        | <input type="text" value="Olympic Bl"/>         | I/S No:        | <input type="text" value="23"/> |
| AM/PM:      | <input type="text" value="PM"/>          | Comments:   | <input type="text" value="Existing Year 2005"/> |                |                                 |
| COUNT DATE: | <input type="text"/>                     | STUDY DATE: | <input type="text"/>                            | GROWTH FACTOR: | <input type="text"/>            |

|          | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|----------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|          | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING | 21         | 20 | 28   | 226        | 80 | 317  | 28        | 2512 | 74   | 196       | 2367 | 14   |
| AMBIENT  |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED  |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT  |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL    | 21         | 20 | 28   | 226        | 80 | 317  | 28        | 2512 | 74   | 196       | 2367 | 14   |
| LANE     |            |    |      |            |    |      |           |      |      |           |      |      |
| SIGNAL   | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|          | Perm       |    | Auto | Perm       |    | Auto | Perm      |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|  |   |   |                  |            |
|--|---|---|------------------|------------|
|  | <b>SouthBound</b><br>A: <input type="text" value="306"/><br>B: <input type="text" value="226"/> |   |                  |            |
| <b>EastBound</b><br>A: <input type="text" value="794"/><br>B: <input type="text" value="196"/> |   | <b>WestBound</b><br>A: <input type="text" value="862"/><br>B: <input type="text" value="28"/> | <u>V/C RATIO</u> | <u>LOS</u> |
|  |   |   | 0.00 - 0.60      | A          |
|  |   |   | 0.61 - 0.70      | B          |
|  |   |   | 0.71 - 0.80      | C          |
|  |   |   | 0.81 - 0.90      | D          |
|  |   |   | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{21 + 306 + 862 + 196}{1425} = 0.972$       LOS = E

Existing PM Year 2005

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #23 Spalding Drive & Olympic Boulevard

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 0.973

Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 157 Level Of Service: E

\*\*\*\*\*

| Street Name: | Spalding Drive |   |        |             |   |       | Olympic Boulevard |   |       |            |   |       |
|--------------|----------------|---|--------|-------------|---|-------|-------------------|---|-------|------------|---|-------|
|              | North Bound    |   |        | South Bound |   |       | East Bound        |   |       | West Bound |   |       |
| Approach:    | L              | T | R      | L           | T | R     | L                 | T | R     | L          | T | R     |
| Control:     | Permitted      |   |        | Permitted   |   |       | Protected         |   |       | Permitted  |   |       |
| Rights:      | Include        |   |        | Include     |   |       | Include           |   |       | Include    |   |       |
| Min. Green:  | 0              | 0 | 0      | 0           | 0 | 0     | 0                 | 0 | 0     | 0          | 0 | 0     |
| Lanes:       | 0              | 0 | 1! 0 0 | 0           | 1 | 0 0 1 | 1                 | 0 | 2 1 0 | 1          | 0 | 2 1 0 |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 21   | 20   | 28   | 226  | 80   | 317  | 196  | 2367 | 14   | 28   | 2512 | 74   |
| 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   | 20   | 28   | 226  | 80   | 317  | 196  | 2367 | 14   | 28   | 2512 | 74   |
| 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:  | 21   | 20   | 28   | 226  | 80   | 317  | 196  | 2367 | 14   | 28   | 2512 | 74   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced Vol: | 21   | 20   | 28   | 226  | 80   | 317  | 196  | 2367 | 14   | 28   | 2512 | 74   |
| 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 |
| Final Vol.:  | 21   | 20   | 28   | 226  | 80   | 317  | 196  | 2367 | 14   | 28   | 2512 | 74   |

Saturation Flow Module:

|             |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Sat/Lane:   | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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:      | 0.30 | 0.29 | 0.41 | 0.74 | 0.26 | 1.00 | 1.00 | 2.98 | 0.02 | 1.00 | 2.91 | 0.09 |
| Final Sat.: | 487  | 464  | 649  | 1182 | 418  | 1600 | 1600 | 4772 | 28   | 1600 | 4663 | 137  |

Capacity Analysis Module:

|             |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Vol/Sat:    | 0.01 | 0.04 | 0.04 | 0.14 | 0.19 | 0.20 | 0.12 | 0.50 | 0.50 | 0.02 | 0.54 | 0.54 |
| Crit Moves: | **** |      |      |      |      | **** | **** |      |      | **** |      |      |

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## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |            |           |            |             |           |           |          |           |            |           |            |
|-----------------------------------|------------|------------|-----------|------------|-------------|-----------|-----------|----------|-----------|------------|-----------|------------|
|                                   | NORTHBOUND |            |           | SOUTHBOUND |             |           | WESTBOUND |          |           | EASTBOUND  |           |            |
|                                   | LT         | TH         | RT        | LT         | TH          | RT        | LT        | TH       | RT        | LT         | TH        | RT         |
| EXISTING                          | 14         | 581        | 51        | 123        | 1476        | 25        | 49        | 3        | 48        | 165        | 27        | 251        |
| AMBIENT                           |            |            |           |            |             |           |           |          |           |            |           |            |
| RELATED                           |            |            |           |            |             |           |           |          |           |            |           |            |
| PROJECT                           |            |            |           |            |             |           |           |          |           |            |           |            |
| <b>TOTAL</b>                      | <b>14</b>  | <b>581</b> | <b>51</b> | <b>123</b> | <b>1476</b> | <b>25</b> | <b>49</b> | <b>3</b> | <b>48</b> | <b>165</b> | <b>27</b> | <b>251</b> |
| LANE                              | ↔          | ↕          | ↕         | ↕          | ↕           | ↕         | ↕         | ↕        | ↕         | ↕          | ↕         | ↕          |
|                                   | 2          | 0          | 2         | 1          | 0           | 2         | 1         | 0        | 0         | 2          | 0         | 0          |
| SIGNAL                            | Phasing    |            | RTOR      | Phasing    |             | RTOR      | Phasing   |          | RTOR      | Phasing    |           | RTOR       |
|                                   | Prot-Fix   |            | Auto      | Perm       |             | Auto      | Split     |          | Auto      | Split      |           | Auto       |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 500 |
| B:         | 123 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 247 |
| B:        | 91  |

|           |    |
|-----------|----|
| WestBound |    |
| A:        | 48 |
| B:        | 49 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 211 |
| B:         | 8   |

|             | VIC RATIO | LOS |
|-------------|-----------|-----|
| 0.00 - 0.60 | A         |     |
| 0.61 - 0.70 | B         |     |
| 0.71 - 0.80 | C         |     |
| 0.81 - 0.90 | D         |     |
| 0.91 - 1.00 | E         |     |

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

VIC =  $\frac{8 + 500 + 49 + 247}{*1375} = 0.515 - 0.03$  LOS = A

*ATCS*  
*= 0.492*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |            |           |            |             |          |           |          |           |           |          |          |
|-----------------------------------|------------|------------|-----------|------------|-------------|----------|-----------|----------|-----------|-----------|----------|----------|
|                                   | NORTHBOUND |            |           | SOUTHBOUND |             |          | WESTBOUND |          |           | EASTBOUND |          |          |
|                                   | LT         | TH         | RT        | LT         | TH          | RT       | LT        | TH       | RT        | LT        | TH       | RT       |
| EXISTING                          | 0          | 600        | 19        | 17         | 1528        | 0        | 16        | 0        | 24        | 0         | 0        | 0        |
| AMBIENT                           |            |            |           |            |             |          |           |          |           |           |          |          |
| RELATED                           |            |            |           |            |             |          |           |          |           |           |          |          |
| PROJECT                           |            |            |           |            |             |          |           |          |           |           |          |          |
| <b>TOTAL</b>                      | <b>0</b>   | <b>600</b> | <b>19</b> | <b>17</b>  | <b>1528</b> | <b>0</b> | <b>16</b> | <b>0</b> | <b>24</b> | <b>0</b>  | <b>0</b> | <b>0</b> |
| LANE                              |            |            |           |            |             |          |           |          |           |           |          |          |
|                                   | 1          | 0          | 2         | 0          | 1           | 0        | 0         | 0        | 1         | 0         | 0        | 0        |
| SIGNAL                            | Phasing    |            | RTOR      | Phasing    |             | RTOR     | Phasing   |          | RTOR      | Phasing   |          | RTOR     |
|                                   | Perm       |            | Auto      | Perm       |             | Auto     | Perm      |          | Auto      | Perm      |          | Auto     |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 509 |
| B:         | 17  |

|           |   |
|-----------|---|
| EastBound |   |
| A:        | 0 |
| B:        | 0 |

|           |    |
|-----------|----|
| WestBound |    |
| A:        | 40 |
| B:        | 16 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 206 |
| B:         | 0   |

|  | V/C RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 509 + 40 + 0}{1500} = 0.366$       LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND      |                 |                 | SOUTHBOUND      |                 |                 | WESTBOUND       |                 |                 | EASTBOUND       |                 |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|          | LT              | TH              | RT              | LT              | TH              | RT              | LT              | TH              | RT              | LT              | TH              | RT              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING | 301             | 788             | 481             | 70              | 1330            | 107             | 1018            | 1585            | 37              | 92              | 1121            | 370             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL    | 301             | 788             | 481             | 70              | 1330            | 107             | 1018            | 1585            | 37              | 92              | 1121            | 370             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE     | ↔ ↑ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↑ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↑ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↑ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↑ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↑ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↑ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↑ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↑ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↑ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↑ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↑ ↕ ↕ ↕ ↕ ↕ ↕ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|          | 2               | 0               | 1               | 0               | 0               | 2               | 0               | 1               | 0               | 1               | 0               | 1               | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 |
| SIGNAL   | Phasing         |                 | RTOR            | Phasing         |                 | RTOR            | Phasing         |                 | RTOR            | Phasing         |                 | RTOR            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|          | Prot-Fix        |                 | OLA             | Perm            |                 | Auto            | Perm            |                 | Auto            | Prot-Fix        |                 | Auto            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="719"/><br/>                 B: <input type="text" value="70"/> </div> |   |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
|--|---|---|--|--|------------------|------------|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="497"/><br/>                 B: <input type="text" value="92"/> </div> | <div style="text-align: center;">                 ↑<br/>                  <br/>                 ↑             </div>  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input type="text" value="541"/><br/>                 B: <input type="text" value="560"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 NorthBound<br/>                 A: <input type="text" value="788"/><br/>                 B: <input type="text" value="166"/> </div> |  |                  |            |             |   |             |   |             |   |             |   |             |   |
|  |   |   |  | <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;"><u>V/C RATIO</u></th> <th style="text-align: left;"><u>LOS</u></th> </tr> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </table> | <u>V/C RATIO</u> | <u>LOS</u> | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| <u>V/C RATIO</u>   | <u>LOS</u>  |   |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60  | A   |   |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70  | B   |   |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80  | C   |   |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90  | D   |   |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00  | E   |   |  |  |                  |            |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{166 + 719 + 560 + 497}{*1375} = 1.342 - 0.03 = 1.312$$
 LOS = F



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |     |      |           |      |      |           |      |      |
|-----------------------------------|------------|----|------|------------|-----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |     |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH | RT   | LT         | TH  | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 86         | 59 | 122  | 11         | 214 | 46   | 146       | 2018 | 30   | 47        | 1315 | 41   |
| AMBIENT                           |            |    |      |            |     |      |           |      |      |           |      |      |
| RELATED                           |            |    |      |            |     |      |           |      |      |           |      |      |
| PROJECT                           |            |    |      |            |     |      |           |      |      |           |      |      |
| TOTAL                             | 86         | 59 | 122  | 11         | 214 | 46   | 146       | 2018 | 30   | 47        | 1315 | 41   |
| LANE                              |            |    |      |            |     |      |           |      |      |           |      |      |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |     | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |    | Auto | Perm       |     | Auto | Prot-Fix  |      | Auto | Perm      |      | Auto |

### Critical Movements Diagram

| SouthBound |     |
|------------|-----|
| A:         | 271 |
| B:         | 11  |

| EastBound |     |
|-----------|-----|
| A:        | 658 |
| B:        | 47  |

| WestBound |     |
|-----------|-----|
| A:        | 683 |
| B:        | 146 |

| NorthBound |     |
|------------|-----|
| A:         | 267 |
| B:         | 86  |

|  | VIC RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

VIC =  $\frac{86 + 271 + 146 + 658}{*1425} = 0.745 - 0.03$ 
ATCS  
= 0.715
LOS = C

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND |       |       | SOUTHBOUND |       |       | WESTBOUND |       |       | EASTBOUND |       |       |
|----------|------------|-------|-------|------------|-------|-------|-----------|-------|-------|-----------|-------|-------|
|          | LT         | TH    | RT    | LT         | TH    | RT    | LT        | TH    | RT    | LT        | TH    | RT    |
| EXISTING | 0          | 0     | 0     | 364        | 0     | 366   | 0         | 1804  | 305   | 210       | 1319  | 0     |
| AMBIENT  |            |       |       |            |       |       |           |       |       |           |       |       |
| RELATED  |            |       |       |            |       |       |           |       |       |           |       |       |
| PROJECT  |            |       |       |            |       |       |           |       |       |           |       |       |
| TOTAL    | 0          | 0     | 0     | 364        | 0     | 366   | 0         | 1804  | 305   | 210       | 1319  | 0     |
| LANE     | ↙ ↕ ↗      | ↖ ↕ ↘ | ↙ ↕ ↗ | ↙ ↕ ↗      | ↖ ↕ ↘ | ↙ ↕ ↗ | ↙ ↕ ↗     | ↖ ↕ ↘ | ↙ ↕ ↗ | ↙ ↕ ↗     | ↖ ↕ ↘ | ↙ ↕ ↗ |
|          | 0          | 0     | 0     | 1          | 0     | 1     | 0         | 2     | 1     | 1         | 3     | 0     |
| SIGNAL   | Phasing    |       | RTOR  | Phasing    |       | RTOR  | Phasing   |       | RTOR  | Phasing   |       | RTOR  |
|          | Perm       |       | Auto  | Perm       |       | Auto  | Perm      |       | Auto  | Perm      |       | Auto  |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 243 |
| B:         | 243 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 440 |
| B:        | 210 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 703 |
| B:        | 0   |

|            |   |
|------------|---|
| NorthBound |   |
| A:         | 0 |
| B:         | 0 |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 243 + 703 + 210}{*1500} = 0.701 - 0.03$  LOS = ~~B~~ **B**

*ATCS*  
= 0.671

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |   |   |   |   |    |      |           |      |      |           |      |      |
|-----------------------------------|---|---|---|---|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND  |   |   | SOUTHBOUND  |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT  | TH  | RT  | LT  | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 292   | 0   | 624   | 109   | 0  | 240  | 981       | 1500 | 68   | 73        | 1430 | 440  |
| AMBIENT                           |   |   |   |   |    |      |           |      |      |           |      |      |
| RELATED                           |   |   |   |   |    |      |           |      |      |           |      |      |
| PROJECT                           |   |   |   |   |    |      |           |      |      |           |      |      |
| TOTAL                             | 292   | 0   | 624   | 109   | 0  | 240  | 981       | 1500 | 68   | 73        | 1430 | 440  |
| LANE                              | 2                      0                      0                      0                      0                      1                      0 | 1                      0                      0                      0                      0                      1                      0 | 1                      0                      3                      0                      0                      0                      0 | 1                      0                      2                      0                      1                      0                      0 |    |      |           |      |      |           |      |      |
| SIGNAL                            | Phasing   |   | RTOR  | Phasing   |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Split   |   | OLA   | Split   |    | Auto | Prot-Fix  |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 203 |
| B:         | 109 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 623 |
| B:        | 73  |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 500 |
| B:        | 981 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 0   |
| B:         | 161 |

|  |                  |            |
|--|------------------|------------|
|  | <b>V/C RATIO</b> | <b>LOS</b> |
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{161 + 203 + 981 + 623}{*1375} = 1.361$  ATCS LOS = F  
= 1.33!

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|----------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|          | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING | 0          | 0  | 0    | 448        | 0  | 1105 | 0         | 1680 | 149  | 497       | 1733 | 0    |
| AMBIENT  |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED  |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT  |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL    | 0          | 0  | 0    | 448        | 0  | 1105 | 0         | 1680 | 149  | 497       | 1733 | 0    |
| LANE     |            |    |      |            |    |      |           |      |      |           |      |      |
|          | 0          | 0  | 0    | 2          | 0  | 0    | 0         | 0    | 2    | 0         | 1    | 0    |
| SIGNAL   | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|          | Perm       |    | Auto | Perm       |    | Auto | Perm      |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|  |  |   |   |  |  |  |   |             |   |   |   |
|--|--|---|---|--|--|--|---|-------------|---|---|---|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="471"/><br/>                 B: <input type="text" value="246"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="578"/><br/>                 B: <input type="text" value="273"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input type="text" value="610"/><br/>                 B: <input type="text" value="0"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 NorthBound<br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 ↑             </div> |             | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 V/C RATIO             </div> |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 LOS             </div> |
|  |  |   |   |  |  |  |   | 0.00 - 0.60 |   | A |   |
|  |  |   |   |  |  |  |   | 0.61 - 0.70 |   | B |   |
|  |  |   |   |  |  |  |   | 0.71 - 0.80 |   | C |   |
|  |  |   |   |  |  |  |   | 0.81 - 0.90 |   | D |   |
|  |  |   |   |  |  |  |   | 0.91 - 1.00 |   | E |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$VIC = \frac{0 + 471 + 610 + 273}{*1425} = 0.880 - 0.03 \text{ LOS} = D$$
*ATCS*  
= 0.850

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |       |   |   |   |   |   |   |
|----------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|-------|---|---|---|---|---|---|
|          | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |       |   |   |   |   |   |   |
| EXISTING | 7          | 20 | 13   | 640        | 3  | 520  | 7         | 1300 | 201  | 182       | 2004 | 0    |       |   |   |   |   |   |   |
| AMBIENT  |            |    |      |            |    |      |           |      |      |           |      |      |       |   |   |   |   |   |   |
| RELATED  |            |    |      |            |    |      |           |      |      |           |      |      |       |   |   |   |   |   |   |
| PROJECT  |            |    |      |            |    |      |           |      |      |           |      |      |       |   |   |   |   |   |   |
| TOTAL    | 7          | 20 | 13   | 640        | 3  | 520  | 7         | 1300 | 201  | 182       | 2004 | 0    |       |   |   |   |   |   |   |
| LANE     | 0          | 1  | 0    | 0          | 1  | 0    | 1         | 0    | 3    | 0         | 0    | 1    | 2     | 0 | 2 | 0 | 1 | 0 | 0 |
|          | ↙ ↕ ↘      |    |      | ↙ ↕ ↘      |    |      | ↙ ↕ ↘     |      |      | ↙ ↕ ↘     |      |      | ↙ ↕ ↘ |   |   |   |   |   |   |
| SIGNAL   | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |       |   |   |   |   |   |   |
|          | Perm       |    | Auto | Prot-Fix   |    | OLA  | Perm      |      | Auto | Prot-Fix  |      | Auto |       |   |   |   |   |   |   |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 388 |
| B:         | 388 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 668 |
| B:        | 100 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 433 |
| B:        | 7   |

|            |    |
|------------|----|
| NorthBound |    |
| A:         | 24 |
| B:         | 7  |

|  | VIC RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

#### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$VIC = \frac{24 + 388 + 7 + 668}{*1375} = 0.721 - 0.03 = 0.691$$

LOS = *B*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND   |  |  | SOUTHBOUND   |  |   | WESTBOUND                                    |   |            | EASTBOUND |            |            |
|--------------|--|--|--|--|--|---|--|---|------------|-----------|------------|------------|
|              | LT   | TH   | RT   | LT   | TH   | RT  | LT   | TH  | RT         | LT        | TH         | RT         |
| EXISTING     | 64   | 507  | 106  | 200  | 755  | 7   | 69   | 173                                       | 229        | 29        | 383        | 224        |
| AMBIENT      |  |  |  |  |  |   |  |   |            |           |            |            |
| RELATED      |  |  |  |  |  |   |  |   |            |           |            |            |
| PROJECT      |  |  |  |  |  |   |  |   |            |           |            |            |
| <b>TOTAL</b> | <b>64</b>  | <b>507</b>   | <b>106</b>   | <b>200</b>   | <b>755</b>                                   | <b>7</b>                                  | <b>69</b>                                    | <b>173</b>                                | <b>229</b> | <b>29</b> | <b>383</b> | <b>224</b> |
| LANE         | <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> | <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> | <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> | <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> |  |   |  |   |            |           |            |            |
| SIGNAL       | Phasing<br><input type="text" value="Perm"/>   | RTOR<br><input type="text" value="Auto"/>  | Phasing<br><input type="text" value="Perm"/>   | RTOR<br><input type="text" value="Auto"/>  | Phasing<br><input type="text" value="Perm"/> | RTOR<br><input type="text" value="Auto"/> | Phasing<br><input type="text" value="Perm"/> | RTOR<br><input type="text" value="Auto"/> |            |           |            |            |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 762 |
| B:         | 200 |

|   |  |
|---|--|
| ↑ |  |
|---|--|

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 402 |
| B:        | 69  |

|             | V/C RATIO | LOS |
|-------------|-----------|-----|
| 0.00 - 0.60 | A         |     |
| 0.61 - 0.70 | B         |     |
| 0.71 - 0.80 | C         |     |
| 0.81 - 0.90 | D         |     |
| 0.91 - 1.00 | E         |     |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

#### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$V/C = \frac{64 + 762 + 69 + 383}{*1500} = 0.782$

LOS = C

**Cumulative Base (2010)**





## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  AM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND   |                   |  | SOUTHBOUND        |   |            | WESTBOUND  |             |           | EASTBOUND  |             |            |
|--------------|--|-------------------|--|-------------------|---|------------|--|-------------|-----------|------------|-------------|------------|
|              | LT   | TH                | RT   | LT                | TH  | RT         | LT   | TH          | RT        | LT         | TH          | RT         |
| EXISTING     | 108  | 652               | 133  | 140               | 1028  | 127        | 113  | 2535        | 74        | 118        | 2260        | 392        |
| AMBIENT      |  |                   |  |                   |   |            |  |             |           |            |             |            |
| RELATED      |  |                   |  |                   |   |            |  |             |           |            |             |            |
| PROJECT      |  |                   |  |                   |   |            |  |             |           |            |             |            |
| <b>TOTAL</b> | <b>108</b>   | <b>652</b>        | <b>133</b>   | <b>140</b>        | <b>1028</b>   | <b>127</b> | <b>113</b>   | <b>2535</b> | <b>74</b> | <b>118</b> | <b>2260</b> | <b>392</b> |
| LANE         | <br>1 0 1 0 1 0 0  | <br>1 0 1 0 1 0 0 | <br>1 0 2 0 1 0 0  | <br>1 0 3 0 0 1 0 |   |            |  |             |           |            |             |            |
| SIGNAL       | Phasing <input type="text" value="Perm"/> RTOR <input type="text" value="Auto"/> |                   | Phasing <input type="text" value="Perm"/> RTOR <input type="text" value="Auto"/> |                   | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="OLA"/> |            | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |             |           |            |             |            |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 578 |
| B:         | 140 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 753 |
| B:        | 118 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 870 |
| B:        | 113 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 393 |
| B:         | 108 |

|  |                  |            |
|--|------------------|------------|
|  | <u>V/C RATIO</u> | <u>LOS</u> |
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{108 + 578 + 870 + 118}{*1425} = 1.105 - 0.03 = 1.075$$

LOS = F

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND |          |            | SOUTHBOUND |          |          | WESTBOUND  |             |          | EASTBOUND |             |          |  |  |
|--------------|------------|----------|------------|------------|----------|----------|------------|-------------|----------|-----------|-------------|----------|--|--|
|              | LT         | TH       | RT         | LT         | TH       | RT       | LT         | TH          | RT       | LT        | TH          | RT       |  |  |
| EXISTING     | 383        | 0        | 385        | 0          | 0        | 0        | 290        | 2247        | 0        | 0         | 3378        | 5        |  |  |
| AMBIENT      |            |          |            |            |          |          |            |             |          |           |             |          |  |  |
| RELATED      |            |          |            |            |          |          |            |             |          |           |             |          |  |  |
| PROJECT      |            |          |            |            |          |          |            |             |          |           |             |          |  |  |
| <b>TOTAL</b> | <b>383</b> | <b>0</b> | <b>385</b> | <b>0</b>   | <b>0</b> | <b>0</b> | <b>290</b> | <b>2247</b> | <b>0</b> | <b>0</b>  | <b>3378</b> | <b>5</b> |  |  |
| LANE         |            |          |            |            |          |          |            |             |          |           |             |          |  |  |
| SIGNAL       | Phasing    |          | RTOR       | Phasing    |          | RTOR     | Phasing    |             | RTOR     | Phasing   |             | RTOR     |  |  |
|              | Perm       |          | Auto       | Perm       |          | Auto     | Prot-Fix   |             | Auto     | Perm      |             | Auto     |  |  |

### Critical Movements Diagram

|   |   |  |                  |            |
|---|---|--|------------------|------------|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                     A: <input type="text" value="0"/><br/>                     B: <input type="text" value="0"/> </div>   |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                     A: <input type="text" value="749"/><br/>                     B: <input type="text" value="290"/> </div> | <b>V/C RATIO</b> | <b>LOS</b> |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                     A: <input type="text" value="1126"/><br/>                     B: <input type="text" value="0"/> </div> |   |  | 0.00 - 0.60      | A          |
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                     A: <input type="text" value="240"/><br/>                     B: <input type="text" value="383"/> </div> |  | 0.61 - 0.70      | B          |
|   |   |  | 0.71 - 0.80      | C          |
|   |   |  | 0.81 - 0.90      | D          |
|   |   |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{383 + 0 + 290 + 1126}{*1425} = 1.192 \text{ (ATCS } -0.03) \text{ LOS} = F$$
 $= 1.102$

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |    |      |           |     |      |  |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|----|------|-----------|-----|------|--|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |     |      |  |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH  | RT   |  |
| EXISTING                          | 0          | 678 | 65   | 25         | 270 | 0    | 32        | 0  | 89   | 0         | 133 | 104  |  |
| AMBIENT                           |            |     |      |            |     |      |           |    |      |           |     |      |  |
| RELATED                           |            |     |      |            |     |      |           |    |      |           |     |      |  |
| PROJECT                           |            |     |      |            |     |      |           |    |      |           |     |      |  |
| TOTAL                             | 0          | 678 | 65   | 25         | 270 | 0    | 32        | 0  | 89   | 0         | 133 | 104  |  |
| LANE                              |            |     |      |            |     |      |           |    |      |           |     |      |  |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |     | RTOR |  |
|                                   | Perm       |     | Auto | Perm       |     | Auto | Prot-Fix  |    | Auto | Perm      |     | Auto |  |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 270 |
| B:         | 25  |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 237 |
| B:        | 0   |

|           |    |
|-----------|----|
| WestBound |    |
| A:        | 89 |
| B:        | 32 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 372 |
| B:         | 0   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|             | <u>V/C RATIO</u> | <u>LOS</u> |
|-------------|------------------|------------|
| 0.00 - 0.60 | A                |            |
| 0.61 - 0.70 | B                |            |
| 0.71 - 0.80 | C                |            |
| 0.81 - 0.90 | D                |            |
| 0.91 - 1.00 | E                |            |

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**Results**

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{372 + 25 + 32 + 237}{*1425} = 0.397 - 0.03 \text{ LOS} = A$$

*ATCS*  
= 0.367

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND          |                   |                     | SOUTHBOUND        |                     |             | WESTBOUND           |             |                     | EASTBOUND    |             |          |
|--------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------|---------------------|-------------|---------------------|--------------|-------------|----------|
|              | LT                  | TH                | RT                  | LT                | TH                  | RT          | LT                  | TH          | RT                  | LT           | TH          | RT       |
| EXISTING     | 37                  | 686               | 242                 | 873               | 917                 | 194         | 122                 | 2204        | 249                 | 203          | 3582        | 0        |
| AMBIENT      |                     |                   |                     |                   |                     |             |                     |             |                     |              |             |          |
| RELATED      |                     |                   |                     |                   |                     |             |                     |             |                     |              |             |          |
| PROJECT      |                     |                   |                     |                   |                     |             |                     |             |                     |              |             |          |
| <b>TOTAL</b> | <b>37</b>           | <b>686</b>        | <b>242</b>          | <b>873</b>        | <b>917</b>          | <b>194</b>  | <b>122</b>          | <b>2204</b> | <b>249</b>          | <b>203</b>   | <b>3582</b> | <b>0</b> |
| LANE         | <br>2 0 2 0 0 1 0   | <br>2 0 2 0 0 1 0 | <br>2 0 3 0 0 2 0   | <br>2 0 3 0 1 0 0 |                     |             |                     |             |                     |              |             |          |
| SIGNAL       | Phasing<br>Prot-Fix | RTOR<br>OLA       | Phasing<br>Prot-Fix | RTOR<br>OLA       | Phasing<br>Prot-Fix | RTOR<br>OLA | Phasing<br>Prot-Fix | RTOR<br>OLA | Phasing<br>Prot-Fix | RTOR<br>Auto |             |          |

### Critical Movements Diagram

|  |   |  |  |
|--|---|--|--|
| SouthBound<br>A: <input type="text" value="459"/><br>B: <input type="text" value="480"/> | EastBound<br>A: <input type="text" value="896"/><br>B: <input type="text" value="112"/> | WestBound<br>A: <input type="text" value="735"/><br>B: <input type="text" value="67"/> |  |
|  |   |  |  |
| NorthBound<br>A: <input type="text" value="343"/><br>B: <input type="text" value="20"/>  |   |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  |                           |
|--|---------------------------|
| <b>Results</b>                                   |                           |
| North/South Critical Movements = A(N/B) + B(S/B) |                           |
| West/East Critical Movements = B(W/B) + A(E/B)   |                           |
| VIC = $\frac{343 + 480 + 67 + 896}{*1375}$       | = 1.229 - 0.08<br>= 1.199 |
|  | LOS = F                   |

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |         |    |           |    |         |           |      |     |   |
|-----------------------------------|------------|-----|------|------------|---------|----|-----------|----|---------|-----------|------|-----|---|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |         |    | WESTBOUND |    |         | EASTBOUND |      |     |   |
|                                   | LT         | TH  | RT   | LT         | TH      | RT | LT        | TH | RT      | LT        | TH   | RT  |   |
| EXISTING                          | 0          | 966 | 0    | 0          | 991     | 22 | 0         | 0  | 0       | 0         | 0    | 106 |   |
| AMBIENT                           |            |     |      |            |         |    |           |    |         |           |      |     |   |
| RELATED                           |            |     |      |            |         |    |           |    |         |           |      |     |   |
| PROJECT                           |            |     |      |            |         |    |           |    |         |           |      |     |   |
| TOTAL                             | 0          | 966 | 0    | 0          | 991     | 22 | 0         | 0  | 0       | 0         | 0    | 106 |   |
| LANE                              | 0          | 0   | 5    | 0          | 0       | 0  | 0         | 0  | 2       | 0         | 0    | 1   | 0 |
|                                   | ↶          | ↷   | ↑    | ↶          | ↷       | ↑  | ↶         | ↷  | ↑       | ↶         | ↷    | ↑   | ↶ |
| SIGNAL                            | Phasing    |     | RTOR |            | Phasing |    | RTOR      |    | Phasing |           | RTOR |     |   |
|                                   | Perm       |     | Auto |            | Perm    |    | Auto      |    | Perm    |           | Auto |     |   |

### Critical Movements Diagram

|                                     |                                     |                                   |
|-------------------------------------|-------------------------------------|-----------------------------------|
| EastBound                           | SouthBound                          | WestBound                         |
| A: <input type="text" value="106"/> | A: <input type="text" value="496"/> | A: <input type="text" value="0"/> |
| B: <input type="text" value="0"/>   | B: <input type="text" value="0"/>   | B: <input type="text" value="0"/> |

|                                     |
|-------------------------------------|
| NorthBound                          |
| A: <input type="text" value="193"/> |
| B: <input type="text" value="0"/>   |

|  |                  |            |
|--|------------------|------------|
|  | <u>V/C RATIO</u> | <u>LOS</u> |
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 496 + 0 + 106}{1500} = 0.401 \quad \text{LOS} = A$$

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|--|--|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |  |  |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |  |  |
| EXISTING                          | 74         | 0  | 201  | 0          | 0  | 0    | 377       | 2502 | 0    | 0         | 4332 | 408  |  |  |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| TOTAL                             | 74         | 0  | 201  | 0          | 0  | 0    | 377       | 2502 | 0    | 0         | 4332 | 408  |  |  |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |  |  |
|                                   | Perm       |    | OLA  | Perm       |    | Auto | Prot-Fix  |      | Auto | Perm      |      | OLA  |  |  |

### Critical Movements Diagram

SouthBound

A:

B:

WestBound

A:

B:

|  | VIC RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$VIC = \frac{74 + 0 + 207 + 1444}{*1425} = 1.141 \overset{ATCS}{-0.03} \text{ LOS} = F$$

*ATCS*  
= 1.111

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |    |      |           |    |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|----|------|-----------|----|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |    |      | EASTBOUND |    |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH | RT   | LT        | TH | RT   |
| EXISTING                          | 0          | 0  | 0    | 0          | 0  | 180  | 0         | 54 | 41   | 0         | 0  | 0    |
| AMBIENT                           |            |    |      |            |    |      |           |    |      |           |    |      |
| RELATED                           |            |    |      |            |    |      |           |    |      |           |    |      |
| PROJECT                           |            |    |      |            |    |      |           |    |      |           |    |      |
| TOTAL                             | 0          | 0  | 0    | 0          | 0  | 180  | 0         | 54 | 41   | 0         | 0  | 0    |
| LANE                              | ↔          | ↕  | ↕    | ↕          | ↕  | ↕    | ↕         | ↕  | ↕    | ↕         | ↕  | ↕    |
|                                   | 0          | 0  | 0    | 0          | 0  | 1    | 0         | 0  | 1    | 0         | 0  | 0    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |
|                                   | Perm       |    | Auto | Perm       |    | Auto | Perm      |    | Auto | Perm      |    | Auto |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 180 |
| B:         | 0   |

|           |   |
|-----------|---|
| EastBound |   |
| A:        | 0 |
| B:        | 0 |

|           |    |
|-----------|----|
| WestBound |    |
| A:        | 95 |
| B:        | 0  |

|            |   |
|------------|---|
| NorthBound |   |
| A:         | 0 |
| B:         | 0 |

|  | V/C RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

#### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$V/C = \frac{0 + 180 + 95 + 0}{1500} = 0.183$ 
LOS = A

# CalcaDB

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND  |                   |  | SOUTHBOUND        |  |    | WESTBOUND   |      |    | EASTBOUND |      |      |
|----------|---|-------------------|--|-------------------|--|----|---|------|----|-----------|------|------|
|          | LT  | TH                | RT   | LT                | TH   | RT | LT  | TH   | RT | LT        | TH   | RT   |
| EXISTING | 456   | 0                 | 303  | 0                 | 0  | 0  | 584   | 2563 | 0  | 0         | 3189 | 1668 |
| AMBIENT  |   |                   |  |                   |  |    |   |      |    |           |      |      |
| RELATED  |   |                   |  |                   |  |    |   |      |    |           |      |      |
| PROJECT  |   |                   |  |                   |  |    |   |      |    |           |      |      |
| TOTAL    | 456   | 0                 | 303  | 0                 | 0  | 0  | 584   | 2563 | 0  | 0         | 3189 | 1668 |
| LANE     | <br>3 0 0 0 0 2 0   | <br>0 0 0 0 0 0 0 | <br>2 0 3 0 0 0 0  | <br>1 0 4 0 0 1 0 |  |    |   |      |    |           |      |      |
| SIGNAL   | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="OLA"/> |                   | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |    | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="OLA"/> |      |    |           |      |      |

### Critical Movements Diagram

|   |  |  |                  |            |
|---|--|--|------------------|------------|
| <b>EastBound</b><br>A: <input type="text" value="1668"/><br>B: <input type="text" value="0"/> |  | <b>WestBound</b><br>A: <input type="text" value="854"/><br>B: <input type="text" value="321"/> | <b>V/C RATIO</b> | <b>LOS</b> |
|   |  |  | 0.00 - 0.60      | A          |
|   |  |  | 0.61 - 0.70      | B          |
|   |  |  | 0.71 - 0.80      | C          |
|   |  |  | 0.81 - 0.90      | D          |
|   |  |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{169 + 0 + 321 + 1668}{*1425} = 1.444$  LOS = F

ATSAC = 1425



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |    |      |           |    |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|----|------|-----------|----|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |    |      | EASTBOUND |    |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH | RT   | LT        | TH | RT   |
| EXISTING                          | 0          | 0  | 0    | 0          | 0  | 0    | 0         | 0  | 0    | 0         | 0  | 0    |
| AMBIENT                           |            |    |      |            |    |      |           |    |      |           |    |      |
| RELATED                           |            |    |      |            |    |      |           |    |      |           |    |      |
| PROJECT                           |            |    |      |            |    |      |           |    |      |           |    |      |
| TOTAL                             | 0          | 0  | 0    | 0          | 0  | 0    | 0         | 0  | 0    | 0         | 0  | 0    |
| LANE                              |            |    |      |            |    |      |           |    |      |           |    |      |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |
|                                   | Perm       |    | Auto | Prot-Fix   |    | Auto | Prot-Fix  |    | Auto | Perm      |    | Auto |

### Critical Movements Diagram

|  |   |  |  |
|--|---|--|--|
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div> |  |  |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div> |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div> |  |
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div> |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  | <u>V/C RATIO</u> | <u>LOS</u> |
|--|------------------|------------|
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

---

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$V/C = \frac{0 + 0 + 0 + 0}{*1375} = -0.070 \quad LOS = A$

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                                   | NORTHBOUND   |  |  | SOUTHBOUND   |  |  | WESTBOUND  |  |  | EASTBOUND  |  |  |  |
|                                   | LT   | TH   | RT   | LT   | TH   | RT   | LT   | TH   | RT   | LT   | TH   | RT   |  |
| EXISTING                          | 399  | 0  | 219  | 0  | 0  | 0  | 1338   | 3042   | 0  | 0  | 2506   | 875  |  |
| AMBIENT                           |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RELATED                           |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PROJECT                           |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TOTAL                             | 399  | 0  | 219  | 0  | 0  | 0  | 1338   | 3042   | 0  | 0  | 2506   | 875  |  |
| LANE                              | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↙ ↕ ↘</span> <span>↖ ↕ ↗</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↙ ↕ ↘</span> <span>↖ ↕ ↗</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↙ ↕ ↘</span> <span>↖ ↕ ↗</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↙ ↕ ↘</span> <span>↖ ↕ ↗</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↙ ↕ ↘</span> <span>↖ ↕ ↗</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↙ ↕ ↘</span> <span>↖ ↕ ↗</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↙ ↕ ↘</span> <span>↖ ↕ ↗</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↙ ↕ ↘</span> <span>↖ ↕ ↗</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↙ ↕ ↘</span> <span>↖ ↕ ↗</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↙ ↕ ↘</span> <span>↖ ↕ ↗</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↙ ↕ ↘</span> <span>↖ ↕ ↗</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↙ ↕ ↘</span> <span>↖ ↕ ↗</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↙ ↕ ↘</span> <span>↖ ↕ ↗</span> </div> |
| SIGNAL                            | Phasing  |  | RTOR   | Phasing  |  | RTOR   | Phasing  |  | RTOR   | Phasing  |  | RTOR   |  |
|                                   | Perm   |  | OLA  | Perm   |  | Auto   | Prot-Fix   |  | Auto   | Prot-Fix   |  | OLA  |  |

### Critical Movements Diagram

|                                     |                                   |   |                                     |                                     |
|-------------------------------------|-----------------------------------|---|-------------------------------------|-------------------------------------|
| EastBound                           |                                   | ↑ | WestBound                           |                                     |
| A: <input type="text" value="875"/> | B: <input type="text" value="0"/> |   | A: <input type="text" value="761"/> | B: <input type="text" value="736"/> |

|                  |            |
|------------------|------------|
| <u>V/C RATIO</u> | <u>LOS</u> |
| 0.00 - 0.60      | A          |
| 0.61 - 0.70      | B          |
| 0.71 - 0.80      | C          |
| 0.81 - 0.90      | D          |
| 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{219 + 0 + 736 + 875}{1425} = 1.214 - 0.03 \text{ (ATS)} = 1.184 \text{ LOS} = F$$

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |    |      |           |    |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|----|------|-----------|----|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |    |      | EASTBOUND |    |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH | RT   | LT        | TH | RT   |
| EXISTING                          | 0          | 0  | 0    | 0          | 0  | 0    | 0         | 0  | 0    | 0         | 0  | 0    |
| AMBIENT                           |            |    |      |            |    |      |           |    |      |           |    |      |
| RELATED                           |            |    |      |            |    |      |           |    |      |           |    |      |
| PROJECT                           |            |    |      |            |    |      |           |    |      |           |    |      |
| TOTAL                             | 0          | 0  | 0    | 0          | 0  | 0    | 0         | 0  | 0    | 0         | 0  | 0    |
| LANE                              | ↙          | ↕  | ↗    | ↙          | ↕  | ↗    | ↙         | ↕  | ↗    | ↙         | ↕  | ↗    |
|                                   | 1          | 0  | 2    | 1          | 0  | 1    | 1         | 0  | 1    | 1         | 0  | 2    |
|                                   | 0          | 0  | 0    | 0          | 0  | 0    | 0         | 0  | 0    | 0         | 0  | 0    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |
|                                   | Perm       |    | Auto | Perm       |    | Auto | Perm      |    | Auto | Prot-Fix  |    | Auto |

### Critical Movements Diagram

SouthBound

A:

B:

EastBound

A:

B:

↑

WestBound

A:

B:

NorthBound

A:

B:

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{0 + 0 + 0 + 0}{*1425} = -0.070$       LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |      |      |            |      |      |           |      |      |           |      |      |  |
|-----------------------------------|------------|------|------|------------|------|------|-----------|------|------|-----------|------|------|--|
|                                   | NORTHBOUND |      |      | SOUTHBOUND |      |      | WESTBOUND |      |      | EASTBOUND |      |      |  |
|                                   | LT         | TH   | RT   | LT         | TH   | RT   | LT        | TH   | RT   | LT        | TH   | RT   |  |
| EXISTING                          | 0          | 1089 | 208  | 0          | 2166 | 648  | 317       | 1737 | 11   | 747       | 1909 | 39   |  |
| AMBIENT                           |            |      |      |            |      |      |           |      |      |           |      |      |  |
| RELATED                           |            |      |      |            |      |      |           |      |      |           |      |      |  |
| PROJECT                           |            |      |      |            |      |      |           |      |      |           |      |      |  |
| TOTAL                             | 0          | 1089 | 208  | 0          | 2166 | 648  | 317       | 1737 | 11   | 747       | 1909 | 39   |  |
| LANE                              |            |      |      |            |      |      |           |      |      |           |      |      |  |
| SIGNAL                            | Phasing    |      | RTOR | Phasing    |      | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |  |
|                                   | Perm       |      | Auto | Perm       |      | Auto | Split     |      | Auto | Split     |      | Auto |  |

### Critical Movements Diagram

|  |   |  |   |                                     |
|--|---|--|---|-------------------------------------|
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="722"/><br/>                 B: <input type="text" value="0"/> </div> |  |   |                                     |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="955"/><br/>                 B: <input type="text" value="747"/> </div> |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="583"/><br/>                 B: <input type="text" value="317"/> </div> | <b>V/C RATIO</b><br>0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 | <b>LOS</b><br>A<br>B<br>C<br>D<br>E |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

**Results**

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + A(E/B)

V/C =  $\frac{0 + 722 + 583 + 955}{1425} = 1.586$       LOS = F

Cumbase AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #12 Santa Monica BL (N) & Wilshire Bl

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.358
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module:

Table with 12 columns representing different volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module:

Table with 12 columns representing saturation flow factors like Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 12 columns representing capacity analysis factors like Vol/Sat, Crit Moves.

\*\*\*\*\*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|                 | NORTHBOUND   |                   |  | SOUTHBOUND        |  |                   | WESTBOUND  |                   |  | EASTBOUND         |  |                   |                   |
|-----------------|--|-------------------|--|-------------------|--|-------------------|--|-------------------|--|-------------------|--|-------------------|-------------------|
|                 | LT   | TH                | RT   | LT                | TH   | RT                | LT   | TH                | RT   | LT                | TH   | RT                |                   |
| <b>EXISTING</b> | 98   | 723               | 273  | 54                | 1213   | 381               | 363  | 1596              | 51   | 241               | 1673   | 143               |                   |
| <b>AMBIENT</b>  |  |                   |  |                   |  |                   |  |                   |  |                   |  |                   |                   |
| <b>RELATED</b>  |  |                   |  |                   |  |                   |  |                   |  |                   |  |                   |                   |
| <b>PROJECT</b>  |  |                   |  |                   |  |                   |  |                   |  |                   |  |                   |                   |
| <b>TOTAL</b>    | 98   | 723               | 273  | 54                | 1213   | 381               | 363  | 1596              | 51   | 241               | 1673   | 143               |                   |
| <b>LANE</b>     | <br>1 0 2 0 0 1 0  | <br>1 0 1 0 1 0 0 | <br>1 0 2 0 1 0 0  | <br>1 0 1 0 1 0 0 | <br>1 0 2 0 1 0 0  | <br>1 0 1 0 1 0 0 | <br>1 0 1 0 1 0 0  | <br>1 0 1 0 1 0 0 | <br>1 0 1 0 1 0 0  | <br>1 0 1 0 1 0 0 | <br>1 0 1 0 1 0 0  | <br>1 0 1 0 1 0 0 | <br>1 0 1 0 1 0 0 |
| <b>SIGNAL</b>   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |                   |                   |

### Critical Movements Diagram

|  |       |  |
|--|-------|--|
| <b>EastBound</b><br>A: <input type="text" value="908"/><br>B: <input type="text" value="241"/> | ↑<br> | <b>WestBound</b><br>A: <input type="text" value="549"/><br>B: <input type="text" value="363"/> |
| <b>SouthBound</b><br>A: <input type="text" value="797"/><br>B: <input type="text" value="54"/> |       |  |
| <b>NorthBound</b><br>A: <input type="text" value="362"/><br>B: <input type="text" value="98"/> |       |  |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$V/C = \frac{98 + 797 + 363 + 908}{1375} = 1.575$ 
LOS = F

Cumbase AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #13 Santa Monica Bl (S) & Wilshire Bl
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.454
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green (0 0 0), and Lanes (1 0 2 0 1).

Volume Module: Table with 12 columns representing different volume metrics. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table with 12 columns representing saturation flow metrics. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns representing capacity analysis metrics. Rows include Vol/Sat and Crit Moves.

\*\*\*\*\*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |
|----------|------------|-----|------|------------|-----|------|-----------|----|------|-----------|----|------|
|          | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |
| EXISTING | 0          | 261 | 649  | 264        | 368 | 0    | 186       | 0  | 97   | 0         | 0  | 0    |
| AMBIENT  |            |     |      |            |     |      |           |    |      |           |    |      |
| RELATED  |            |     |      |            |     |      |           |    |      |           |    |      |
| PROJECT  |            |     |      |            |     |      |           |    |      |           |    |      |
| TOTAL    | 0          | 261 | 649  | 264        | 368 | 0    | 186       | 0  | 97   | 0         | 0  | 0    |
| LANE     |            |     |      |            |     |      |           |    |      |           |    |      |
| SIGNAL   | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |
|          | Perm       |     | OLA  | Prot-Fix   |     | Auto | Perm      |    | Auto | Perm      |    | Auto |

### Critical Movements Diagram

|   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
|---|-----------|--|-----------------------------------|-----------------------------------|--|------------|--|-------------------------------------|-------------------------------------|---|-----------|--|-----------------------------------|-------------------------------------|--|------------|--|-------------------------------------|-----------------------------------|--|---|-----------|--|-------------|-------------|-------------|-------------|-------------|---|-----|--|---|---|---|---|---|
| <table border="1" style="margin: auto;"> <tr><td colspan="2" style="text-align: center;">EastBound</td></tr> <tr><td>A: <input type="text" value="0"/></td></tr> <tr><td>B: <input type="text" value="0"/></td></tr> </table> | EastBound |  | A: <input type="text" value="0"/> | B: <input type="text" value="0"/> | <table border="1" style="margin: auto;"> <tr><td colspan="2" style="text-align: center;">SouthBound</td></tr> <tr><td>A: <input type="text" value="123"/></td></tr> <tr><td>B: <input type="text" value="264"/></td></tr> </table> | SouthBound |  | A: <input type="text" value="123"/> | B: <input type="text" value="264"/> | <table border="1" style="margin: auto;"> <tr><td colspan="2" style="text-align: center;">WestBound</td></tr> <tr><td>A: <input type="text" value="0"/></td></tr> <tr><td>B: <input type="text" value="102"/></td></tr> </table> | WestBound |  | A: <input type="text" value="0"/> | B: <input type="text" value="102"/> | <table border="1" style="margin: auto;"> <tr><td colspan="2" style="text-align: center;">NorthBound</td></tr> <tr><td>A: <input type="text" value="649"/></td></tr> <tr><td>B: <input type="text" value="0"/></td></tr> </table> | NorthBound |  | A: <input type="text" value="649"/> | B: <input type="text" value="0"/> |  | <table border="1" style="margin: auto;"> <tr><td colspan="2" style="text-align: center;">V/C RATIO</td></tr> <tr><td>0.00 - 0.60</td></tr> <tr><td>0.61 - 0.70</td></tr> <tr><td>0.71 - 0.80</td></tr> <tr><td>0.81 - 0.90</td></tr> <tr><td>0.91 - 1.00</td></tr> </table> | V/C RATIO |  | 0.00 - 0.60 | 0.61 - 0.70 | 0.71 - 0.80 | 0.81 - 0.90 | 0.91 - 1.00 | <table border="1" style="margin: auto;"> <tr><td colspan="2" style="text-align: center;">LOS</td></tr> <tr><td>A</td></tr> <tr><td>B</td></tr> <tr><td>C</td></tr> <tr><td>D</td></tr> <tr><td>E</td></tr> </table> | LOS |  | A | B | C | D | E |
| EastBound   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| A: <input type="text" value="0"/>   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| B: <input type="text" value="0"/>   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| SouthBound  |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| A: <input type="text" value="123"/>   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| B: <input type="text" value="264"/>   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| WestBound   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| A: <input type="text" value="0"/>   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| B: <input type="text" value="102"/>   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| NorthBound  |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| A: <input type="text" value="649"/>   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| B: <input type="text" value="0"/>   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| V/C RATIO   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| 0.00 - 0.60   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| 0.61 - 0.70   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| 0.71 - 0.80   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| 0.81 - 0.90   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| 0.91 - 1.00   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| LOS   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| A   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| B   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| C   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| D   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |
| E   |           |  |                                   |                                   |  |            |  |                                     |                                     |   |           |  |                                   |                                     |  |            |  |                                     |                                   |  |   |           |  |             |             |             |             |             |   |     |  |   |   |   |   |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{649 + 264 + 102 + 0}{*1425} = 0.642 - 0.03$  LOS = B

*ATCS = 0.612*



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  AM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND   |             |  | SOUTHBOUND |  |            | WESTBOUND  |           |  | EASTBOUND  |  |           |
|--------------|--|-------------|--|------------|--|------------|--|-----------|--|------------|--|-----------|
|              | LT   | TH          | RT   | LT         | TH   | RT         | LT   | TH        | RT   | LT         | TH   | RT        |
| EXISTING     | 388  | 1119        | 863  | 637        | 722  | 323        | 83   | 99        | 146  | 105        | 543  | 70        |
| AMBIENT      |  |             |  |            |  |            |  |           |  |            |  |           |
| RELATED      |  |             |  |            |  |            |  |           |  |            |  |           |
| PROJECT      |  |             |  |            |  |            |  |           |  |            |  |           |
| <b>TOTAL</b> | <b>388</b>   | <b>1119</b> | <b>863</b>   | <b>637</b> | <b>722</b>   | <b>323</b> | <b>83</b>  | <b>99</b> | <b>146</b>   | <b>105</b> | <b>543</b>   | <b>70</b> |
| LANE         | ↙ ↕ ↘  | ↙ ↕ ↘       | ↙ ↕ ↘  | ↙ ↕ ↘      | ↙ ↕ ↘  | ↙ ↕ ↘      | ↙ ↕ ↘  | ↙ ↕ ↘     | ↙ ↕ ↘  | ↙ ↕ ↘      | ↙ ↕ ↘  | ↙ ↕ ↘     |
|              | 2 0 2  | 0 1 1       | 0  | 2 0 2      | 0 1 0  | 0          | 1 0 2  | 0 0 1     | 0  | 1 0 2      | 0 0 1  | 0         |
| SIGNAL       | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |             | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |            | Phasing <input type="text" value="Prot-Var"/> RTOR <input type="text" value="Auto"/> |            | Phasing <input type="text" value="Prot-Var"/> RTOR <input type="text" value="Auto"/> |           | Phasing <input type="text" value="Prot-Var"/> RTOR <input type="text" value="Auto"/> |            | Phasing <input type="text" value="Prot-Var"/> RTOR <input type="text" value="Auto"/> |           |

### Critical Movements Diagram

|  | <b>SouthBound</b><br>A: <input type="text" value="348"/><br>B: <input type="text" value="350"/> |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
|--|---|--|---|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| <b>EastBound</b><br>A: <input type="text" value="272"/><br>B: <input type="text" value="105"/> | ↑<br>(North arrow)  | <b>WestBound</b><br>A: <input type="text" value="50"/><br>B: <input type="text" value="83"/> | <b>NorthBound</b><br>A: <input type="text" value="496"/><br>B: <input type="text" value="213"/> | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>V/C RATIO</th> <th>LOS</th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| V/C RATIO  | LOS   |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60  | A   |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70  | B   |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80  | C   |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90  | D   |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00  | E   |  |   |  |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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**Results**

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{496 + 350 + 83 + 272}{*1375} = 0.803$  LOS =  $\phi$

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND   |  |  | SOUTHBOUND   |            |            | WESTBOUND |           |           | EASTBOUND  |          |            |
|--------------|--|--|--|--|------------|------------|-----------|-----------|-----------|------------|----------|------------|
|              | LT   | TH   | RT   | LT   | TH         | RT         | LT        | TH        | RT        | LT         | TH       | RT         |
| EXISTING     | 368  | 1226   | 0  | 11   | 741        | 440        | 11        | 20        | 30        | 224        | 0        | 152        |
| AMBIENT      |  |  |  |  |            |            |           |           |           |            |          |            |
| RELATED      |  |  |  |  |            |            |           |           |           |            |          |            |
| PROJECT      |  |  |  |  |            |            |           |           |           |            |          |            |
| <b>TOTAL</b> | <b>368</b>   | <b>1226</b>  | <b>0</b>   | <b>11</b>  | <b>741</b> | <b>440</b> | <b>11</b> | <b>20</b> | <b>30</b> | <b>224</b> | <b>0</b> | <b>152</b> |
| LANE         |  |  |  |  |            |            |           |           |           |            |          |            |
| SIGNAL       | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |            |            |           |           |           |            |          |            |

### Critical Movements Diagram

|   |  |   |  |  |   |                                     |
|---|--|---|--|--|---|-------------------------------------|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="440"/><br/>                 B: <input type="text" value="11"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="84"/><br/>                 B: <input type="text" value="123"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input type="text" value="41"/><br/>                 B: <input type="text" value="11"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 NorthBound<br/>                 A: <input type="text" value="409"/><br/>                 B: <input type="text" value="368"/> </div> | <b>V/C RATIO</b><br>0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 | <b>LOS</b><br>A<br>B<br>C<br>D<br>E |
|---|--|---|--|--|---|-------------------------------------|

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{368 + 440 + 41 + 123}{*1500} = 0.578 - 0.03 = 0.548$  LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **AM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |               |               |               |               |               |               |               |               |               |               |               |               |   |   |   |   |   |   |   |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---|---|---|---|---|---|---|
|                                   | NORTHBOUND    |               |               | SOUTHBOUND    |               |               | WESTBOUND     |               |               | EASTBOUND     |               |               |   |   |   |   |   |   |   |
|                                   | LT            | TH            | RT            | LT            | TH            | RT            | LT            | TH            | RT            | LT            | TH            | RT            |   |   |   |   |   |   |   |
| EXISTING                          | 113           | 522           | 490           | 111           | 507           | 45            | 286           | 2771          | 58            | 24            | 3117          | 48            |   |   |   |   |   |   |   |
| AMBIENT                           |               |               |               |               |               |               |               |               |               |               |               |               |   |   |   |   |   |   |   |
| RELATED                           |               |               |               |               |               |               |               |               |               |               |               |               |   |   |   |   |   |   |   |
| PROJECT                           |               |               |               |               |               |               |               |               |               |               |               |               |   |   |   |   |   |   |   |
| TOTAL                             | 113           | 522           | 490           | 111           | 507           | 45            | 286           | 2771          | 58            | 24            | 3117          | 48            |   |   |   |   |   |   |   |
| LANE                              | ↔ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↕ ↕ ↕ ↕ ↕ | ↔ ↕ ↕ ↕ ↕ ↕ ↕ |   |   |   |   |   |   |   |
|                                   | 1             | 0             | 0             | 0             | 1             | 0             | 0             | 1             | 0             | 3             | 0             | 0             | 1 | 0 | 2 | 0 | 1 | 0 | 0 |
| SIGNAL                            | Phasing       |               | RTOR          | Phasing       |               | RTOR          | Phasing       |               | RTOR          | Phasing       |               | RTOR          |   |   |   |   |   |   |   |
|                                   | Perm          |               | Auto          | Perm          |               | Auto          | Prot-Fix      |               | Auto          | Prot-Fix      |               | Auto          |   |   |   |   |   |   |   |

### Critical Movements Diagram

|  |   |  |  |  |
|--|---|--|--|--|
|  |   | SouthBound<br>A: <input type="text" value="552"/><br>B: <input style="background-color: #cccccc;" type="text" value="111"/>  |  |  |
| EastBound<br>A: <input style="background-color: #cccccc;" type="text" value="1055"/><br>B: <input type="text" value="24"/> | ↑ | WestBound<br>A: <input type="text" value="924"/><br>B: <input style="background-color: #cccccc;" type="text" value="286"/>   |  |  |
|  |   | NorthBound<br>A: <input style="background-color: #cccccc;" type="text" value="1012"/><br>B: <input type="text" value="113"/> |  |  |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{1012 + 111 + 286 + 1055}{*1425} = 1.659$  LOS = F

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |               |               |               |               |               |               |               |               |               |               |               |               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND    |               |               | SOUTHBOUND    |               |               | WESTBOUND     |               |               | EASTBOUND     |               |               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | LT            | TH            | RT            | LT            | TH            | RT            | LT            | TH            | RT            | LT            | TH            | RT            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING                          | 101           | 512           | 265           | 185           | 544           | 245           | 48            | 2561          | 91            | 199           | 3345          | 81            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT                           |               |               |               |               |               |               |               |               |               |               |               |               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |               |               |               |               |               |               |               |               |               |               |               |               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |               |               |               |               |               |               |               |               |               |               |               |               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 101           | 512           | 265           | 185           | 544           | 245           | 48            | 2561          | 91            | 199           | 3345          | 81            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE                              | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | 1             | 0             | 2             | 0             | 0             | 1             | 0             | 1             | 0             | 2             | 0             | 0             | 1 | 0 | 1 | 0 | 3 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 0 | 1 | 0 |
| SIGNAL                            | Phasing       |               | RTOR          | Phasing       |               | RTOR          | Phasing       |               | RTOR          | Phasing       |               | RTOR          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | Prot-Var      |               | Auto          | Prot-Var      |               | Auto          | Prot-Var      |               | Auto          | Prot-Var      |               | Auto          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

|                  | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <input type="text" value="272"/><br/>                 B: <input type="text" value="185"/> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <b>EastBound</b><br/>                     A: <input type="text" value="1115"/><br/>                     B: <input type="text" value="199"/> </div> <div style="width: 10%; text-align: center;">↑</div> <div style="width: 45%;"> <b>WestBound</b><br/>                     A: <input type="text" value="854"/><br/>                     B: <input type="text" value="48"/> </div> </div> </div> <div style="border: 1px solid black; padding: 5px;"> <b>NorthBound</b><br/>                 A: <input type="text" value="256"/><br/>                 B: <input type="text" value="101"/> </div> |  |                  |            |             |   |             |   |             |   |             |   |             |   |
|------------------|--|--|------------------|------------|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
|                  |  | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>V/C RATIO</u></th> <th style="text-align: left;"><u>LOS</u></th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | <u>V/C RATIO</u> | <u>LOS</u> | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| <u>V/C RATIO</u> | <u>LOS</u>   |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60      | A  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70      | B  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80      | C  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90      | D  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00      | E  |  |                  |            |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

$V/C = \frac{256 + 185 + 48 + 1115}{*1375} = 1.097 - 0.03 \text{ ATSC} = 1.067$  LOS = F

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |          |          |            |          |            |           |             |            |             |             |          |
|-----------------------------------|------------|----------|----------|------------|----------|------------|-----------|-------------|------------|-------------|-------------|----------|
|                                   | NORTHBOUND |          |          | SOUTHBOUND |          |            | WESTBOUND |             |            | EASTBOUND   |             |          |
|                                   | LT         | TH       | RT       | LT         | TH       | RT         | LT        | TH          | RT         | LT          | TH          | RT       |
| EXISTING                          | 0          | 0        | 0        | 54         | 0        | 247        | 0         | 2507        | 238        | 1173        | 3224        | 0        |
| AMBIENT                           |            |          |          |            |          |            |           |             |            |             |             |          |
| RELATED                           |            |          |          |            |          |            |           |             |            |             |             |          |
| PROJECT                           |            |          |          |            |          |            |           |             |            |             |             |          |
| <b>TOTAL</b>                      | <b>0</b>   | <b>0</b> | <b>0</b> | <b>54</b>  | <b>0</b> | <b>247</b> | <b>0</b>  | <b>2507</b> | <b>238</b> | <b>1173</b> | <b>3224</b> | <b>0</b> |
| LANE                              |            |          |          |            |          |            |           |             |            |             |             |          |
|                                   | 0          | 0        | 0        | 2          | 0        | 0          | 0         | 0           | 3          | 0           | 0           | 1        |
| SIGNAL                            | Phasing    |          | RTOR     | Phasing    |          | RTOR       | Phasing   |             | RTOR       | Phasing     |             | RTOR     |
|                                   | Perm       |          | Auto     | Perm       |          | OLA        | Perm      |             | Auto       | Prot-Fix    |             | Auto     |

### Critical Movements Diagram

|            |                                 |
|------------|---------------------------------|
| SouthBound |                                 |
| A:         | <input type="text" value="0"/>  |
| B:         | <input type="text" value="30"/> |

|           |                                   |
|-----------|-----------------------------------|
| EastBound |                                   |
| A:        | <input type="text" value="1075"/> |
| B:        | <input type="text" value="645"/>  |

|           |                                  |
|-----------|----------------------------------|
| WestBound |                                  |
| A:        | <input type="text" value="836"/> |
| B:        | <input type="text" value="0"/>   |

|            |                                |
|------------|--------------------------------|
| NorthBound |                                |
| A:         | <input type="text" value="0"/> |
| B:         | <input type="text" value="0"/> |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  | <u>V/C RATIO</u> | <u>LOS</u> |
|--|------------------|------------|
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

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**Results**

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 30 + 836 + 645}{*1425} = 0.990$  <sup>ATSAC</sup> ~~0.990~~ <sub>= 0.900</sub> LOS = E

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |             |           |            |            |           |            |           |            |           |           |           |  |  |
|-----------------------------------|------------|-------------|-----------|------------|------------|-----------|------------|-----------|------------|-----------|-----------|-----------|--|--|
|                                   | NORTHBOUND |             |           | SOUTHBOUND |            |           | WESTBOUND  |           |            | EASTBOUND |           |           |  |  |
|                                   | LT         | TH          | RT        | LT         | TH         | RT        | LT         | TH        | RT         | LT        | TH        | RT        |  |  |
| EXISTING                          | 11         | 2003        | 50        | 24         | 836        | 43        | 262        | 11        | 321        | 17        | 11        | 11        |  |  |
| AMBIENT                           |            |             |           |            |            |           |            |           |            |           |           |           |  |  |
| RELATED                           |            |             |           |            |            |           |            |           |            |           |           |           |  |  |
| PROJECT                           |            |             |           |            |            |           |            |           |            |           |           |           |  |  |
| <b>TOTAL</b>                      | <b>11</b>  | <b>2003</b> | <b>50</b> | <b>24</b>  | <b>836</b> | <b>43</b> | <b>262</b> | <b>11</b> | <b>321</b> | <b>17</b> | <b>11</b> | <b>11</b> |  |  |
| LANE                              |            |             |           |            |            |           |            |           |            |           |           |           |  |  |
| SIGNAL                            | Phasing    |             | RTOR      |            | Phasing    |           | RTOR       |           | Phasing    |           | RTOR      |           |  |  |
|                                   | Perm       |             | Auto      |            | Perm       |           | Auto       |           | Perm       |           | Auto      |           |  |  |

### Critical Movements Diagram

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="293"/><br/>                 B: <input type="text" value="24"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="321"/><br/>                 B: <input type="text" value="262"/> </div> |  |  |  |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="28"/><br/>                 B: <input type="text" value="17"/> </div>   |  |  |  |  |  |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="684"/><br/>                 B: <input type="text" value="11"/> </div> |  |  |  |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAAC Benefit

|             | <u>V/C RATIO</u> | <u>LOS</u> |
|-------------|------------------|------------|
| 0.00 - 0.60 | A                |            |
| 0.61 - 0.70 | B                |            |
| 0.71 - 0.80 | C                |            |
| 0.81 - 0.90 | D                |            |
| 0.91 - 1.00 | E                |            |

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{684 + 24 + 321 + 17}{*1500} = 0.627$  LOS = **B**

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |      |      |            |     |      |           |    |      |           |    |      |  |  |
|-----------------------------------|------------|------|------|------------|-----|------|-----------|----|------|-----------|----|------|--|--|
|                                   | NORTHBOUND |      |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |  |  |
|                                   | LT         | TH   | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |  |  |
| EXISTING                          | 57         | 1700 | 30   | 47         | 875 | 163  | 134       | 30 | 365  | 11        | 11 | 11   |  |  |
| AMBIENT                           |            |      |      |            |     |      |           |    |      |           |    |      |  |  |
| RELATED                           |            |      |      |            |     |      |           |    |      |           |    |      |  |  |
| PROJECT                           |            |      |      |            |     |      |           |    |      |           |    |      |  |  |
| TOTAL                             | 57         | 1700 | 30   | 47         | 875 | 163  | 134       | 30 | 365  | 11        | 11 | 11   |  |  |
| LANE                              |            |      |      |            |     |      |           |    |      |           |    |      |  |  |
| SIGNAL                            | Phasing    |      | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |  |  |
|                                   | Perm       |      | Auto | Prot-Fix   |     | Auto | Perm      |    | Auto | Perm      |    | Auto |  |  |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 346 |
| B:         | 26  |

|           |    |
|-----------|----|
| EastBound |    |
| A:        | 22 |
| B:        | 11 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 265 |
| B:        | 134 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 577 |
| B:         | 57  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  | VIC RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

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**Results**

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

VIC =  $\frac{577 + 26 + 265 + 11}{*1425} = 0.547 \sim 0.05$  LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |             |            |            |            |           |           |             |            |           |             |           |  |  |
|-----------------------------------|------------|-------------|------------|------------|------------|-----------|-----------|-------------|------------|-----------|-------------|-----------|--|--|
|                                   | NORTHBOUND |             |            | SOUTHBOUND |            |           | WESTBOUND |             |            | EASTBOUND |             |           |  |  |
|                                   | LT         | TH          | RT         | LT         | TH         | RT        | LT        | TH          | RT         | LT        | TH          | RT        |  |  |
| EXISTING                          | 516        | 1077        | 128        | 190        | 212        | 88        | 0         | 3209        | 654        | 0         | 2268        | 65        |  |  |
| AMBIENT                           |            |             |            |            |            |           |           |             |            |           |             |           |  |  |
| RELATED                           |            |             |            |            |            |           |           |             |            |           |             |           |  |  |
| PROJECT                           |            |             |            |            |            |           |           |             |            |           |             |           |  |  |
| <b>TOTAL</b>                      | <b>516</b> | <b>1077</b> | <b>128</b> | <b>190</b> | <b>212</b> | <b>88</b> | <b>0</b>  | <b>3209</b> | <b>654</b> | <b>0</b>  | <b>2268</b> | <b>65</b> |  |  |
| LANE                              |            |             |            |            |            |           |           |             |            |           |             |           |  |  |
| SIGNAL                            | Phasing    |             | RTOR       | Phasing    |            | RTOR      | Phasing   |             | RTOR       | Phasing   |             | RTOR      |  |  |
|                                   | Prot-Fix   |             | Auto       | Prot-Fix   |            | Auto      | Perm      |             | Auto       | Perm      |             | Auto      |  |  |

### Critical Movements Diagram

| EastBound |                                  |
|-----------|----------------------------------|
| A:        | <input type="text" value="778"/> |
| B:        | <input type="text" value="0"/>   |

| SouthBound |                                  |
|------------|----------------------------------|
| A:         | <input type="text" value="106"/> |
| B:         | <input type="text" value="105"/> |

| WestBound |                                  |
|-----------|----------------------------------|
| A:        | <input type="text" value="966"/> |
| B:        | <input type="text" value="0"/>   |

| NorthBound |                                  |
|------------|----------------------------------|
| A:         | <input type="text" value="402"/> |
| B:         | <input type="text" value="284"/> |

|  |  |  |                  |            |
|--|--|--|------------------|------------|
|  |  |  | <b>V/C RATIO</b> | <b>LOS</b> |
|  |  |  | 0.00 - 0.60      | A          |
|  |  |  | 0.61 - 0.70      | B          |
|  |  |  | 0.71 - 0.80      | C          |
|  |  |  | 0.81 - 0.90      | D          |
|  |  |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

$V/C = \frac{402 + 105 + 966 + 0}{*1425} = 0.964 - 0.03$

LOS = E



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |  |  |  |  |    |     |           |      |     |           |      |    |
|-----------------------------------|--|--|--|--|----|-----|-----------|------|-----|-----------|------|----|
|                                   | NORTHBOUND   |  |  | SOUTHBOUND   |    |     | WESTBOUND |      |     | EASTBOUND |      |    |
|                                   | LT   | TH   | RT   | LT   | TH | RT  | LT        | TH   | RT  | LT        | TH   | RT |
| EXISTING                          | 121  | 57   | 22   | 177  | 40 | 387 | 11        | 3396 | 141 | 271       | 2010 | 20 |
| AMBIENT                           |  |  |  |  |    |     |           |      |     |           |      |    |
| RELATED                           |  |  |  |  |    |     |           |      |     |           |      |    |
| PROJECT                           |  |  |  |  |    |     |           |      |     |           |      |    |
| TOTAL                             | 121  | 57   | 22   | 177  | 40 | 387 | 11        | 3396 | 141 | 271       | 2010 | 20 |
| LANE                              | <br>0 0 0 1 0 0 0  | <br>0 1 0 0 0 1 0  | <br>1 0 2 0 1 0 0  | <br>1 0 2 0 1 0 0  |    |     |           |      |     |           |      |    |
| SIGNAL                            | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |    |     |           |      |     |           |      |    |

### Critical Movements Diagram

|            |                                  |
|------------|----------------------------------|
| SouthBound |                                  |
| A:         | <input type="text" value="251"/> |
| B:         | <input type="text" value="177"/> |

|           |                                  |
|-----------|----------------------------------|
| EastBound |                                  |
| A:        | <input type="text" value="677"/> |
| B:        | <input type="text" value="271"/> |

|           |                                   |
|-----------|-----------------------------------|
| WestBound |                                   |
| A:        | <input type="text" value="1179"/> |
| B:        | <input type="text" value="11"/>   |

|            |                                  |
|------------|----------------------------------|
| NorthBound |                                  |
| A:         | <input type="text" value="200"/> |
| B:         | <input type="text" value="121"/> |

|  |                  |            |
|--|------------------|------------|
|  | <u>V/C RATIO</u> | <u>LOS</u> |
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{200 + 177 + 1179 + 271}{*1425} = 1.212 \quad LOS = F$$

Cumbase AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #23 Spalding Drive & Olympic Boulevard

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.324
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: Spalding Drive Olympic Boulevard
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 Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 0 0 1 0 0 1 0 0

Volume Module:

Base Vol: 121 57 22 177 40 387 271 2010 20 11 3396 141
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: 121 57 22 177 40 387 271 2010 20 11 3396 141
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: 121 57 22 177 40 387 271 2010 20 11 3396 141
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 121 57 22 177 40 387 271 2010 20 11 3396 141
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
Final Vol.: 121 57 22 177 40 387 271 2010 20 11 3396 141

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600
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: 0.60 0.29 0.11 0.82 0.18 1.00 1.00 2.97 0.03 1.00 2.88 0.12
Final Sat.: 968 456 176 1305 295 1600 1600 4753 47 1600 4609 191

Capacity Analysis Module:

Vol/Sat: 0.08 0.13 0.13 0.11 0.14 0.24 0.17 0.42 0.42 0.01 0.74 0.74
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*

\*\*\*\*\*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |      |      |            |     |      |           |    |      |           |    |      |
|-----------------------------------|------------|------|------|------------|-----|------|-----------|----|------|-----------|----|------|
|                                   | NORTHBOUND |      |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |
|                                   | LT         | TH   | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |
| EXISTING                          | 446        | 1718 | 29   | 52         | 624 | 410  | 25        | 0  | 78   | 34        | 0  | 26   |
| AMBIENT                           |            |      |      |            |     |      |           |    |      |           |    |      |
| RELATED                           |            |      |      |            |     |      |           |    |      |           |    |      |
| PROJECT                           |            |      |      |            |     |      |           |    |      |           |    |      |
| TOTAL                             | 446        | 1718 | 29   | 52         | 624 | 410  | 25        | 0  | 78   | 34        | 0  | 26   |
| LANE                              | ↔          | ↕    | ↕    | ↕          | ↕   | ↕    | ↕         | ↕  | ↕    | ↕         | ↕  | ↕    |
|                                   | 2          | 0    | 2    | 1          | 0   | 2    | 1         | 0  | 0    | 2         | 0  | 0    |
| SIGNAL                            | Phasing    |      | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |
|                                   | Prot-Fix   |      | Auto | Perm       |     | Auto | Split     |    | Auto | Split     |    | Auto |

### Critical Movements Diagram

|  |   |                  |            |
|--|---|------------------|------------|
|  | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <input type="text" value="410"/><br/>                 B: <input type="text" value="52"/> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>EastBound</b><br/>                     A: <input type="text" value="0"/><br/>                     B: <input type="text" value="19"/> </div> <div style="text-align: center;"> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>WestBound</b><br/>                     A: <input type="text" value="78"/><br/>                     B: <input type="text" value="25"/> </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <b>NorthBound</b><br/>                 A: <input type="text" value="582"/><br/>                 B: <input type="text" value="245"/> </div> |                  |            |
|  |   | <u>V/C RATIO</u> | <u>LOS</u> |
|  |   | 0.00 - 0.60      | A          |
|  |   | 0.61 - 0.70      | B          |
|  |   | 0.71 - 0.80      | C          |
|  |   | 0.81 - 0.90      | D          |
|  |   | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{245 + 410 + 78 + 19}{*1375} = 0.477 - 0.03 \text{ (ATCC)} = 0.447 \text{ (handwritten)}$$

LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |      |      |            |     |      |           |    |      |           |    |      |
|-----------------------------------|------------|------|------|------------|-----|------|-----------|----|------|-----------|----|------|
|                                   | NORTHBOUND |      |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |
|                                   | LT         | TH   | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |
| EXISTING                          | 27         | 2125 | 11   | 21         | 606 | 31   | 17        | 0  | 67   | 0         | 0  | 0    |
| AMBIENT                           |            |      |      |            |     |      |           |    |      |           |    |      |
| RELATED                           |            |      |      |            |     |      |           |    |      |           |    |      |
| PROJECT                           |            |      |      |            |     |      |           |    |      |           |    |      |
| TOTAL                             | 27         | 2125 | 11   | 21         | 606 | 31   | 17        | 0  | 67   | 0         | 0  | 0    |
| LANE                              |            |      |      |            |     |      |           |    |      |           |    |      |
| SIGNAL                            | Phasing    |      | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |
|                                   | Perm       |      | Auto | Perm       |     | Auto | Perm      |    | Auto | Perm      |    | Auto |

### Critical Movements Diagram

|  |  |  |                  |            |
|--|--|--|------------------|------------|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="212"/><br/>                 B: <input type="text" value="21"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="84"/><br/>                 B: <input type="text" value="17"/> </div> | <b>V/C RATIO</b> | <b>LOS</b> |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div>     |  |  | 0.00 - 0.60      | A          |
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="712"/><br/>                 B: <input type="text" value="27"/> </div> |  | 0.61 - 0.70      | B          |
|  |  |  | 0.71 - 0.80      | C          |
|  |  |  | 0.81 - 0.90      | D          |
|  |  |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSSAC Benefit

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**Results**

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{712 + 21 + 84 + 0}{1500} = 0.545$       LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |  |       |       |  |       |       |  |       |       |   |       |       |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|--|-------|-------|--|-------|-------|--|-------|-------|---|-------|-------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND                                       |       |       | SOUTHBOUND                               |       |       | WESTBOUND                                    |       |       | EASTBOUND                                 |       |       |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | LT   | TH    | RT    | LT                                       | TH    | RT    | LT   | TH    | RT    | LT  | TH    | RT    |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING                          | 258  | 1208  | 1008  | 34                                       | 766   | 19    | 601  | 1294  | 59    | 88  | 1612  | 156   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT                           |  |       |       |  |       |       |  |       |       |   |       |       |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |  |       |       |  |       |       |  |       |       |   |       |       |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |  |       |       |  |       |       |  |       |       |   |       |       |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 258  | 1208  | 1008  | 34                                       | 766   | 19    | 601  | 1294  | 59    | 88  | 1612  | 156   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE                              | ↙ ↕ ↗  | ↕ ↕ ↕ | ↕ ↕ ↕ | ↙ ↕ ↗                                    | ↕ ↕ ↕ | ↕ ↕ ↕ | ↙ ↕ ↗  | ↕ ↕ ↕ | ↕ ↕ ↕ | ↙ ↕ ↗                                     | ↕ ↕ ↕ | ↕ ↕ ↕ |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | 2  | 0     | 1     | 0  | 0     | 2     | 0  | 1     | 0     | 1   | 0     | 1     | 0  | 0 | 2 | 0   | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 |
| SIGNAL                            | Phasing<br><input type="text" value="Prot-Fix"/> |       |       | RTOR<br><input type="text" value="OLA"/> |       |       | Phasing<br><input type="text" value="Perm"/> |       |       | RTOR<br><input type="text" value="Auto"/> |       |       | Phasing<br><input type="text" value="Prot-Fix"/> |   |   | RTOR<br><input type="text" value="Auto"/> |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

|   |  |  |  |
|---|--|--|--|
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="393"/><br/>                 B: <input type="text" value="34"/> </div>   |  |  |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="589"/><br/>                 B: <input type="text" value="88"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 ↑<br/>                 ↑             </div>   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="647"/><br/>                 B: <input type="text" value="331"/> </div> |  |
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="1208"/><br/>                 B: <input type="text" value="142"/> </div> |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{1208 + 34 + 331 + 589}{*1375} = 1.502 - 0.03 = 1.472$  LOS = F

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |       |       |            |       |       |           |       |       |           |       |       |
|-----------------------------------|------------|-------|-------|------------|-------|-------|-----------|-------|-------|-----------|-------|-------|
|                                   | NORTHBOUND |       |       | SOUTHBOUND |       |       | WESTBOUND |       |       | EASTBOUND |       |       |
|                                   | LT         | TH    | RT    | LT         | TH    | RT    | LT        | TH    | RT    | LT        | TH    | RT    |
| EXISTING                          | 31         | 120   | 219   | 11         | 71    | 39    | 88        | 1674  | 52    | 48        | 2113  | 77    |
| AMBIENT                           |            |       |       |            |       |       |           |       |       |           |       |       |
| RELATED                           |            |       |       |            |       |       |           |       |       |           |       |       |
| PROJECT                           |            |       |       |            |       |       |           |       |       |           |       |       |
| TOTAL                             | 31         | 120   | 219   | 11         | 71    | 39    | 88        | 1674  | 52    | 48        | 2113  | 77    |
| LANE                              | ↵ ↶ ↷      | ↶ ↷ ↵ | ↶ ↷ ↵ | ↶ ↷ ↵      | ↶ ↷ ↵ | ↶ ↷ ↵ | ↶ ↷ ↵     | ↶ ↷ ↵ | ↶ ↷ ↵ | ↶ ↷ ↵     | ↶ ↷ ↵ | ↶ ↷ ↵ |
|                                   | 0          | 0     | 0     | 1          | 0     | 0     | 0         | 0     | 0     | 1         | 0     | 0     |
| SIGNAL                            | Phasing    |       | RTOR  | Phasing    |       | RTOR  | Phasing   |       | RTOR  | Phasing   |       | RTOR  |
|                                   | Perm       |       | Auto  | Perm       |       | Auto  | Prot-Fix  |       | Auto  | Perm      |       | Auto  |

### Critical Movements Diagram

|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="121"/><br/>                 B: <input type="text" value="11"/> </div> |   |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
|--|---|---|---|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="730"/><br/>                 B: <input type="text" value="48"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input type="text" value="837"/><br/>                 B: <input type="text" value="88"/> </div>  | ↑ | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 NorthBound<br/>                 A: <input type="text" value="370"/><br/>                 B: <input type="text" value="31"/> </div> | ↓  |           |     |             |   |             |   |             |   |             |   |             |   |
|  |   |   |   | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">V/C RATIO</th> <th style="text-align: left;">LOS</th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| V/C RATIO  | LOS   |   |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60  | A   |   |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70  | B   |   |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80  | C   |   |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90  | D   |   |   |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00  | E   |   |   |  |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{370 + 11 + 837 + 48}{*1425} = 0.818 \overset{ATCS}{- 0.03} = 0.788 \quad LOS = \overset{D}{\cancel{D}} = C$$

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                                   | NORTHBOUND   |  |  | SOUTHBOUND   |  |  | WESTBOUND  |  |  | EASTBOUND  |  |  |  |
|                                   | LT   | TH   | RT   | LT   | TH   | RT   | LT   | TH   | RT   | LT   | TH   | RT   |  |
| EXISTING                          | 0  | 0  | 0  | 275  | 0  | 305  | 0  | 1472   | 252  | 511  | 1982   | 0  |  |
| AMBIENT                           |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RELATED                           |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PROJECT                           |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TOTAL                             | 0  | 0  | 0  | 275  | 0  | 305  | 0  | 1472   | 252  | 511  | 1982   | 0  |  |
| LANE                              | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| SIGNAL                            | Phasing  |  | RTOR   | Phasing  |  | RTOR   | Phasing  |  | RTOR   | Phasing  |  | RTOR   |  |
|                                   | Perm   |  | Auto   | Perm   |  | Auto   | Perm   |  | Auto   | Perm   |  | Auto   |  |

### Critical Movements Diagram

|             | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                     A: <input type="text" value="193"/><br/>                     B: <input type="text" value="193"/> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>EastBound</b><br/>                     A: <input type="text" value="661"/><br/>                     B: <input type="text" value="511"/> </div> <div style="text-align: center;"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>WestBound</b><br/>                     A: <input type="text" value="736"/><br/>                     B: <input type="text" value="0"/> </div> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>NorthBound</b><br/>                     A: <input type="text" value="0"/><br/>                     B: <input type="text" value="0"/> </div> |  |           |     |             |   |             |   |             |   |             |   |             |   |  |
|-------------|--|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|--|
|             |  |  |           |     |             |   |             |   |             |   |             |   |             |   |  |
|             |  | <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <th>V/C RATIO</th> <th>LOS</th> </tr> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |  |
| V/C RATIO   | LOS  |  |           |     |             |   |             |   |             |   |             |   |             |   |  |
| 0.00 - 0.60 | A  |  |           |     |             |   |             |   |             |   |             |   |             |   |  |
| 0.61 - 0.70 | B  |  |           |     |             |   |             |   |             |   |             |   |             |   |  |
| 0.71 - 0.80 | C  |  |           |     |             |   |             |   |             |   |             |   |             |   |  |
| 0.81 - 0.90 | D  |  |           |     |             |   |             |   |             |   |             |   |             |   |  |
| 0.91 - 1.00 | E  |  |           |     |             |   |             |   |             |   |             |   |             |   |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 193 + 736 + 511}{*1500} = 0.890 - 0.03 = 0.860$  LOS = D

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 327        | 0  | 1374 | 21         | 0  | 32   | 261       | 1308 | 197  | 243       | 1879 | 282  |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL                             | 327        | 0  | 1374 | 21         | 0  | 32   | 261       | 1308 | 197  | 243       | 1879 | 282  |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |
|                                   | 2          | 0  | 0    | 1          | 0  | 0    | 1         | 0    | 3    | 1         | 0    | 2    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Split      |    | OLA  | Split      |    | Auto | Prot-Fix  |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

| SouthBound |    |
|------------|----|
| A:         | 0  |
| B:         | 21 |

| EastBound |     |
|-----------|-----|
| A:        | 720 |
| B:        | 243 |

| WestBound |     |
|-----------|-----|
| A:        | 436 |
| B:        | 261 |

| NorthBound |      |
|------------|------|
| A:         | 1113 |
| B:         | 180  |

|  |  |  |                  |            |
|--|--|--|------------------|------------|
|  |  |  | <b>V/C RATIO</b> | <b>LOS</b> |
|  |  |  | 0.00 - 0.60      | A          |
|  |  |  | 0.61 - 0.70      | B          |
|  |  |  | 0.71 - 0.80      | C          |
|  |  |  | 0.81 - 0.90      | D          |
|  |  |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{1113 + 21 + 261 + 720}{*1375} = 1.468 - 0.03 \text{ (ATS)} = 1.438 \text{ LOS} = F$$



# CalcaDB

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND |       |       | SOUTHBOUND |       |       | WESTBOUND |       |       | EASTBOUND |       |       |
|----------|------------|-------|-------|------------|-------|-------|-----------|-------|-------|-----------|-------|-------|
|          | LT         | TH    | RT    | LT         | TH    | RT    | LT        | TH    | RT    | LT        | TH    | RT    |
| EXISTING | 0          | 0     | 0     | 226        | 0     | 375   | 0         | 1476  | 583   | 1534      | 1740  | 0     |
| AMBIENT  |            |       |       |            |       |       |           |       |       |           |       |       |
| RELATED  |            |       |       |            |       |       |           |       |       |           |       |       |
| PROJECT  |            |       |       |            |       |       |           |       |       |           |       |       |
| TOTAL    | 0          | 0     | 0     | 226        | 0     | 375   | 0         | 1476  | 583   | 1534      | 1740  | 0     |
| LANE     | ↙ ↕ ↗      | ↖ ↕ ↘ | ↙ ↕ ↗ | ↙ ↕ ↗      | ↖ ↕ ↘ | ↙ ↕ ↗ | ↙ ↕ ↗     | ↖ ↕ ↘ | ↙ ↕ ↗ | ↙ ↕ ↗     | ↖ ↕ ↘ | ↙ ↕ ↗ |
|          | 0          | 0     | 0     | 2          | 0     | 0     | 0         | 0     | 2     | 0         | 0     | 0     |
| SIGNAL   | Phasing    |       | RTOR  | Phasing    |       | RTOR  | Phasing   |       | RTOR  | Phasing   |       | RTOR  |
|          | Perm       |       | Auto  | Perm       |       | Auto  | Perm      |       | Auto  | Prot-Fix  |       | Auto  |

### Critical Movements Diagram

|  |             |  |                  |            |
|--|-------------|--|------------------|------------|
| <p>SouthBound</p> <p>A: <input type="text" value="0"/></p> <p>B: <input type="text" value="124"/></p>  |             | <p>WestBound</p> <p>A: <input type="text" value="686"/></p> <p>B: <input type="text" value="0"/></p> | <u>V/C RATIO</u> | <u>LOS</u> |
| <p>EastBound</p> <p>A: <input type="text" value="580"/></p> <p>B: <input type="text" value="844"/></p> |             | 0.00 - 0.60  | A                |            |
| <p>NorthBound</p> <p>A: <input type="text" value="0"/></p> <p>B: <input type="text" value="0"/></p>    |             | 0.61 - 0.70  | B                |            |
|  |             | 0.71 - 0.80  | C                |            |
|  | 0.81 - 0.90 | D  |                  |            |
|  | 0.91 - 1.00 | E  |                  |            |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 124 + 686 + 844}{*1425} = 1.091 - 0.03 = 1.061$  LOS = F

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 11         | 12 | 11   | 164        | 16 | 41   | 25        | 1956 | 819  | 695       | 1221 | 0    |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL                             | 11         | 12 | 11   | 164        | 16 | 41   | 25        | 1956 | 819  | 695       | 1221 | 0    |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |
|                                   | 0          | 1  | 0    | 0          | 1  | 0    | 0         | 1    | 0    | 2         | 0    | 2    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |    | Auto | Prot-Fix   |    | OLA  | Perm      |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|            |    |
|------------|----|
| SouthBound |    |
| A:         | 90 |
| B:         | 90 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 407 |
| B:        | 382 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 774 |
| B:        | 25  |

|            |    |
|------------|----|
| NorthBound |    |
| A:         | 17 |
| B:         | 11 |

|  |                  |            |
|--|------------------|------------|
|  | <b>V/C RATIO</b> | <b>LOS</b> |
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{17 + 90 + 774 + 382}{*1375} = 0.849 - 0.03 \text{ LOS} = D$$

*ATCS = 0.819*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |                                   |            |                                   |                                   |            |                                   |                                   |            |                                   |                                   |            |                                   |
|-----------------------------------|-----------------------------------|------------|-----------------------------------|-----------------------------------|------------|-----------------------------------|-----------------------------------|------------|-----------------------------------|-----------------------------------|------------|-----------------------------------|
|                                   | NORTHBOUND                        |            |                                   | SOUTHBOUND                        |            |                                   | WESTBOUND                         |            |                                   | EASTBOUND                         |            |                                   |
|                                   | LT                                | TH         | RT                                | LT                                | TH         | RT                                | LT                                | TH         | RT                                | LT                                | TH         | RT                                |
| EXISTING                          | 288                               | 841        | 75                                | 148                               | 299        | 11                                | 86                                | 381        | 325                               | 24                                | 202        | 77                                |
| AMBIENT                           |                                   |            |                                   |                                   |            |                                   |                                   |            |                                   |                                   |            |                                   |
| RELATED                           |                                   |            |                                   |                                   |            |                                   |                                   |            |                                   |                                   |            |                                   |
| PROJECT                           |                                   |            |                                   |                                   |            |                                   |                                   |            |                                   |                                   |            |                                   |
| <b>TOTAL</b>                      | <b>288</b>                        | <b>841</b> | <b>75</b>                         | <b>148</b>                        | <b>299</b> | <b>11</b>                         | <b>86</b>                         | <b>381</b> | <b>325</b>                        | <b>24</b>                         | <b>202</b> | <b>77</b>                         |
| LANE                              |                                   |            |                                   |                                   |            |                                   |                                   |            |                                   |                                   |            |                                   |
| SIGNAL                            | Phasing                           |            | RTOR                              | Phasing                           |            | RTOR                              | Phasing                           |            | RTOR                              | Phasing                           |            | RTOR                              |
|                                   | <input type="text" value="Perm"/> |            | <input type="text" value="Auto"/> | <input type="text" value="Perm"/> |            | <input type="text" value="Auto"/> | <input type="text" value="Perm"/> |            | <input type="text" value="Auto"/> | <input type="text" value="Perm"/> |            | <input type="text" value="Auto"/> |

| Critical Movements Diagram   |  | ↑  | VIC RATIO   | LOS |
|--|--|--|-------------|-----|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                     SouthBound<br/>                     A: <input type="text" value="310"/><br/>                     B: <input type="text" value="148"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                     EastBound<br/>                     A: <input type="text" value="202"/><br/>                     B: <input type="text" value="24"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                     WestBound<br/>                     A: <input type="text" value="706"/><br/>                     B: <input type="text" value="86"/> </div> |             |     |
|  |  |  | 0.00 - 0.60 | A   |
|  |  |  | 0.61 - 0.70 | B   |
|  |  |  | 0.71 - 0.80 | C   |
|  |  |  | 0.81 - 0.90 | D   |
|  |  |  | 0.91 - 1.00 | E   |
| <p>A = Adjusted Through/Right Volume<br/>                     B = Adjusted Left Volume<br/>                     * = ATSAC Benefit</p>  |  |  |             |     |
| <p><b>Results</b></p> <p>North/South Critical Movements = A(N/B) + B(S/B)</p> <p>West/East Critical Movements = A(W/B) + B(E/B)</p>  |  |  |             |     |
| <p>VIC = <math>\frac{841 + 148 + 706 + 24}{*1500} = 1.076</math>      LOS = F</p>  |  |  |             |     |

# CalcaDB

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |      |      |            |         |    |           |      |          |           |      |     |
|-----------------------------------|------------|------|------|------------|---------|----|-----------|------|----------|-----------|------|-----|
|                                   | NORTHBOUND |      |      | SOUTHBOUND |         |    | WESTBOUND |      |          | EASTBOUND |      |     |
|                                   | LT         | TH   | RT   | LT         | TH      | RT | LT        | TH   | RT       | LT        | TH   | RT  |
| EXISTING                          | 186        | 1205 | 174  | 115        | 808     | 89 | 137       | 2395 | 210      | 170       | 2500 | 320 |
| AMBIENT                           |            |      |      |            |         |    |           |      |          |           |      |     |
| RELATED                           |            |      |      |            |         |    |           |      |          |           |      |     |
| PROJECT                           |            |      |      |            |         |    |           |      |          |           |      |     |
| TOTAL                             | 186        | 1205 | 174  | 115        | 808     | 89 | 137       | 2395 | 210      | 170       | 2500 | 320 |
| LANE                              | 1          | 0    | 1    | 0          | 1       | 0  | 0         | 1    | 0        | 1         | 0    | 0   |
| SIGNAL                            | Phasing    |      | RTOR |            | Phasing |    | RTOR      |      | Phasing  |           | RTOR |     |
|                                   | Perm       |      | Auto |            | Perm    |    | Auto      |      | Prot-Fix |           | OLA  |     |

### Critical Movements Diagram

|            |                                  |
|------------|----------------------------------|
| SouthBound |                                  |
| A:         | <input type="text" value="449"/> |
| B:         | <input type="text" value="115"/> |

|           |                                  |
|-----------|----------------------------------|
| EastBound |                                  |
| A:        | <input type="text" value="833"/> |
| B:        | <input type="text" value="170"/> |

|           |                                  |
|-----------|----------------------------------|
| WestBound |                                  |
| A:        | <input type="text" value="868"/> |
| B:        | <input type="text" value="137"/> |

|            |                                  |
|------------|----------------------------------|
| NorthBound |                                  |
| A:         | <input type="text" value="690"/> |
| B:         | <input type="text" value="186"/> |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{690 + 115 + 868 + 170}{*1425} = 1.223 - 0.03$  LOS = F

*ATCS = 1.193*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 383        | 0  | 320  | 0          | 0  | 0    | 561       | 2873 | 0    | 0         | 2425 | 47   |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL                             | 383        | 0  | 320  | 0          | 0  | 0    | 561       | 2873 | 0    | 0         | 2425 | 47   |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |
|                                   | 1          | 0  | 0    | 0          | 0  | 0    | 1         | 0    | 3    | 0         | 3    | 0    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |    | Auto | Perm       |    | Auto | Prot-Fix  |      | Auto | Perm      |      | Auto |

### Critical Movements Diagram

|  |   |  |                  |            |
|--|---|--|------------------|------------|
|  | <b>SouthBound</b><br>A: <input type="text" value="0"/><br>B: <input type="text" value="0"/> | <b>WestBound</b><br>A: <input type="text" value="958"/><br>B: <input type="text" value="561"/> |                  |            |
| <b>EastBound</b><br>A: <input type="text" value="808"/><br>B: <input type="text" value="0"/> |   | <b>NorthBound</b><br>A: <input type="text" value="39"/><br>B: <input type="text" value="383"/> | <b>V/C RATIO</b> | <b>LOS</b> |
|  |   |  | 0.00 - 0.60      | A          |
|  |   |  | 0.61 - 0.70      | B          |
|  |   |  | 0.71 - 0.80      | C          |
|  |   |  | 0.81 - 0.90      | D          |
|  |   |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{383 + 0 + 561 + 808}{*1425} = 1.159 - 0.02 = 1.129$  LOS = F

## INTERSECTION DATA SUMMARY SHEET

|             |  |             |   |                |                                |
|-------------|--|-------------|---|----------------|--------------------------------|
| N/S:        | <input type="text" value="Overland Av"/> | W/E:        | <input type="text" value="Santa Monica Bl (S)"/>  | I/S No:        | <input type="text" value="3"/> |
| AM/PM:      | <input type="text" value="PM"/>          | Comments:   | <input type="text" value="Cumulative Base 2010"/> |                |                                |
| COUNT DATE: | <input type="text"/>                     | STUDY DATE: | <input type="text"/>                              | GROWTH FACTOR: | <input type="text"/>           |

|              | NORTHBOUND   |  |  | SOUTHBOUND   |  |          | WESTBOUND  |          |  | EASTBOUND |           |            |
|--------------|--|--|--|--|--|----------|--|----------|--|-----------|-----------|------------|
|              | LT   | TH   | RT   | LT   | TH   | RT       | LT   | TH       | RT   | LT        | TH        | RT         |
| EXISTING     | 0  | 518  | 51   | 46   | 552  | 0        | 78   | 0        | 175  | 0         | 47        | 198        |
| AMBIENT      |  |  |  |  |  |          |  |          |  |           |           |            |
| RELATED      |  |  |  |  |  |          |  |          |  |           |           |            |
| PROJECT      |  |  |  |  |  |          |  |          |  |           |           |            |
| <b>TOTAL</b> | <b>0</b>   | <b>518</b>   | <b>51</b>  | <b>46</b>  | <b>552</b>   | <b>0</b> | <b>78</b>  | <b>0</b> | <b>175</b>   | <b>0</b>  | <b>47</b> | <b>198</b> |
| LANE         | <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> | <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> | <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> | <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> |  |          |  |          |  |           |           |            |
| SIGNAL       | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/>   |  | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/>   |  | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |          | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |          | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |           |           |            |

### Critical Movements Diagram

|  |  |   |  |
|--|--|---|--|
|  | <b>SouthBound</b><br>A: <input type="text" value="552"/><br>B: <input type="text" value="46"/> |   |  |
| <b>EastBound</b><br>A: <input type="text" value="245"/><br>B: <input type="text" value="0"/> |  | <b>WestBound</b><br>A: <input type="text" value="175"/><br>B: <input type="text" value="78"/> |  |
|  | <b>NorthBound</b><br>A: <input type="text" value="285"/><br>B: <input type="text" value="0"/>  |   |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$\text{VIC} = \frac{0 + 552 + 78 + 245}{*1425} = 0.544 \text{ (ATSAC)} \text{ LOS} = \text{A}$$

*ATSAC*  
-0.03  
= 0.514

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |      |      |           |      |      |           |      |      |
|-----------------------------------|------------|-----|------|------------|------|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |      |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH  | RT   | LT         | TH   | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 42         | 711 | 145  | 319        | 1114 | 118  | 238       | 3457 | 873  | 180       | 2525 | 0    |
| AMBIENT                           |            |     |      |            |      |      |           |      |      |           |      |      |
| RELATED                           |            |     |      |            |      |      |           |      |      |           |      |      |
| PROJECT                           |            |     |      |            |      |      |           |      |      |           |      |      |
| TOTAL                             | 42         | 711 | 145  | 319        | 1114 | 118  | 238       | 3457 | 873  | 180       | 2525 | 0    |
| LANE                              | ↙          | ↕   | ↗    | ↙          | ↕    | ↗    | ↙         | ↕    | ↗    | ↙         | ↕    | ↗    |
|                                   | 2          | 0   | 2    | 0          | 0    | 1    | 0         | 0    | 2    | 0         | 0    | 1    |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |      | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Prot-Fix   |     | OLA  | Prot-Fix   |      | OLA  | Prot-Fix  |      | OLA  | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|                                     |
|-------------------------------------|
| SouthBound                          |
| A: <input type="text" value="557"/> |
| B: <input type="text" value="175"/> |

|                                     |
|-------------------------------------|
| EastBound                           |
| A: <input type="text" value="631"/> |
| B: <input type="text" value="99"/>  |

|                                      |
|--------------------------------------|
| WestBound                            |
| A: <input type="text" value="1152"/> |
| B: <input type="text" value="131"/>  |

|                                     |
|-------------------------------------|
| NorthBound                          |
| A: <input type="text" value="356"/> |
| B: <input type="text" value="23"/>  |

|  |                  |            |
|--|------------------|------------|
|  | <u>V/C RATIO</u> | <u>LOS</u> |
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{23 + 557 + 1152 + 99}{*1375} = 1.262$  LOS = F

ATSAC = 1.232

# CalcaDB

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |         |    |           |    |         |           |      |     |
|-----------------------------------|------------|-----|------|------------|---------|----|-----------|----|---------|-----------|------|-----|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |         |    | WESTBOUND |    |         | EASTBOUND |      |     |
|                                   | LT         | TH  | RT   | LT         | TH      | RT | LT        | TH | RT      | LT        | TH   | RT  |
| EXISTING                          | 0          | 897 | 0    | 0          | 1228    | 87 | 0         | 0  | 0       | 0         | 0    | 141 |
| AMBIENT                           |            |     |      |            |         |    |           |    |         |           |      |     |
| RELATED                           |            |     |      |            |         |    |           |    |         |           |      |     |
| PROJECT                           |            |     |      |            |         |    |           |    |         |           |      |     |
| TOTAL                             | 0          | 897 | 0    | 0          | 1228    | 87 | 0         | 0  | 0       | 0         | 0    | 141 |
| LANE                              | ↵          | ↵   | ↵    | ↵          | ↵       | ↵  | ↵         | ↵  | ↵       | ↵         | ↵    | ↵   |
|                                   | 0          | 0   | 5    | 0          | 0       | 0  | 0         | 0  | 2       | 0         | 0    | 1   |
|                                   | ↵          | ↵   | ↵    | ↵          | ↵       | ↵  | ↵         | ↵  | ↵       | ↵         | ↵    | ↵   |
|                                   | 0          | 0   | 0    | 0          | 0       | 0  | 0         | 0  | 0       | 0         | 0    | 0   |
| SIGNAL                            | Phasing    |     | RTOR |            | Phasing |    | RTOR      |    | Phasing |           | RTOR |     |
|                                   | Perm       |     | Auto |            | Perm    |    | Auto      |    | Perm    |           | Auto |     |

| Critical Movements Diagram   |  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
|--|--|------------|----|-----|-----|----|--|---|-----------|----|-----|----|----|---|---|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
|  | <table border="1"> <tr><td colspan="2">SouthBound</td></tr> <tr><td>A:</td><td>614</td></tr> <tr><td>B:</td><td>0</td></tr> </table> | SouthBound |    | A:  | 614 | B: | 0  | <table border="1"> <tr><td colspan="2">WestBound</td></tr> <tr><td>A:</td><td>0</td></tr> <tr><td>B:</td><td>0</td></tr> </table> | WestBound |    | A:  | 0  | B: | 0 | <table border="1"> <tr><th>V/C RATIO</th><th>LOS</th></tr> <tr><td>0.00 - 0.60</td><td>A</td></tr> <tr><td>0.61 - 0.70</td><td>B</td></tr> <tr><td>0.71 - 0.80</td><td>C</td></tr> <tr><td>0.81 - 0.90</td><td>D</td></tr> <tr><td>0.91 - 1.00</td><td>E</td></tr> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| SouthBound   |  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| A:   | 614  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| B:   | 0  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| WestBound  |  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| A:   | 0  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| B:   | 0  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| V/C RATIO  | LOS  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60  | A  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70  | B  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80  | C  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90  | D  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00  | E  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| <table border="1"> <tr><td colspan="2">EastBound</td></tr> <tr><td>A:</td><td>141</td></tr> <tr><td>B:</td><td>0</td></tr> </table>  | EastBound  |            | A: | 141 | B:  | 0  | <table border="1"> <tr><td colspan="2">NorthBound</td></tr> <tr><td>A:</td><td>179</td></tr> <tr><td>B:</td><td>0</td></tr> </table> | NorthBound  |           | A: | 179 | B: | 0  |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| EastBound  |  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| A:   | 141  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| B:   | 0  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| NorthBound   |  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| A:   | 179  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| B:   | 0  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| <p>A = Adjusted Through/Right Volume<br/>                 B = Adjusted Left Volume<br/>                 * = ATSAC Benefit</p>  |  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| <p>Results</p> <p>North/South Critical Movements = B(N/B) + A(S/B)</p> <p>West/East Critical Movements = B(W/B) + A(E/B)</p> <p>V/C = <math>\frac{0 + 614 + 0 + 141}{1500} = 0.503</math>      LOS = A</p> |  |            |    |     |     |    |  |   |           |    |     |    |    |   |   |           |     |             |   |             |   |             |   |             |   |             |   |



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND   |  |  | SOUTHBOUND   |    |    | WESTBOUND |      |    | EASTBOUND |      |     |
|----------|--|--|--|--|----|----|-----------|------|----|-----------|------|-----|
|          | LT   | TH   | RT   | LT   | TH | RT | LT        | TH   | RT | LT        | TH   | RT  |
| EXISTING | 563  | 0  | 375  | 0  | 0  | 0  | 288       | 4007 | 0  | 0         | 2853 | 137 |
| AMBIENT  |  |  |  |  |    |    |           |      |    |           |      |     |
| RELATED  |  |  |  |  |    |    |           |      |    |           |      |     |
| PROJECT  |  |  |  |  |    |    |           |      |    |           |      |     |
| TOTAL    | 563  | 0  | 375  | 0  | 0  | 0  | 288       | 4007 | 0  | 0         | 2853 | 137 |
| LANE     | <input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="1"/> | <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> | <input type="text" value="2"/> <input type="text" value="0"/> <input type="text" value="3"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> | <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="3"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="1"/> <input type="text" value="0"/> |    |    |           |      |    |           |      |     |
| SIGNAL   | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="OLA"/>  | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/>   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/>   | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="OLA"/>  |    |    |           |      |    |           |      |     |

### Critical Movements Diagram

|  |   |   |  |
|--|---|---|--|
|  | <b>SouthBound</b><br>A: <input type="text" value="0"/><br>B: <input type="text" value="0"/>     |   |  |
| <b>EastBound</b><br>A: <input type="text" value="951"/><br>B: <input type="text" value="0"/> |   | <b>WestBound</b><br>A: <input type="text" value="1336"/><br>B: <input type="text" value="158"/> |  |
|  | <b>NorthBound</b><br>A: <input type="text" value="154"/><br>B: <input type="text" value="313"/> |   |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|             | VIC RATIO | LOS |
|-------------|-----------|-----|
| 0.00 - 0.60 |           | A   |
| 0.61 - 0.70 |           | B   |
| 0.71 - 0.80 |           | C   |
| 0.81 - 0.90 |           | D   |
| 0.91 - 1.00 |           | E   |

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

VIC =  $\frac{313 + 0 + 1336 + 0}{*1425} = 1.087 - 0.03 = 1.057$ 

 ATCS  
 LOS = F

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |     |      |           |    |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|-----|------|-----------|----|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |     |      | EASTBOUND |    |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH  | RT   | LT        | TH | RT   |
| EXISTING                          | 0          | 0  | 0    | 0          | 0  | 124  | 0         | 161 | 240  | 0         | 0  | 0    |
| AMBIENT                           |            |    |      |            |    |      |           |     |      |           |    |      |
| RELATED                           |            |    |      |            |    |      |           |     |      |           |    |      |
| PROJECT                           |            |    |      |            |    |      |           |     |      |           |    |      |
| TOTAL                             | 0          | 0  | 0    | 0          | 0  | 124  | 0         | 161 | 240  | 0         | 0  | 0    |
| LANE                              | ↙          | ↕  | ↗    | ↙          | ↕  | ↗    | ↙         | ↕   | ↗    | ↙         | ↕  | ↗    |
|                                   | 0          | 0  | 0    | 0          | 0  | 0    | 0         | 0   | 0    | 0         | 0  | 0    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |     | RTOR | Phasing   |    | RTOR |
|                                   | Perm       |    | Auto | Perm       |    | Auto | Perm      |     | Auto | Perm      |    | Auto |

### Critical Movements Diagram

|                                   |                                   |   |                                     |                                   |
|-----------------------------------|-----------------------------------|---|-------------------------------------|-----------------------------------|
| EastBound                         |                                   | ↑ | WestBound                           |                                   |
| A: <input type="text" value="0"/> | B: <input type="text" value="0"/> |   | A: <input type="text" value="401"/> | B: <input type="text" value="0"/> |

|                                     |                                   |                                   |                                   |
|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| SouthBound                          |                                   | NorthBound                        |                                   |
| A: <input type="text" value="124"/> | B: <input type="text" value="0"/> | A: <input type="text" value="0"/> | B: <input type="text" value="0"/> |

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

**A = Adjusted Through/Right Volume**  
**B = Adjusted Left Volume**  
**\* = ATSAC Benefit**

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

VIC =  $\frac{0 + 124 + 401 + 0}{1500} = 0.350$       LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 1304       | 0  | 440  | 0          | 0  | 0    | 300       | 3358 | 0    | 0         | 2802 | 601  |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL                             | 1304       | 0  | 440  | 0          | 0  | 0    | 300       | 3358 | 0    | 0         | 2802 | 601  |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |
|                                   | 3          | 0  | 0    | 0          | 0  | 0    | 2         | 0    | 3    | 1         | 0    | 4    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |    | OLA  | Perm       |    | Auto | Prot-Fix  |      | Auto | Prot-Fix  |      | OLA  |

### Critical Movements Diagram

|  |   |                  |            |
|--|---|------------------|------------|
|  | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                     A: <input type="text" value="0"/><br/>                     B: <input type="text" value="0"/> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>EastBound</b><br/>                     A: <input type="text" value="701"/><br/>                     B: <input type="text" value="0"/> </div> <div style="text-align: center;"> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>WestBound</b><br/>                     A: <input type="text" value="1119"/><br/>                     B: <input type="text" value="165"/> </div> </div> <div style="border: 1px solid black; padding: 5px;"> <b>NorthBound</b><br/>                     A: <input type="text" value="77"/><br/>                     B: <input type="text" value="482"/> </div> |                  |            |
|  |   | <b>V/C RATIO</b> | <b>LOS</b> |
|  |   | 0.00 - 0.60      | A          |
|  |   | 0.61 - 0.70      | B          |
|  |   | 0.71 - 0.80      | C          |
|  |   | 0.81 - 0.90      | D          |
|  |   | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{482 + 0 + 1119 + 0}{*1425} = 1.054 - 0.03$  LOS = F

*ATSAC*  
= 1.024

## INTERSECTION DATA SUMMARY SHEET

|   |   |  |
|---|---|--|
| N/S: <input style="width: 80%;" type="text" value="Av of the Stars"/> | W/E: <input style="width: 80%;" type="text" value="Santa Monica Bl (S)"/>       | I/S No: <input style="width: 80%;" type="text" value="9"/> |
| AM/PM: <input style="width: 50%;" type="text" value="PM"/>            | Comments: <input style="width: 90%;" type="text" value="Cumulative Base 2010"/> |  |
| COUNT DATE: <input style="width: 80%;" type="text"/>                  | STUDY DATE: <input style="width: 80%;" type="text"/>                            | GROWTH FACTOR: <input style="width: 80%;" type="text"/>    |

|          | NORTHBOUND                                 |    |   | SOUTHBOUND |  |    | WESTBOUND                               |    |  | EASTBOUND |   |    |
|----------|--|----|---|------------|--|----|---|----|--|-----------|---|----|
|          | LT   | TH | RT                                      | LT         | TH   | RT | LT                                      | TH | RT   | LT        | TH                                      | RT |
| EXISTING | 0  | 0  | 0                                       | 0          | 0  | 0  | 0                                       | 0  | 0  | 0         | 0                                       | 0  |
| AMBIENT  |  |    |   |            |  |    |   |    |  |           |   |    |
| RELATED  |  |    |   |            |  |    |   |    |  |           |   |    |
| PROJECT  |  |    |   |            |  |    |   |    |  |           |   |    |
| TOTAL    | 0  | 0  | 0                                       | 0          | 0  | 0  | 0                                       | 0  | 0  | 0         | 0                                       | 0  |
| LANE     |  |    |   |            |  |    |   |    |  |           |   |    |
| SIGNAL   | Phasing: <input type="text" value="Perm"/> |    | RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Prot-Fix"/> |    | RTOR: <input type="text" value="Auto"/> |    | Phasing: <input type="text" value="Prot-Fix"/> |           | RTOR: <input type="text" value="Auto"/> |    |

### Critical Movements Diagram

|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input style="width: 50px;" type="text" value="0"/><br/>                 B: <input style="width: 50px;" type="text" value="0"/> </div> |  |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
|--|---|--|---|---|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input style="width: 50px;" type="text" value="0"/><br/>                 B: <input style="width: 50px;" type="text" value="0"/> </div> |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input style="width: 50px;" type="text" value="0"/><br/>                 B: <input style="width: 50px;" type="text" value="0"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input style="width: 50px;" type="text" value="0"/><br/>                 B: <input style="width: 50px;" type="text" value="0"/> </div> | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>V/C RATIO</th> <th>LOS</th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| V/C RATIO  | LOS   |  |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60  | A   |  |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70  | B   |  |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80  | C   |  |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90  | D   |  |   |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00  | E   |  |   |   |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{0 + 0 + 0 + 0}{*1375} = -0.070$       LOS = A

# CalcaDB

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |         |    |           |      |          |           |      |     |
|-----------------------------------|------------|----|------|------------|---------|----|-----------|------|----------|-----------|------|-----|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |         |    | WESTBOUND |      |          | EASTBOUND |      |     |
|                                   | LT         | TH | RT   | LT         | TH      | RT | LT        | TH   | RT       | LT        | TH   | RT  |
| EXISTING                          | 884        | 0  | 884  | 0          | 0       | 0  | 224       | 2991 | 0        | 0         | 3093 | 307 |
| AMBIENT                           |            |    |      |            |         |    |           |      |          |           |      |     |
| RELATED                           |            |    |      |            |         |    |           |      |          |           |      |     |
| PROJECT                           |            |    |      |            |         |    |           |      |          |           |      |     |
| TOTAL                             | 884        | 0  | 884  | 0          | 0       | 0  | 224       | 2991 | 0        | 0         | 3093 | 307 |
| LANE                              |            |    |      |            |         |    |           |      |          |           |      |     |
|                                   | 2          | 0  | 0    | 0          | 0       | 2  | 0         | 0    | 0        | 0         | 0    | 0   |
| SIGNAL                            | Phasing    |    | RTOR |            | Phasing |    | RTOR      |      | Phasing  |           | RTOR |     |
|                                   | Perm       |    | OLA  |            | Perm    |    | Auto      |      | Prot-Fix |           | Auto |     |

### Critical Movements Diagram

|   |  |  |                  |             |
|---|--|--|------------------|-------------|
| <p>SouthBound</p> <p>A: <input type="text" value="0"/></p> <p>B: <input type="text" value="0"/></p>     |  | <p>WestBound</p> <p>A: <input type="text" value="748"/></p> <p>B: <input type="text" value="123"/></p> | <b>V/C RATIO</b> | <b>LOS</b>  |
| <p>EastBound</p> <p>A: <input type="text" value="773"/></p> <p>B: <input type="text" value="0"/></p>    |  |  | 0.00 - 0.60      | A           |
| <p>NorthBound</p> <p>A: <input type="text" value="363"/></p> <p>B: <input type="text" value="486"/></p> |  |  | 0.61 - 0.70      | B           |
|   |  |  |                  | 0.71 - 0.80 |
|   |  |  | 0.81 - 0.90      | D           |
|   |  |  | 0.91 - 1.00      | E           |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{486 + 0 + 123 + 773}{*1425} = 0.900$  ATSAC = 0.02 LOS = D

= 0.870

## INTERSECTION DATA SUMMARY SHEET

|  |   |   |
|--|---|---|
| N/S: <input style="width: 80%;" type="text" value="Century Park E"/> | W/E: <input style="width: 80%;" type="text" value="Santa Monica Bl (S)"/>       | I/S No: <input style="width: 80%;" type="text" value="11"/> |
| AM/PM: <input style="width: 50%;" type="text" value="PM"/>           | Comments: <input style="width: 90%;" type="text" value="Cumulative Base 2010"/> |   |
| COUNT DATE: <input style="width: 80%;" type="text"/>                 | STUDY DATE: <input style="width: 80%;" type="text"/>                            | GROWTH FACTOR: <input style="width: 80%;" type="text"/>     |

|          | NORTHBOUND |       |       | SOUTHBOUND |       |       | WESTBOUND |       |       | EASTBOUND |       |      |
|----------|------------|-------|-------|------------|-------|-------|-----------|-------|-------|-----------|-------|------|
|          | LT         | TH    | RT    | LT         | TH    | RT    | LT        | TH    | RT    | LT        | TH    | RT   |
| EXISTING | 0          | 0     | 0     | 0          | 0     | 0     | 0         | 0     | 0     | 0         | 0     | 0    |
| AMBIENT  |            |       |       |            |       |       |           |       |       |           |       |      |
| RELATED  |            |       |       |            |       |       |           |       |       |           |       |      |
| PROJECT  |            |       |       |            |       |       |           |       |       |           |       |      |
| TOTAL    | 0          | 0     | 0     | 0          | 0     | 0     | 0         | 0     | 0     | 0         | 0     | 0    |
| LANE     | ↙ ↕ ↗      | ↖ ↕ ↘ | ↙ ↕ ↗ | ↖ ↕ ↘      | ↙ ↕ ↗ | ↖ ↕ ↘ | ↙ ↕ ↗     | ↖ ↕ ↘ | ↙ ↕ ↗ | ↖ ↕ ↘     | ↙ ↕ ↗ |      |
|          | 1          | 0     | 2     | 1          | 0     | 1     | 1         | 0     | 1     | 1         | 0     | 2    |
| SIGNAL   | Phasing    |       | RTOR  | Phasing    |       | RTOR  | Phasing   |       | RTOR  | Phasing   |       | RTOR |
|          | Perm       |       | Auto  | Perm       |       | Auto  | Perm      |       | Auto  | Prot-Fix  |       | Auto |

### Critical Movements Diagram

|  |  |
|--|--|
| SouthBound   |  |
| A: <input style="width: 50px;" type="text" value="0"/> |  |
| B: <input style="width: 50px;" type="text" value="0"/> |  |

|  |  |
|--|--|
| EastBound  |  |
| A: <input style="width: 50px;" type="text" value="0"/> |  |
| B: <input style="width: 50px;" type="text" value="0"/> |  |

|  |  |
|--|--|
| WestBound  |  |
| A: <input style="width: 50px;" type="text" value="0"/> |  |
| B: <input style="width: 50px;" type="text" value="0"/> |  |

|  |  |
|--|--|
| NorthBound   |  |
| A: <input style="width: 50px;" type="text" value="0"/> |  |
| B: <input style="width: 50px;" type="text" value="0"/> |  |

|  | <u>V/C RATIO</u> | <u>LOS</u> |
|--|------------------|------------|
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

#### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{0 + 0 + 0 + 0}{*1425} = -0.070$       LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND |             |            | SOUTHBOUND |             |             | WESTBOUND  |             |           | EASTBOUND  |             |           |   |
|--------------|------------|-------------|------------|------------|-------------|-------------|------------|-------------|-----------|------------|-------------|-----------|---|
|              | LT         | TH          | RT         | LT         | TH          | RT          | LT         | TH          | RT        | LT         | TH          | RT        |   |
| EXISTING     | 0          | 1454        | 223        | 0          | 1540        | 1003        | 242        | 1873        | 48        | 925        | 1753        | 30        |   |
| AMBIENT      |            |             |            |            |             |             |            |             |           |            |             |           |   |
| RELATED      |            |             |            |            |             |             |            |             |           |            |             |           |   |
| PROJECT      |            |             |            |            |             |             |            |             |           |            |             |           |   |
| <b>TOTAL</b> | <b>0</b>   | <b>1454</b> | <b>223</b> | <b>0</b>   | <b>1540</b> | <b>1003</b> | <b>242</b> | <b>1873</b> | <b>48</b> | <b>925</b> | <b>1753</b> | <b>30</b> |   |
| LANE         | ↔          | ↕           | ↕          | ↕          | ↕           | ↕           | ↕          | ↕           | ↕         | ↕          | ↕           | ↕         |   |
|              | 0          | 0           | 2          | 0          | 0           | 1           | 0          | 0           | 2         | 0          | 1           | 0         | 0 |
| SIGNAL       | Phasing    |             | RTOR       |            | Phasing     |             | RTOR       |             | Phasing   |            | RTOR        |           |   |
|              | Perm       |             | Auto       |            | Perm        |             | Auto       |             | Split     |            | Auto        |           |   |

### Critical Movements Diagram

|            |                                  |
|------------|----------------------------------|
| SouthBound |                                  |
| A:         | <input type="text" value="636"/> |
| B:         | <input type="text" value="0"/>   |

|           |                                  |
|-----------|----------------------------------|
| EastBound |                                  |
| A:        | <input type="text" value="893"/> |
| B:        | <input type="text" value="893"/> |

|           |                                  |
|-----------|----------------------------------|
| WestBound |                                  |
| A:        | <input type="text" value="640"/> |
| B:        | <input type="text" value="242"/> |

|            |                                  |
|------------|----------------------------------|
| NorthBound |                                  |
| A:         | <input type="text" value="727"/> |
| B:         | <input type="text" value="0"/>   |

|  |                  |            |
|--|------------------|------------|
|  | <u>V/C RATIO</u> | <u>LOS</u> |
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

**A = Adjusted Through/Right Volume**  
**B = Adjusted Left Volume**  
**\* = ATSAC Benefit**

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**Results**

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

V/C =  $\frac{727 + 0 + 640 + 893}{1425} = 1.586$       LOS = F

Cumbase PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #12 Santa Monica BL (N) & Wilshire Bl

Cycle (sec): 100 Critical Vol./Cap. (X): 1.276
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Permitted, Prot+Permit), Rights (Include), Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of volume-related metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns for movements and 2 rows for Vol/Sat and Crit Moves.



# CalcaDB

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND        |               |                   | SOUTHBOUND    |                   |               | WESTBOUND         |               |                   | EASTBOUND     |                   |               |
|----------|-------------------|---------------|-------------------|---------------|-------------------|---------------|-------------------|---------------|-------------------|---------------|-------------------|---------------|
|          | LT                | TH            | RT                | LT            | TH                | RT            | LT                | TH            | RT                | LT            | TH                | RT            |
| EXISTING | 138               | 1170          | 508               | 41            | 687               | 367           | 327               | 1635          | 77                | 262           | 1626              | 55            |
| AMBIENT  |                   |               |                   |               |                   |               |                   |               |                   |               |                   |               |
| RELATED  |                   |               |                   |               |                   |               |                   |               |                   |               |                   |               |
| PROJECT  |                   |               |                   |               |                   |               |                   |               |                   |               |                   |               |
| TOTAL    | 138               | 1170          | 508               | 41            | 687               | 367           | 327               | 1635          | 77                | 262           | 1626              | 55            |
| LANE     | 1 0 2 0 0 1 0     | 1 0 1 0 1 0 0 | 1 0 2 0 1 0 0     | 1 0 1 0 1 0 0 | 1 0 2 0 1 0 0     | 1 0 1 0 1 0 0 | 1 0 2 0 1 0 0     | 1 0 1 0 1 0 0 | 1 0 1 0 1 0 0     | 1 0 1 0 1 0 0 | 1 0 1 0 1 0 0     | 1 0 1 0 1 0 0 |
| SIGNAL   | Phasing: Prot-Fix | RTOR: Auto    | Phasing: Prot-Fix | RTOR: Auto    | Phasing: Prot-Fix | RTOR: Auto    | Phasing: Prot-Fix | RTOR: Auto    | Phasing: Prot-Fix | RTOR: Auto    | Phasing: Prot-Fix | RTOR: Auto    |

### Critical Movements Diagram

| Direction  | A   | B   |
|------------|-----|-----|
| SouthBound | 527 | 41  |
| EastBound  | 841 | 262 |
| WestBound  | 571 | 327 |
| NorthBound | 585 | 138 |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{138 + 527 + 327 + 841}{1375} = 1.333$       LOS = F

Cumbase PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #13 Santa Monica Bl (S) & Wilshire Bl

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.245

Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

| 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: | 0           | 0 | 0 | 0           | 0 | 0 | 0          | 0 | 0 | 0          | 0 | 0 |
| Lanes:      | 1           | 0 | 2 | 0           | 1 | 1 | 0          | 1 | 1 | 0          | 1 | 0 |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 138  | 1170 | 508  | 41   | 687  | 367  | 262  | 1626 | 55   | 327  | 1635 | 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: | 138  | 1170 | 508  | 41   | 687  | 367  | 262  | 1626 | 55   | 327  | 1635 | 77   |
| 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:  | 138  | 1170 | 508  | 41   | 687  | 367  | 262  | 1626 | 55   | 327  | 1635 | 77   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Reduced Vol: | 138  | 1170 | 508  | 41   | 687  | 367  | 262  | 1626 | 55   | 327  | 1635 | 77   |
| 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 |
| Final Vol.:  | 138  | 1170 | 508  | 41   | 687  | 367  | 262  | 1626 | 55   | 327  | 1635 | 77   |

Saturation Flow Module:

|             |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Sat/Lane:   | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| 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 | 2.00 | 1.00 | 1.00 | 1.30 | 0.70 | 1.00 | 1.93 | 0.07 | 1.00 | 2.87 | 0.13 |
| Final Sat.: | 1600 | 3200 | 1600 | 1600 | 2086 | 1114 | 1600 | 3095 | 105  | 1600 | 4584 | 216  |

Capacity Analysis Module:

|             |      |      |      |      |      |      |      |      |      |      |      |      |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Vol/Sat:    | 0.09 | 0.37 | 0.32 | 0.03 | 0.33 | 0.33 | 0.16 | 0.53 | 0.53 | 0.20 | 0.36 | 0.36 |
| Crit Moves: | **** |      |      | **** |      |      | **** |      |      | **** |      |      |

\*\*\*\*\*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |    |      |           |    |      |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|----|------|-----------|----|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |
| EXISTING                          | 0          | 375 | 93   | 51         | 361 | 0    | 887       | 0  | 410  | 0         | 0  | 0    |
| AMBIENT                           |            |     |      |            |     |      |           |    |      |           |    |      |
| RELATED                           |            |     |      |            |     |      |           |    |      |           |    |      |
| PROJECT                           |            |     |      |            |     |      |           |    |      |           |    |      |
| TOTAL                             | 0          | 375 | 93   | 51         | 361 | 0    | 887       | 0  | 410  | 0         | 0  | 0    |
| LANE                              |            |     |      |            |     |      |           |    |      |           |    |      |
|                                   | 0          | 0   | 2    | 0          | 0   | 1    | 0         | 0  | 0    | 0         | 0  | 0    |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |
|                                   | Perm       |     | OLA  | Prot-Fix   |     | Auto | Perm      |    | Auto | Perm      |    | Auto |

### Critical Movements Diagram

|   |   |   |  |
|---|---|---|--|
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="120"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="51"/> </div> |   |  |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div> |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="200"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="488"/> </div> |  |
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="188"/><br/>                 B: <input type="text" value="0"/> </div>  |   |  |

|  | VIC RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$VIC = \frac{188 + 51 + 488 + 0}{*1425} = 0.440 - 0.03 \text{ LOS} = A$$

*ATCS*  
= 0.410

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |       |       |            |       |       |           |       |       |           |       |       |
|-----------------------------------|------------|-------|-------|------------|-------|-------|-----------|-------|-------|-----------|-------|-------|
|                                   | NORTHBOUND |       |       | SOUTHBOUND |       |       | WESTBOUND |       |       | EASTBOUND |       |       |
|                                   | LT         | TH    | RT    | LT         | TH    | RT    | LT        | TH    | RT    | LT        | TH    | RT    |
| EXISTING                          | 347        | 854   | 120   | 149        | 1170  | 294   | 248       | 605   | 421   | 280       | 210   | 454   |
| AMBIENT                           |            |       |       |            |       |       |           |       |       |           |       |       |
| RELATED                           |            |       |       |            |       |       |           |       |       |           |       |       |
| PROJECT                           |            |       |       |            |       |       |           |       |       |           |       |       |
| TOTAL                             | 347        | 854   | 120   | 149        | 1170  | 294   | 248       | 605   | 421   | 280       | 210   | 454   |
| LANE                              | ↵ ↶ ↷      | ↶ ↷ ↵ | ↶ ↷ ↵ | ↵ ↶ ↷      | ↶ ↷ ↵ | ↶ ↷ ↵ | ↵ ↶ ↷     | ↶ ↷ ↵ | ↶ ↷ ↵ | ↵ ↶ ↷     | ↶ ↷ ↵ | ↶ ↷ ↵ |
|                                   | 2          | 0     | 2     | 0          | 1     | 1     | 0         | 0     | 0     | 1         | 0     | 2     |
| SIGNAL                            | Phasing    |       | RTOR  | Phasing    |       | RTOR  | Phasing   |       | RTOR  | Phasing   |       | RTOR  |
|                                   | Prot-Fix   |       | Auto  | Prot-Fix   |       | Auto  | Prot-Var  |       | Auto  | Prot-Var  |       | Auto  |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 488 |
| B:         | 82  |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 359 |
| B:        | 280 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 380 |
| B:        | 248 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 285 |
| B:         | 191 |

|  |   |  |                  |            |
|--|---|--|------------------|------------|
|  | ↑ |  | <u>V/C RATIO</u> | <u>LOS</u> |
|  |   |  | 0.00 - 0.60      | A          |
|  |   |  | 0.61 - 0.70      | B          |
|  |   |  | 0.71 - 0.80      | C          |
|  |   |  | 0.81 - 0.90      | D          |
|  |   |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{191 + 488 + 380 + 280}{*1375} = 0.904 - 0.03 = 0.874$       LOS = **E**

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |      |      |           |    |      |           |    |      |
|-----------------------------------|------------|-----|------|------------|------|------|-----------|----|------|-----------|----|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |      |      | WESTBOUND |    |      | EASTBOUND |    |      |
|                                   | LT         | TH  | RT   | LT         | TH   | RT   | LT        | TH | RT   | LT        | TH | RT   |
| EXISTING                          | 157        | 635 | 0    | 51         | 1057 | 242  | 0         | 11 | 32   | 695       | 0  | 593  |
| AMBIENT                           |            |     |      |            |      |      |           |    |      |           |    |      |
| RELATED                           |            |     |      |            |      |      |           |    |      |           |    |      |
| PROJECT                           |            |     |      |            |      |      |           |    |      |           |    |      |
| TOTAL                             | 157        | 635 | 0    | 51         | 1057 | 242  | 0         | 11 | 32   | 695       | 0  | 593  |
| LANE                              |            |     |      |            |      |      |           |    |      |           |    |      |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |      | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |
|                                   | Perm       |     | Auto | Perm       |      | Auto | Perm      |    | Auto | Perm      |    | Auto |

### Critical Movements Diagram

|                                     |   |                                    |
|-------------------------------------|---|------------------------------------|
| EastBound                           | ↑ | WestBound                          |
| A: <input type="text" value="326"/> |   | A: <input type="text" value="32"/> |
| B: <input type="text" value="382"/> |   | B: <input type="text" value="0"/>  |

|                                     |   |                                     |
|-------------------------------------|---|-------------------------------------|
| SouthBound                          | ↓ | NorthBound                          |
| A: <input type="text" value="529"/> |   | A: <input type="text" value="212"/> |
| B: <input type="text" value="51"/>  |   | B: <input type="text" value="157"/> |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{157 + 529 + 32 + 382}{*1500} = 0.663 - 0.02$  LOS = B

ATSAC  
 = 0.688

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |      |      |           |      |      |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 132        | 568 | 212  | 73         | 820 | 59   | 511       | 3644 | 48   | 55        | 2253 | 168  |
| AMBIENT                           |            |     |      |            |     |      |           |      |      |           |      |      |
| RELATED                           |            |     |      |            |     |      |           |      |      |           |      |      |
| PROJECT                           |            |     |      |            |     |      |           |      |      |           |      |      |
| TOTAL                             | 132        | 568 | 212  | 73         | 820 | 59   | 511       | 3644 | 48   | 55        | 2253 | 168  |
| LANE                              |            |     |      |            |     |      |           |      |      |           |      |      |
|                                   | 1          | 0   | 0    | 1          | 0   | 0    | 1         | 0    | 3    | 1         | 0    | 2    |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |     | Auto | Perm       |     | Auto | Prot-Fix  |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|                                     |  |                                     |  |                                     |
|-------------------------------------|--|-------------------------------------|--|-------------------------------------|
|                                     |  | SouthBound                          |  |                                     |
|                                     |  | A: <input type="text" value="879"/> |  |                                     |
|                                     |  | B: <input type="text" value="73"/>  |  |                                     |
| EastBound                           |  | ↑                                   |  | WestBound                           |
| A: <input type="text" value="807"/> |  |                                     |  | A: <input type="text" value="923"/> |
| B: <input type="text" value="55"/>  |  |                                     |  | B: <input type="text" value="511"/> |
|                                     |  | NorthBound                          |  |                                     |
|                                     |  | A: <input type="text" value="780"/> |  |                                     |
|                                     |  | B: <input type="text" value="132"/> |  |                                     |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{132 + 879 + 511 + 807}{*1425} = 1.564 - 0.03$  LOS = F

*ATSAC = 1.564*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND                                |            |  | SOUTHBOUND |   |            | WESTBOUND                              |             |   | EASTBOUND  |  |            |
|--------------|---|------------|--|------------|---|------------|--|-------------|---|------------|--|------------|
|              | LT  | TH         | RT                                     | LT         | TH  | RT         | LT                                     | TH          | RT  | LT         | TH                                     | RT         |
| EXISTING     | 73  | 387        | 63                                     | 203        | 691                                       | 341        | 257                                    | 3803        | 189                                       | 192        | 2142                                   | 101        |
| AMBIENT      |   |            |  |            |   |            |  |             |   |            |  |            |
| RELATED      |   |            |  |            |   |            |  |             |   |            |  |            |
| PROJECT      |   |            |  |            |   |            |  |             |   |            |  |            |
| <b>TOTAL</b> | <b>73</b>                                 | <b>387</b> | <b>63</b>                              | <b>203</b> | <b>691</b>                                | <b>341</b> | <b>257</b>                             | <b>3803</b> | <b>189</b>                                | <b>192</b> | <b>2142</b>                            | <b>101</b> |
| LANE         |   |            |  |            |   |            |  |             |   |            |  |            |
| SIGNAL       | Phasing <input type="text" value="Perm"/> |            | RTOR <input type="text" value="Auto"/> |            | Phasing <input type="text" value="Perm"/> |            | RTOR <input type="text" value="Auto"/> |             | Phasing <input type="text" value="Perm"/> |            | RTOR <input type="text" value="Auto"/> |            |

### Critical Movements Diagram

|   |  |   |                                     |
|---|--|---|-------------------------------------|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                     A: <input type="text" value="346"/><br/>                     B: <input type="text" value="203"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                     A: <input type="text" value="998"/><br/>                     B: <input type="text" value="257"/> </div> | <b>V/C RATIO</b><br>0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 | <b>LOS</b><br>A<br>B<br>C<br>D<br>E |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                     A: <input type="text" value="714"/><br/>                     B: <input type="text" value="192"/> </div>  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                     A: <input type="text" value="194"/><br/>                     B: <input type="text" value="73"/> </div> |   |                                     |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{73 + 346 + 998 + 192}{*1500} = 1.003$  <sup>ATSAC</sup> ~~0.03~~ LOS = F  
 = 1.070

# CalcaDB

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|--|--|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |  |  |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |  |  |
| EXISTING                          | 0          | 0  | 0    | 243        | 0  | 1488 | 0         | 3545 | 105  | 326       | 2565 | 0    |  |  |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| TOTAL                             | 0          | 0  | 0    | 243        | 0  | 1488 | 0         | 3545 | 105  | 326       | 2565 | 0    |  |  |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |  |  |
|                                   | Perm       |    | Auto | Perm       |    | OLA  | Perm      |      | Auto | Prot-Fix  |      | Auto |  |  |

**Critical Movements Diagram**

|   |  |   |                    |            |
|---|--|---|--------------------|------------|
| <p>SouthBound</p> <p>A: <input type="text" value="639"/></p> <p>B: <input type="text" value="134"/></p> |  | <p>WestBound</p> <p>A: <input type="text" value="1182"/></p> <p>B: <input type="text" value="0"/></p> | <b>VIC RATIO</b>   | <b>LOS</b> |
| <p>EastBound</p> <p>A: <input type="text" value="855"/></p> <p>B: <input type="text" value="179"/></p>  |  | <p>0.00 - 0.60</p>  | A                  |            |
| <p>NorthBound</p> <p>A: <input type="text" value="0"/></p> <p>B: <input type="text" value="0"/></p>     |  | <p>0.61 - 0.70</p>  | B                  |            |
|   |  | <p>0.71 - 0.80</p>  | C                  |            |
|   |  |   | <p>0.81 - 0.90</p> | D          |
|   |  |   | <p>0.91 - 1.00</p> | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

VIC =  $\frac{0 + 639 + 1182 + 179}{*1425} = 1.334 - 0.03$  LOS = F

*ATCS = 1.304*



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|------------|-----|------|------------|------|------|-----------|----|------|-----------|----|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |      |      | WESTBOUND |    |      | EASTBOUND |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | LT         | TH  | RT   | LT         | TH   | RT   | LT        | TH | RT   | LT        | TH | RT   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING                          | 14         | 987 | 209  | 131        | 1840 | 45   | 186       | 11 | 276  | 22        | 11 | 13   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT                           |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 14         | 987 | 209  | 131        | 1840 | 45   | 186       | 11 | 276  | 22        | 11 | 13   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE                              |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | 1          | 0   | 2    | 0          | 1    | 0    | 0         | 1  | 0    | 2         | 0  | 1    | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |      | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | Perm       |     | Auto | Perm       |      | Auto | Perm      |    | Auto | Perm      |    | Auto |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

|             | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <input type="text" value="628"/><br/>                 B: <input type="text" value="131"/> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>EastBound</b><br/>                 A: <input type="text" value="33"/><br/>                 B: <input type="text" value="22"/> </div> <div style="text-align: center; width: 20%;"> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>WestBound</b><br/>                 A: <input type="text" value="276"/><br/>                 B: <input type="text" value="186"/> </div> </div> <div style="border: 1px solid black; padding: 5px;"> <b>NorthBound</b><br/>                 A: <input type="text" value="399"/><br/>                 B: <input type="text" value="14"/> </div> |  |           |     |             |   |             |   |             |   |             |   |             |   |
|-------------|--|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
|             |  | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">VIC RATIO</th> <th style="text-align: left;">LOS</th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | VIC RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| VIC RATIO   | LOS  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60 | A  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70 | B  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80 | C  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90 | D  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00 | E  |  |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

$$VIC = \frac{14 + 628 + 276 + 22}{*1500} = 0.557$$
LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|------------|-----|------|------------|------|------|-----------|----|------|-----------|----|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |      |      | WESTBOUND |    |      | EASTBOUND |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | LT         | TH  | RT   | LT         | TH   | RT   | LT        | TH | RT   | LT        | TH | RT   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING                          | 25         | 884 | 132  | 239        | 1782 | 52   | 65        | 11 | 95   | 75        | 37 | 44   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT                           |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 25         | 884 | 132  | 239        | 1782 | 52   | 65        | 11 | 95   | 75        | 37 | 44   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE                              |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | 1          | 0   | 2    | 0          | 1    | 0    | 0         | 2  | 0    | 2         | 0  | 1    | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |      | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | Perm       |     | Auto | Prot-Fix   |      | Auto | Perm      |    | Auto | Perm      |    | Auto |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

|  | <b>SouthBound</b><br>A: <input type="text" value="611"/><br>B: <input type="text" value="131"/> |  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
|--|---|--|--|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| <b>EastBound</b><br>A: <input type="text" value="78"/><br>B: <input type="text" value="75"/> |   | <b>WestBound</b><br>A: <input type="text" value="86"/><br>B: <input type="text" value="65"/> | <b>NorthBound</b><br>A: <input type="text" value="339"/><br>B: <input type="text" value="25"/> |  |           |     |             |   |             |   |             |   |             |   |             |   |
|  |   |  |  | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">VIC RATIO</th> <th style="text-align: left;">LOS</th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | VIC RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| VIC RATIO  | LOS   |  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60  | A   |  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70  | B   |  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80  | C   |  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90  | D   |  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00  | E   |  |  |  |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

VIC =  $\frac{25 + 611 + 86 + 75}{*1425} = 0.489$  LOS = A

NICE  
 = 0.489

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |      |      |           |      |      |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 71         | 305 | 148  | 779        | 718 | 568  | 0         | 2901 | 361  | 0         | 2722 | 137  |
| AMBIENT                           |            |     |      |            |     |      |           |      |      |           |      |      |
| RELATED                           |            |     |      |            |     |      |           |      |      |           |      |      |
| PROJECT                           |            |     |      |            |     |      |           |      |      |           |      |      |
| TOTAL                             | 71         | 305 | 148  | 779        | 718 | 568  | 0         | 2901 | 361  | 0         | 2722 | 137  |
| LANE                              | ↵          | ↕   | ↗    | ↵          | ↕   | ↗    | ↵         | ↕    | ↗    | ↵         | ↕    | ↗    |
|                                   | 2          | 0   | 2    | 0          | 1   | 0    | 0         | 0    | 3    | 0         | 1    | 0    |
|                                   | 0          | 0   | 0    | 2          | 0   | 0    | 0         | 0    | 0    | 0         | 0    | 0    |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Prot-Fix   |     | Auto | Prot-Fix   |     | Auto | Perm      |      | Auto | Perm      |      | Auto |

### Critical Movements Diagram

|  |   |   |                  |            |
|--|---|---|------------------|------------|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="359"/><br/>                 B: <input type="text" value="428"/> </div> |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input type="text" value="816"/><br/>                 B: <input type="text" value="0"/> </div> | <u>V/C RATIO</u> | <u>LOS</u> |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="953"/><br/>                 B: <input type="text" value="0"/> </div>    | <div style="text-align: center;">                 ↑<br/>                  <br/>                 ↑             </div>  |   | 0.00 - 0.60      | A          |
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 NorthBound<br/>                 A: <input type="text" value="151"/><br/>                 B: <input type="text" value="39"/> </div> |   | 0.61 - 0.70      | B          |
|  |   |   | 0.71 - 0.80      | C          |
|  |   |   | 0.81 - 0.90      | D          |
|  |   |   | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{151 + 428 + 0 + 953}{*1425} = 1.005 - 0.03$  LOS =  E

*ATSAC = 0.975*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |           |           |            |           |            |           |             |            |            |             |           |  |  |
|-----------------------------------|------------|-----------|-----------|------------|-----------|------------|-----------|-------------|------------|------------|-------------|-----------|--|--|
|                                   | NORTHBOUND |           |           | SOUTHBOUND |           |            | WESTBOUND |             |            | EASTBOUND  |             |           |  |  |
|                                   | LT         | TH        | RT        | LT         | TH        | RT         | LT        | TH          | RT         | LT         | TH          | RT        |  |  |
| EXISTING                          | 22         | 21        | 30        | 275        | 86        | 377        | 30        | 2730        | 113        | 230        | 2703        | 15        |  |  |
| AMBIENT                           |            |           |           |            |           |            |           |             |            |            |             |           |  |  |
| RELATED                           |            |           |           |            |           |            |           |             |            |            |             |           |  |  |
| PROJECT                           |            |           |           |            |           |            |           |             |            |            |             |           |  |  |
| <b>TOTAL</b>                      | <b>22</b>  | <b>21</b> | <b>30</b> | <b>275</b> | <b>86</b> | <b>377</b> | <b>30</b> | <b>2730</b> | <b>113</b> | <b>230</b> | <b>2703</b> | <b>15</b> |  |  |
| LANE                              |            |           |           |            |           |            |           |             |            |            |             |           |  |  |
| SIGNAL                            | Phasing    |           | RTOR      |            | Phasing   |            | RTOR      |             | Phasing    |            | RTOR        |           |  |  |
|                                   | Perm       |           | Auto      |            | Perm      |            | Auto      |             | Perm       |            | Auto        |           |  |  |

| Critical Movements Diagram   |   | VIC RATIO   | LOS                   |
|--|---|---|-----------------------|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                     SouthBound<br/>                     A: <input type="text" value="361"/><br/>                     B: <input type="text" value="275"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                     EastBound<br/>                     A: <input type="text" value="906"/><br/>                     B: <input type="text" value="230"/> </div> |   |                       |
|  |   |   |                       |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                     NorthBound<br/>                     A: <input type="text" value="73"/><br/>                     B: <input type="text" value="22"/> </div>   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                     WestBound<br/>                     A: <input type="text" value="948"/><br/>                     B: <input type="text" value="30"/> </div>  |   |                       |
| <p>A = Adjusted Through/Right Volume<br/>                     B = Adjusted Left Volume<br/>                     * = ATSAC Benefit</p>  |   | 0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 | A<br>B<br>C<br>D<br>E |
| <b>Results</b>   |   |   |                       |
| North/South Critical Movements = B(N/B) + A(S/B)   |   |   |                       |
| West/East Critical Movements = A(W/B) + B(E/B)   |   |   |                       |
| VIC = $\frac{22 + 361 + 948 + 230}{*1425}$   |   | = 1.025      LOS = F  |                       |

Cumbase PM

Level of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #23 Spalding Drive & Olympic Boulevard

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.085

Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx

Optimal Cycle: 180 Level Of Service: F

\*\*\*\*\*

Street Name: Spalding Drive Olympic Boulevard

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 Permitted

Rights: Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Lanes: 0 0 1! 0 0 0 1 0 0 1 0 1 0 2 1 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 22 21 30 275 86 377 230 2703 15 30 2730 113

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: 22 21 30 275 86 377 230 2703 15 30 2730 113

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: 22 21 30 275 86 377 230 2703 15 30 2730 113

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 22 21 30 275 86 377 230 2703 15 30 2730 113

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

Final Vol.: 22 21 30 275 86 377 230 2703 15 30 2730 113

-----|-----|-----|-----|

Saturation Flow Module:

Sat/Lane: 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600 1600

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: 0.30 0.29 0.41 0.76 0.24 1.00 1.00 2.98 0.02 1.00 2.88 0.12

Final Sat.: 482 460 658 1219 381 1600 1600 4774 26 1600 4609 191

-----|-----|-----|-----|

Capacity Analysis Module:

Vol/Sat: 0.01 0.05 0.05 0.17 0.23 0.24 0.14 0.57 0.57 0.02 0.59 0.59

Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*

\*\*\*\*\*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |  |            |   |            |  |           |   |          |   |            |   |            |
|-----------------------------------|--|------------|---|------------|--|-----------|---|----------|---|------------|---|------------|
|                                   | NORTHBOUND                                     |            |   | SOUTHBOUND |  |           | WESTBOUND                               |          |   | EASTBOUND  |   |            |
|                                   | LT   | TH         | RT                                      | LT         | TH   | RT        | LT                                      | TH       | RT  | LT         | TH                                      | RT         |
| EXISTING                          | 27   | 706        | 55                                      | 140        | 1862                                       | 36        | 52                                      | 0        | 54  | 276        | 0                                       | 335        |
| AMBIENT                           |  |            |   |            |  |           |   |          |   |            |   |            |
| RELATED                           |  |            |   |            |  |           |   |          |   |            |   |            |
| PROJECT                           |  |            |   |            |  |           |   |          |   |            |   |            |
| <b>TOTAL</b>                      | <b>27</b>                                      | <b>706</b> | <b>55</b>                               | <b>140</b> | <b>1862</b>                                | <b>36</b> | <b>52</b>                               | <b>0</b> | <b>54</b>                                   | <b>276</b> | <b>0</b>                                | <b>335</b> |
| LANE                              |  |            |   |            |  |           |   |          |   |            |   |            |
|                                   | 2  | 0          | 2                                       | 0          | 1  | 0         | 0                                       | 1        | 0   | 0          | 0                                       | 0          |
| SIGNAL                            | Phasing: <input type="text" value="Prot-Fix"/> |            | RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Perm"/> |           | RTOR: <input type="text" value="Auto"/> |          | Phasing: <input type="text" value="Split"/> |            | RTOR: <input type="text" value="Auto"/> |            |

### Critical Movements Diagram

|  |   |  |   |                                     |
|--|---|--|---|-------------------------------------|
| <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px;"> <b>EastBound</b><br/>                     A: <input type="text" value="328"/><br/>                     B: <input type="text" value="152"/> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> </div> <div style="border: 1px solid black; padding: 5px;"> <b>WestBound</b><br/>                     A: <input type="text" value="54"/><br/>                     B: <input type="text" value="52"/> </div> </div> | <b>SouthBound</b><br>A: <input type="text" value="633"/><br>B: <input type="text" value="140"/> | <b>NorthBound</b><br>A: <input type="text" value="254"/><br>B: <input type="text" value="15"/> | <b>V/C RATIO</b><br>0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 | <b>LOS</b><br>A<br>B<br>C<br>D<br>E |
|--|---|--|---|-------------------------------------|

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSA Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$$V/C = \frac{15 + 633 + 54 + 328}{*1375} = 0.679 - 0.03 \text{ ATSA} = 0.649 \text{ LOS} = B$$

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  PM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |      |      |           |    |      |           |    |      |  |  |
|-----------------------------------|------------|-----|------|------------|------|------|-----------|----|------|-----------|----|------|--|--|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |      |      | WESTBOUND |    |      | EASTBOUND |    |      |  |  |
|                                   | LT         | TH  | RT   | LT         | TH   | RT   | LT        | TH | RT   | LT        | TH | RT   |  |  |
| EXISTING                          | 11         | 718 | 20   | 33         | 1925 | 11   | 17        | 0  | 29   | 0         | 0  | 0    |  |  |
| AMBIENT                           |            |     |      |            |      |      |           |    |      |           |    |      |  |  |
| RELATED                           |            |     |      |            |      |      |           |    |      |           |    |      |  |  |
| PROJECT                           |            |     |      |            |      |      |           |    |      |           |    |      |  |  |
| TOTAL                             | 11         | 718 | 20   | 33         | 1925 | 11   | 17        | 0  | 29   | 0         | 0  | 0    |  |  |
| LANE                              |            |     |      |            |      |      |           |    |      |           |    |      |  |  |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |      | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |  |  |
|                                   | Perm       |     | Auto | Perm       |      | Auto | Perm      |    | Auto | Perm      |    | Auto |  |  |

### Critical Movements Diagram

|  |  |  |  |  |  |  |   |                                     |
|--|--|--|--|--|--|--|---|-------------------------------------|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="645"/><br/>                 B: <input type="text" value="33"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="46"/><br/>                 B: <input type="text" value="17"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="246"/><br/>                 B: <input type="text" value="11"/> </div> |  | <b>V/C RATIO</b><br>0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 | <b>LOS</b><br>A<br>B<br>C<br>D<br>E |
|--|--|--|--|--|--|--|---|-------------------------------------|

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

**Results**

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{11 + 645 + 46 + 0}{1500} = 0.468$       LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND |            |            | SOUTHBOUND |             |           | WESTBOUND   |             |           | EASTBOUND |             |            |
|--------------|------------|------------|------------|------------|-------------|-----------|-------------|-------------|-----------|-----------|-------------|------------|
|              | LT         | TH         | RT         | LT         | TH          | RT        | LT          | TH          | RT        | LT        | TH          | RT         |
| EXISTING     | 322        | 949        | 437        | 75         | 1658        | 61        | 1056        | 1724        | 40        | 88        | 1155        | 396        |
| AMBIENT      |            |            |            |            |             |           |             |             |           |           |             |            |
| RELATED      |            |            |            |            |             |           |             |             |           |           |             |            |
| PROJECT      |            |            |            |            |             |           |             |             |           |           |             |            |
| <b>TOTAL</b> | <b>322</b> | <b>949</b> | <b>437</b> | <b>75</b>  | <b>1658</b> | <b>61</b> | <b>1056</b> | <b>1724</b> | <b>40</b> | <b>88</b> | <b>1155</b> | <b>396</b> |
| LANE         |            |            |            |            |             |           |             |             |           |           |             |            |
| SIGNAL       | Phasing    |            | RTOR       |            | Phasing     |           | RTOR        |             | Phasing   |           | RTOR        |            |
|              | Prot-Fix   |            | OLA        |            | Perm        |           | Auto        |             | Prot-Fix  |           | Auto        |            |

### Critical Movements Diagram

|   |  |  |                  |            |
|---|--|--|------------------|------------|
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="860"/><br/>                 B: <input type="text" value="75"/> </div> |  |                  |            |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="517"/><br/>                 B: <input type="text" value="88"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="588"/><br/>                 B: <input type="text" value="581"/> </div> | <b>V/C RATIO</b> | <b>LOS</b> |
|   |  |  | 0.00 - 0.60      | A          |
|   |  |  | 0.61 - 0.70      | B          |
|   |  |  | 0.71 - 0.80      | C          |
|   |  |  | 0.81 - 0.90      | D          |
|   |  |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

$V/C = \frac{177 + 860 + 581 + 517}{*1375} = 1.483 - 0.03$  LOS = F  
 = 1.453



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |               |               |               |               |               |               |               |               |               |               |               |               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND    |               |               | SOUTHBOUND    |               |               | WESTBOUND     |               |               | EASTBOUND     |               |               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | LT            | TH            | RT            | LT            | TH            | RT            | LT            | TH            | RT            | LT            | TH            | RT            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING                          | 91            | 63            | 124           | 11            | 226           | 48            | 166           | 2124          | 31            | 49            | 1249          | 44            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT                           |               |               |               |               |               |               |               |               |               |               |               |               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |               |               |               |               |               |               |               |               |               |               |               |               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |               |               |               |               |               |               |               |               |               |               |               |               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 91            | 63            | 124           | 11            | 226           | 48            | 166           | 2124          | 31            | 49            | 1249          | 44            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE                              | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | 0             | 0             | 0             | 1             | 0             | 0             | 0             | 0             | 0             | 0             | 1             | 0             | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 0 |
| SIGNAL                            | Phasing       |               | RTOR          | Phasing       |               | RTOR          | Phasing       |               | RTOR          | Phasing       |               | RTOR          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | Perm          |               | Auto          | Perm          |               | Auto          | Prot-Fix      |               | Auto          | Perm          |               | Auto          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

|   |  |  |  |            |
|---|--|--|--|------------|
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="285"/><br/>                 B: <input type="text" value="11"/> </div> |  |  |            |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="625"/><br/>                 B: <input type="text" value="49"/> </div> | <div style="text-align: center;">                 ↑<br/>                 ↕             </div>  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="718"/><br/>                 B: <input type="text" value="166"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="278"/><br/>                 B: <input type="text" value="91"/> </div> |            |
|   |  | <u>V/C RATIO</u>   |  | <u>LOS</u> |
|   |  | 0.00 - 0.60  |  | A          |
|   |  | 0.61 - 0.70  |  | B          |
|   |  | 0.71 - 0.80  |  | C          |
|   |  | 0.81 - 0.90  |  | D          |
|   |  | 0.91 - 1.00  |  | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

$V/C = \frac{91 + 285 + 166 + 625}{*1425} = 0.749$ 
ATSS  
= 0.719
LOS = C

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |                                   |    |                                   |                                   |    |                                   |                                   |      |                                   |                                   |      |                                   |
|-----------------------------------|-----------------------------------|----|-----------------------------------|-----------------------------------|----|-----------------------------------|-----------------------------------|------|-----------------------------------|-----------------------------------|------|-----------------------------------|
|                                   | NORTHBOUND                        |    |                                   | SOUTHBOUND                        |    |                                   | WESTBOUND                         |      |                                   | EASTBOUND                         |      |                                   |
|                                   | LT                                | TH | RT                                | LT                                | TH | RT                                | LT                                | TH   | RT                                | LT                                | TH   | RT                                |
| EXISTING                          | 0                                 | 0  | 0                                 | 366                               | 0  | 482                               | 0                                 | 1845 | 292                               | 253                               | 1243 | 0                                 |
| AMBIENT                           |                                   |    |                                   |                                   |    |                                   |                                   |      |                                   |                                   |      |                                   |
| RELATED                           |                                   |    |                                   |                                   |    |                                   |                                   |      |                                   |                                   |      |                                   |
| PROJECT                           |                                   |    |                                   |                                   |    |                                   |                                   |      |                                   |                                   |      |                                   |
| TOTAL                             | 0                                 | 0  | 0                                 | 366                               | 0  | 482                               | 0                                 | 1845 | 292                               | 253                               | 1243 | 0                                 |
| LANE                              | 0                                 | 0  | 0                                 | 1                                 | 0  | 0                                 | 0                                 | 2    | 0                                 | 1                                 | 0    | 0                                 |
|                                   | ↙                                 | ↖  | ↑                                 | ↙                                 | ↖  | ↑                                 | ↙                                 | ↖    | ↑                                 | ↙                                 | ↖    | ↑                                 |
| SIGNAL                            | Phasing                           |    | RTOR                              | Phasing                           |    | RTOR                              | Phasing                           |      | RTOR                              | Phasing                           |      | RTOR                              |
|                                   | <input type="text" value="Perm"/> |    | <input type="text" value="Auto"/> | <input type="text" value="Perm"/> |    | <input type="text" value="Auto"/> | <input type="text" value="Perm"/> |      | <input type="text" value="Auto"/> | <input type="text" value="Perm"/> |      | <input type="text" value="Auto"/> |

### Critical Movements Diagram

|                                     |   |                                     |
|-------------------------------------|---|-------------------------------------|
| EastBound                           | ↑ | WestBound                           |
| A: <input type="text" value="414"/> |   | A: <input type="text" value="712"/> |
| B: <input type="text" value="253"/> |   | B: <input type="text" value="0"/>   |

|                                     |
|-------------------------------------|
| SouthBound                          |
| A: <input type="text" value="283"/> |
| B: <input type="text" value="283"/> |

|                                   |
|-----------------------------------|
| NorthBound                        |
| A: <input type="text" value="0"/> |
| B: <input type="text" value="0"/> |

|  |                  |            |
|--|------------------|------------|
|  | <u>V/C RATIO</u> | <u>LOS</u> |
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 283 + 712 + 253}{1500} = 0.762$  LOS = C

*ATSAC*  
= 0.732

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |          |            |            |          |            |             |             |           |           |             |            |
|-----------------------------------|------------|----------|------------|------------|----------|------------|-------------|-------------|-----------|-----------|-------------|------------|
|                                   | NORTHBOUND |          |            | SOUTHBOUND |          |            | WESTBOUND   |             |           | EASTBOUND |             |            |
|                                   | LT         | TH       | RT         | LT         | TH       | RT         | LT          | TH          | RT        | LT        | TH          | RT         |
| EXISTING                          | 315        | 0        | 645        | 117        | 0        | 257        | 1131        | 1437        | 73        | 78        | 1340        | 483        |
| AMBIENT                           |            |          |            |            |          |            |             |             |           |           |             |            |
| RELATED                           |            |          |            |            |          |            |             |             |           |           |             |            |
| PROJECT                           |            |          |            |            |          |            |             |             |           |           |             |            |
| <b>TOTAL</b>                      | <b>315</b> | <b>0</b> | <b>645</b> | <b>117</b> | <b>0</b> | <b>257</b> | <b>1131</b> | <b>1437</b> | <b>73</b> | <b>78</b> | <b>1340</b> | <b>483</b> |
| LANE                              |            |          |            |            |          |            |             |             |           |           |             |            |
|                                   | 2          | 0        | 0          | 1          | 0        | 0          | 1           | 0           | 3         | 1         | 0           | 2          |
| SIGNAL                            | Phasing    |          | RTOR       | Phasing    |          | RTOR       | Phasing     |             | RTOR      | Phasing   |             | RTOR       |
|                                   | Split      |          | OLA        | Split      |          | Auto       | Prot-Fix    |             | Auto      | Prot-Fix  |             | Auto       |

### Critical Movements Diagram

|   |   |   |  |
|---|---|---|--|
|   | <b>SouthBound</b><br>A: <input type="text" value="218"/><br>B: <input type="text" value="117"/> |   |  |
| <b>EastBound</b><br>A: <input type="text" value="608"/><br>B: <input type="text" value="78"/> |   | <b>WestBound</b><br>A: <input type="text" value="479"/><br>B: <input type="text" value="1131"/> |  |
|   | <b>NorthBound</b><br>A: <input type="text" value="0"/><br>B: <input type="text" value="173"/>   |   |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

---

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

VIC =  $\frac{173 + 218 + 1131 + 608}{*1375} = 1.479 - 0.03$  LOS = F

*1.449*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|                 | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|-----------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                 | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| <b>EXISTING</b> | 0          | 0  | 0    | 732        | 0  | 1273 | 0         | 1618 | 364  | 408       | 1765 | 0    |
| <b>AMBIENT</b>  |            |    |      |            |    |      |           |      |      |           |      |      |
| <b>RELATED</b>  |            |    |      |            |    |      |           |      |      |           |      |      |
| <b>PROJECT</b>  |            |    |      |            |    |      |           |      |      |           |      |      |
| <b>TOTAL</b>    | 0          | 0  | 0    | 732        | 0  | 1273 | 0         | 1618 | 364  | 408       | 1765 | 0    |
| <b>LANE</b>     |            |    |      |            |    |      |           |      |      |           |      |      |
|                 | 0          | 0  | 0    | 2          | 0  | 0    | 0         | 2    | 0    | 2         | 0    | 0    |
| <b>SIGNAL</b>   | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                 | Perm       |    | Auto | Perm       |    | Auto | Perm      |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 588 |
| B:         | 403 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 588 |
| B:        | 224 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 661 |
| B:        | 0   |

|            |   |
|------------|---|
| NorthBound |   |
| A:         | 0 |
| B:         | 0 |

|  |                  |            |
|--|------------------|------------|
|  | <b>V/C RATIO</b> | <b>LOS</b> |
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$V/C = \frac{0 + 588 + 661 + 224}{*1425} = 0.964 - 0.003$

**LOS = E**

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND   |           |   | SOUTHBOUND |  |            | WESTBOUND  |             |            | EASTBOUND  |             |          |
|--------------|--|-----------|---|------------|--|------------|--|-------------|------------|------------|-------------|----------|
|              | LT   | TH        | RT  | LT         | TH   | RT         | LT   | TH          | RT         | LT         | TH          | RT       |
| EXISTING     | 11   | 22        | 14  | 687        | 12   | 499        | 11   | 1472        | 227        | 187        | 2316        | 0        |
| AMBIENT      |  |           |   |            |  |            |  |             |            |            |             |          |
| RELATED      |  |           |   |            |  |            |  |             |            |            |             |          |
| PROJECT      |  |           |   |            |  |            |  |             |            |            |             |          |
| <b>TOTAL</b> | <b>11</b>  | <b>22</b> | <b>14</b>   | <b>687</b> | <b>12</b>  | <b>499</b> | <b>11</b>  | <b>1472</b> | <b>227</b> | <b>187</b> | <b>2316</b> | <b>0</b> |
| LANE         |  |           |   |            |  |            |  |             |            |            |             |          |
| SIGNAL       | Phasing <input type="text" value="Perm"/> RTOR <input type="text" value="Auto"/> |           | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="OLA"/> |            | Phasing <input type="text" value="Perm"/> RTOR <input type="text" value="Auto"/> |            | Phasing <input type="text" value="Prot-Fix"/> RTOR <input type="text" value="Auto"/> |             |            |            |             |          |

### Critical Movements Diagram

|                                     |   |                                     |
|-------------------------------------|---|-------------------------------------|
| EastBound                           | ↑ | WestBound                           |
| A: <input type="text" value="772"/> |   | A: <input type="text" value="491"/> |
| B: <input type="text" value="103"/> |   | B: <input type="text" value="11"/>  |

|                                     |
|-------------------------------------|
| SouthBound                          |
| A: <input type="text" value="399"/> |
| B: <input type="text" value="399"/> |

|                                    |
|------------------------------------|
| NorthBound                         |
| A: <input type="text" value="29"/> |
| B: <input type="text" value="11"/> |

|  |                  |            |
|--|------------------|------------|
|  | <u>V/C RATIO</u> | <u>LOS</u> |
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{29 + 399 + 11 + 772}{1375} = 0.811$       LOS =  $\phi$

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND |     |      | SOUTHBOUND |         |    | WESTBOUND |     |         | EASTBOUND |      |     |
|----------|------------|-----|------|------------|---------|----|-----------|-----|---------|-----------|------|-----|
|          | LT         | TH  | RT   | LT         | TH      | RT | LT        | TH  | RT      | LT        | TH   | RT  |
| EXISTING | 68         | 547 | 113  | 276        | 835     | 11 | 74        | 183 | 217     | 31        | 426  | 240 |
| AMBIENT  |            |     |      |            |         |    |           |     |         |           |      |     |
| RELATED  |            |     |      |            |         |    |           |     |         |           |      |     |
| PROJECT  |            |     |      |            |         |    |           |     |         |           |      |     |
| TOTAL    | 68         | 547 | 113  | 276        | 835     | 11 | 74        | 183 | 217     | 31        | 426  | 240 |
| LANE     | 1          | 0   | 1    | 1          | 0       | 0  | 1         | 0   | 0       | 1         | 0    | 1   |
|          | ↙          | ↕   | ↘    | ↙          | ↕       | ↘  | ↙         | ↕   | ↘       | ↙         | ↕    | ↘   |
| SIGNAL   | Phasing    |     | RTOR |            | Phasing |    | RTOR      |     | Phasing |           | RTOR |     |
|          | Perm       |     | Auto |            | Perm    |    | Auto      |     | Perm    |           | Auto |     |

### Critical Movements Diagram

|                                     |
|-------------------------------------|
| SouthBound                          |
| A: <input type="text" value="846"/> |
| B: <input type="text" value="276"/> |

|                                     |
|-------------------------------------|
| EastBound                           |
| A: <input type="text" value="426"/> |
| B: <input type="text" value="31"/>  |

|                                     |
|-------------------------------------|
| WestBound                           |
| A: <input type="text" value="400"/> |
| B: <input type="text" value="74"/>  |

|                                     |
|-------------------------------------|
| NorthBound                          |
| A: <input type="text" value="547"/> |
| B: <input type="text" value="68"/>  |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$V/C = \frac{68 + 846 + 74 + 426}{*1500} = 0.873$

LOS = D

**Cumulative plus Project (2010)**





## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  AM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND   |  |   | SOUTHBOUND   |      |     | WESTBOUND |      |    | EASTBOUND |      |     |
|----------|--|--|---|--|------|-----|-----------|------|----|-----------|------|-----|
|          | LT   | TH   | RT  | LT   | TH   | RT  | LT        | TH   | RT | LT        | TH   | RT  |
| EXISTING | 108  | 655  | 133   | 140  | 1027 | 127 | 113       | 2535 | 74 | 118       | 2260 | 392 |
| AMBIENT  |  |  |   |  |      |     |           |      |    |           |      |     |
| RELATED  |  |  |   |  |      |     |           |      |    |           |      |     |
| PROJECT  |  |  |   |  |      |     |           |      |    |           |      |     |
| TOTAL    | 108  | 655  | 133   | 140  | 1027 | 127 | 113       | 2535 | 74 | 118       | 2260 | 392 |
| LANE     | <br>1 0 1 0 1 0 0  | <br>1 0 1 0 1 0 0  | <br>1 0 2 0 1 0 0   | <br>1 0 3 0 0 1 0  |      |     |           |      |    |           |      |     |
| SIGNAL   | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="OLA"/> | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |      |     |           |      |    |           |      |     |

### Critical Movements Diagram

|  |   |  |  |
|--|---|--|--|
|  | <b>SouthBound</b><br>A: <input type="text" value="577"/><br>B: <input type="text" value="140"/> |  |  |
| <b>EastBound</b><br>A: <input type="text" value="753"/><br>B: <input type="text" value="118"/> |   | <b>WestBound</b><br>A: <input type="text" value="870"/><br>B: <input type="text" value="113"/> |  |
|  | <b>NorthBound</b><br>A: <input type="text" value="394"/><br>B: <input type="text" value="108"/> |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{108 + 577 + 870 + 118}{*1425} = 1.104 - 0.03 = 1.074$  LOS = F

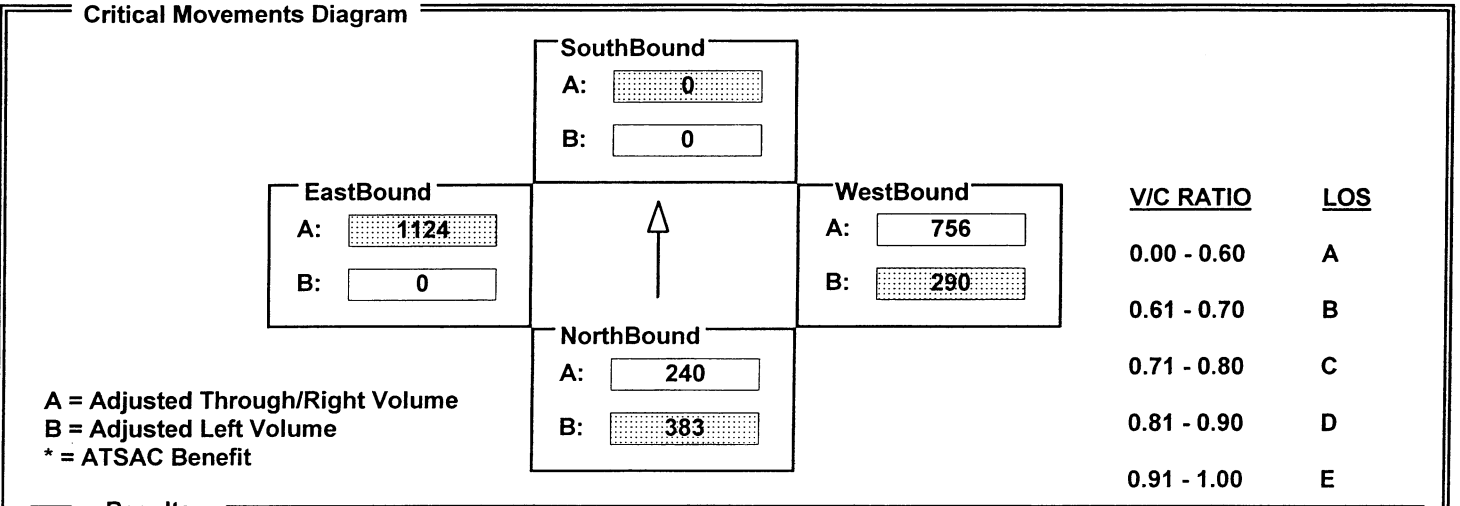
## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND                                |          |  | SOUTHBOUND |   |          | WESTBOUND                              |             |   | EASTBOUND |  |          |
|--------------|---|----------|--|------------|---|----------|--|-------------|---|-----------|--|----------|
|              | LT  | TH       | RT                                     | LT         | TH  | RT       | LT                                     | TH          | RT  | LT        | TH                                     | RT       |
| EXISTING     | 383                                       | 0        | 385                                    | 0          | 0   | 0        | 290                                    | 2267        | 0   | 0         | 3372                                   | 5        |
| AMBIENT      |   |          |  |            |   |          |  |             |   |           |  |          |
| RELATED      |   |          |  |            |   |          |  |             |   |           |  |          |
| PROJECT      |   |          |  |            |   |          |  |             |   |           |  |          |
| <b>TOTAL</b> | <b>383</b>                                | <b>0</b> | <b>385</b>                             | <b>0</b>   | <b>0</b>                                  | <b>0</b> | <b>290</b>                             | <b>2267</b> | <b>0</b>                                      | <b>0</b>  | <b>3372</b>                            | <b>5</b> |
| LANE         |   |          |  |            |   |          |  |             |   |           |  |          |
| SIGNAL       | Phasing <input type="text" value="Perm"/> |          | RTOR <input type="text" value="Auto"/> |            | Phasing <input type="text" value="Perm"/> |          | RTOR <input type="text" value="Auto"/> |             | Phasing <input type="text" value="Prot-Fix"/> |           | RTOR <input type="text" value="Auto"/> |          |



**Results**

North/South Critical Movements =  $B(N/B) + A(S/B)$

West/East Critical Movements =  $B(W/B) + A(E/B)$

$$V/C = \frac{383 + 0 + 290 + 1124}{*1425} = 1.191 - 0.03 = 1.161 \quad \text{LOS} = F$$

*ATCS*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND                                |            |  | SOUTHBOUND |   |          | WESTBOUND                              |          |   | EASTBOUND |  |            |
|--------------|---|------------|--|------------|---|----------|--|----------|---|-----------|--|------------|
|              | LT  | TH         | RT                                     | LT         | TH  | RT       | LT                                     | TH       | RT  | LT        | TH                                     | RT         |
| EXISTING     | 0   | 678        | 65                                     | 25         | 270                                       | 0        | 32                                     | 0        | 89  | 0         | 133                                    | 104        |
| AMBIENT      |   |            |  |            |   |          |  |          |   |           |  |            |
| RELATED      |   |            |  |            |   |          |  |          |   |           |  |            |
| PROJECT      |   |            |  |            |   |          |  |          |   |           |  |            |
| <b>TOTAL</b> | <b>0</b>                                  | <b>678</b> | <b>65</b>                              | <b>25</b>  | <b>270</b>                                | <b>0</b> | <b>32</b>                              | <b>0</b> | <b>89</b>                                     | <b>0</b>  | <b>133</b>                             | <b>104</b> |
| LANE         |   |            |  |            |   |          |  |          |   |           |  |            |
|              | 0   | 0          | 1                                      | 0          | 1   | 0        | 0                                      | 0        | 0   | 0         | 1                                      | 0          |
| SIGNAL       | Phasing <input type="text" value="Perm"/> |            | RTOR <input type="text" value="Auto"/> |            | Phasing <input type="text" value="Perm"/> |          | RTOR <input type="text" value="Auto"/> |          | Phasing <input type="text" value="Prot-Fix"/> |           | RTOR <input type="text" value="Auto"/> |            |

### Critical Movements Diagram

|            |                                  |
|------------|----------------------------------|
| SouthBound |                                  |
| A:         | <input type="text" value="270"/> |
| B:         | <input type="text" value="25"/>  |

↑

|           |                                 |
|-----------|---------------------------------|
| WestBound |                                 |
| A:        | <input type="text" value="89"/> |
| B:        | <input type="text" value="32"/> |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{372 + 25 + 32 + 237}{*1425} = 0.397 - 0.03 = 0.367$$

LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |      |      |           |      |      |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 37         | 686 | 242  | 872        | 917 | 194  | 122       | 2225 | 252  | 203       | 3576 | 0    |
| AMBIENT                           |            |     |      |            |     |      |           |      |      |           |      |      |
| RELATED                           |            |     |      |            |     |      |           |      |      |           |      |      |
| PROJECT                           |            |     |      |            |     |      |           |      |      |           |      |      |
| TOTAL                             | 37         | 686 | 242  | 872        | 917 | 194  | 122       | 2225 | 252  | 203       | 3576 | 0    |
| LANE                              | ↙          | ↕   | ↗    | ↙          | ↕   | ↗    | ↙         | ↕    | ↗    | ↙         | ↕    | ↗    |
|                                   | 2          | 0   | 2    | 0          | 0   | 1    | 0         | 0    | 2    | 0         | 0    | 1    |
|                                   | 0          | 0   | 0    | 1          | 0   | 0    | 0         | 0    | 0    | 0         | 1    | 0    |
|                                   | 0          | 0   | 0    | 0          | 0   | 0    | 0         | 0    | 0    | 0         | 0    | 0    |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Prot-Fix   |     | OLA  | Prot-Fix   |     | OLA  | Prot-Fix  |      | OLA  | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 459 |
| B:         | 480 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 894 |
| B:        | 112 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 742 |
| B:        | 67  |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 343 |
| B:         | 20  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

---

**Results**

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

VIC =  $\frac{343 + 480 + 67 + 894}{*1375} = 1.227 - 0.03 = 1.197$  LOS = F

*ATCS*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |            |          |            |            |           |           |          |          |           |          |            |
|-----------------------------------|------------|------------|----------|------------|------------|-----------|-----------|----------|----------|-----------|----------|------------|
|                                   | NORTHBOUND |            |          | SOUTHBOUND |            |           | WESTBOUND |          |          | EASTBOUND |          |            |
|                                   | LT         | TH         | RT       | LT         | TH         | RT        | LT        | TH       | RT       | LT        | TH       | RT         |
| EXISTING                          | 0          | 966        | 0        | 0          | 991        | 22        | 0         | 0        | 0        | 0         | 0        | 106        |
| AMBIENT                           |            |            |          |            |            |           |           |          |          |           |          |            |
| RELATED                           |            |            |          |            |            |           |           |          |          |           |          |            |
| PROJECT                           |            |            |          |            |            |           |           |          |          |           |          |            |
| <b>TOTAL</b>                      | <b>0</b>   | <b>966</b> | <b>0</b> | <b>0</b>   | <b>991</b> | <b>22</b> | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b>  | <b>0</b> | <b>106</b> |
| LANE                              |            |            |          |            |            |           |           |          |          |           |          |            |
|                                   | 0          | 0          | 5        | 0          | 0          | 2         | 0         | 0        | 0        | 0         | 0        | 0          |
| SIGNAL                            | Phasing    |            | RTOR     | Phasing    |            | RTOR      | Phasing   |          | RTOR     | Phasing   |          | RTOR       |
|                                   | Perm       |            | Auto     | Perm       |            | Auto      | Perm      |          | Auto     | Perm      |          | Auto       |

### Critical Movements Diagram

|                  | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <input type="text" value="496"/><br/>                 B: <input type="text" value="0"/> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>EastBound</b><br/>                 A: <input type="text" value="106"/><br/>                 B: <input type="text" value="0"/> </div> <div style="text-align: center; width: 20%;"> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>WestBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>NorthBound</b><br/>                 A: <input type="text" value="193"/><br/>                 B: <input type="text" value="0"/> </div> |  |                  |            |             |   |             |   |             |   |             |   |             |   |
|------------------|---|--|------------------|------------|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
|                  |   | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>V/C RATIO</u></th> <th style="text-align: left;"><u>LOS</u></th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | <u>V/C RATIO</u> | <u>LOS</u> | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| <u>V/C RATIO</u> | <u>LOS</u>  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60      | A   |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70      | B   |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80      | C   |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90      | D   |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00      | E   |  |                  |            |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$V/C = \frac{0 + 496 + 0 + 106}{1500} = 0.401$

LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |   |                   |  |                   |  |          |   |             |          |           |             |            |
|-----------------------------------|---|-------------------|--|-------------------|--|----------|---|-------------|----------|-----------|-------------|------------|
|                                   | NORTHBOUND  |                   |  | SOUTHBOUND        |  |          | WESTBOUND   |             |          | EASTBOUND |             |            |
|                                   | LT  | TH                | RT   | LT                | TH   | RT       | LT  | TH          | RT       | LT        | TH          | RT         |
| EXISTING                          | 74  | 0                 | 201  | 0                 | 0  | 0        | 366   | 2526        | 0        | 0         | 4333        | 400        |
| AMBIENT                           |   |                   |  |                   |  |          |   |             |          |           |             |            |
| RELATED                           |   |                   |  |                   |  |          |   |             |          |           |             |            |
| PROJECT                           |   |                   |  |                   |  |          |   |             |          |           |             |            |
| <b>TOTAL</b>                      | <b>74</b>   | <b>0</b>          | <b>201</b>   | <b>0</b>          | <b>0</b>   | <b>0</b> | <b>366</b>  | <b>2526</b> | <b>0</b> | <b>0</b>  | <b>4333</b> | <b>400</b> |
| LANE                              | <br>1 0 0 0 0 1 1   | <br>0 0 0 0 0 0 0 | <br>2 0 3 0 0 0 0  | <br>0 0 3 0 0 1 0 |  |          |   |             |          |           |             |            |
| SIGNAL                            | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="OLA"/> |                   | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |          | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="OLA"/> |             |          |           |             |            |

### Critical Movements Diagram

|             | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                     A: <input type="text" value="0"/><br/>                     B: <input type="text" value="0"/> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <b>EastBound</b><br/>                             A: <input type="text" value="1444"/><br/>                             B: <input type="text" value="0"/> </div> <div style="width: 10%; text-align: center;">↑</div> <div style="width: 45%;"> <b>WestBound</b><br/>                             A: <input type="text" value="842"/><br/>                             B: <input type="text" value="201"/> </div> </div> </div> <div style="border: 1px solid black; padding: 5px;"> <b>NorthBound</b><br/>                     A: <input type="text" value="0"/><br/>                     B: <input type="text" value="74"/> </div> |  |           |     |             |   |             |   |             |   |             |   |             |   |  |
|-------------|--|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|--|
|             |  | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">VIC RATIO</th> <th style="text-align: left;">LOS</th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | VIC RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |  |
| VIC RATIO   | LOS  |  |           |     |             |   |             |   |             |   |             |   |             |   |  |
| 0.00 - 0.60 | A  |  |           |     |             |   |             |   |             |   |             |   |             |   |  |
| 0.61 - 0.70 | B  |  |           |     |             |   |             |   |             |   |             |   |             |   |  |
| 0.71 - 0.80 | C  |  |           |     |             |   |             |   |             |   |             |   |             |   |  |
| 0.81 - 0.90 | D  |  |           |     |             |   |             |   |             |   |             |   |             |   |  |
| 0.91 - 1.00 | E  |  |           |     |             |   |             |   |             |   |             |   |             |   |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$VIC = \frac{74 + 0 + 201 + 1444}{*1425} = 1.136 - 0.03 \text{ (ATS)} \text{ LOS} = F = 1.106$$

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |               |               |               |               |               |               |               |               |               |               |               |               |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|                                   | NORTHBOUND    |               |               | SOUTHBOUND    |               |               | WESTBOUND     |               |               | EASTBOUND     |               |               |
|                                   | LT            | TH            | RT            | LT            | TH            | RT            | LT            | TH            | RT            | LT            | TH            | RT            |
| EXISTING                          | 0             | 0             | 0             | 0             | 0             | 180           | 0             | 54            | 41            | 0             | 0             | 0             |
| AMBIENT                           |               |               |               |               |               |               |               |               |               |               |               |               |
| RELATED                           |               |               |               |               |               |               |               |               |               |               |               |               |
| PROJECT                           |               |               |               |               |               |               |               |               |               |               |               |               |
| TOTAL                             | 0             | 0             | 0             | 0             | 0             | 180           | 0             | 54            | 41            | 0             | 0             | 0             |
| LANE                              | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ | ↵ ↶ ↷ ↸ ↹ ↺ ↻ |
|                                   | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             | 0             |
| SIGNAL                            | Phasing       |               | RTOR          | Phasing       |               | RTOR          | Phasing       |               | RTOR          | Phasing       |               | RTOR          |
|                                   | Perm          |               | Auto          | Perm          |               | Auto          | Perm          |               | Auto          | Perm          |               | Auto          |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 180 |
| B:         | 0   |

|           |    |
|-----------|----|
| WestBound |    |
| A:        | 95 |
| B:        | 0  |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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#### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 180 + 95 + 0}{1500} = 0.183$       LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |          |            |            |          |          |            |             |          |           |             |             |
|-----------------------------------|------------|----------|------------|------------|----------|----------|------------|-------------|----------|-----------|-------------|-------------|
|                                   | NORTHBOUND |          |            | SOUTHBOUND |          |          | WESTBOUND  |             |          | EASTBOUND |             |             |
|                                   | LT         | TH       | RT         | LT         | TH       | RT       | LT         | TH          | RT       | LT        | TH          | RT          |
| EXISTING                          | 468        | 0        | 292        | 0          | 0        | 0        | 584        | 2563        | 0        | 0         | 3190        | 1668        |
| AMBIENT                           |            |          |            |            |          |          |            |             |          |           |             |             |
| RELATED                           |            |          |            |            |          |          |            |             |          |           |             |             |
| PROJECT                           |            |          |            |            |          |          |            |             |          |           |             |             |
| <b>TOTAL</b>                      | <b>468</b> | <b>0</b> | <b>292</b> | <b>0</b>   | <b>0</b> | <b>0</b> | <b>584</b> | <b>2563</b> | <b>0</b> | <b>0</b>  | <b>3190</b> | <b>1668</b> |
| LANE                              | ↙ ↕ ↗      | ↕        | ↖ ↗        | ↙ ↕ ↗      | ↕        | ↖ ↗      | ↙ ↕ ↗      | ↕           | ↖ ↗      | ↙ ↕ ↗     | ↕           | ↖ ↗         |
|                                   | 3          | 0        | 0          | 0          | 0        | 0        | 2          | 0           | 3        | 0         | 0           | 0           |
| SIGNAL                            | Phasing    |          | RTOR       | Phasing    |          | RTOR     | Phasing    |             | RTOR     | Phasing   |             | RTOR        |
|                                   | Perm       |          | OLA        | Perm       |          | Auto     | Prot-Fix   |             | Auto     | Prot-Fix  |             | OLA         |

### Critical Movements Diagram

|                                      |   |                                     |
|--------------------------------------|---|-------------------------------------|
| SouthBound                           |   | WestBound                           |
| A: <input type="text" value="0"/>    |   | A: <input type="text" value="854"/> |
| B: <input type="text" value="0"/>    | ↑ | B: <input type="text" value="321"/> |
| EastBound                            |   | NorthBound                          |
| A: <input type="text" value="1668"/> |   | A: <input type="text" value="0"/>   |
| B: <input type="text" value="0"/>    |   | B: <input type="text" value="173"/> |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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#### Results

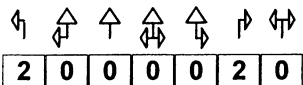
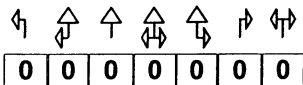
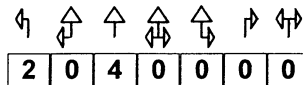
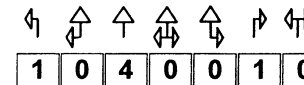
North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{173 + 0 + 321 + 1668}{*1425} = 1.447 - 0.03$  LOS = F  
*ATCS = 1.417*




## INTERSECTION DATA SUMMARY SHEET

|             |                |             |                              |                |    |
|-------------|----------------|-------------|------------------------------|----------------|----|
| N/S:        | Century Park E | W/E:        | Santa Monica Bl (N)          | I/S No:        | 10 |
| AM/PM:      | <b>AM</b>      | Comments:   | Cumulative Plus Project 2010 |                |    |
| COUNT DATE: |                | STUDY DATE: |                              | GROWTH FACTOR: |    |

|              | NORTHBOUND   |  |   | SOUTHBOUND   |                   |            | WESTBOUND         |             |          | EASTBOUND |             |            |
|--------------|--|--|---|--|-------------------|------------|-------------------|-------------|----------|-----------|-------------|------------|
|              | LT   | TH   | RT  | LT   | TH                | RT         | LT                | TH          | RT       | LT        | TH          | RT         |
| EXISTING     | 399  | 0  | 236   | 0  | 0                 | 0          | 1330              | 3042        | 0        | 0         | 2508        | 864        |
| AMBIENT      |  |  |   |  |                   |            |                   |             |          |           |             |            |
| RELATED      |  |  |   |  |                   |            |                   |             |          |           |             |            |
| PROJECT      |  |  |   |  |                   |            |                   |             |          |           |             |            |
| <b>TOTAL</b> | <b>399</b>   | <b>0</b>   | <b>236</b>  | <b>0</b>   | <b>0</b>          | <b>0</b>   | <b>1330</b>       | <b>3042</b> | <b>0</b> | <b>0</b>  | <b>2508</b> | <b>864</b> |
| LANE         |  |  |  |  |                   |            |                   |             |          |           |             |            |
| SIGNAL       | Phasing: Perm  | RTOR: OLA  | Phasing: Perm   | RTOR: Auto   | Phasing: Prot-Fix | RTOR: Auto | Phasing: Prot-Fix | RTOR: OLA   |          |           |             |            |

### Critical Movements Diagram

|  |   |  |   |
|--|---|--|---|
|  | <b>SouthBound</b><br>A: <input type="text" value="0"/><br>B: <input type="text" value="0"/>   |  |   |
| <b>EastBound</b><br>A: <input type="text" value="864"/><br>B: <input type="text" value="0"/> |            | <b>WestBound</b><br>A: <input type="text" value="761"/><br>B: <input type="text" value="732"/> | <u>V/C RATIO</u><br>0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 |
|  | <b>NorthBound</b><br>A: <input type="text" value="0"/><br>B: <input type="text" value="219"/> |  | <u>LOS</u><br>A<br>B<br>C<br>D<br>E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{219 + 0 + 732 + 864}{*1425} = 1.204 - 0.03 \text{ (ATCS)} \text{ LOS} = F$$

*ATCS = 1.174*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |             |            |            |             |            |            |             |           |            |             |           |
|-----------------------------------|------------|-------------|------------|------------|-------------|------------|------------|-------------|-----------|------------|-------------|-----------|
|                                   | NORTHBOUND |             |            | SOUTHBOUND |             |            | WESTBOUND  |             |           | EASTBOUND  |             |           |
|                                   | LT         | TH          | RT         | LT         | TH          | RT         | LT         | TH          | RT        | LT         | TH          | RT        |
| EXISTING                          | 0          | 1098        | 212        | 0          | 2162        | 648        | 315        | 1737        | 11        | 747        | 1909        | 39        |
| AMBIENT                           |            |             |            |            |             |            |            |             |           |            |             |           |
| RELATED                           |            |             |            |            |             |            |            |             |           |            |             |           |
| PROJECT                           |            |             |            |            |             |            |            |             |           |            |             |           |
| <b>TOTAL</b>                      | <b>0</b>   | <b>1098</b> | <b>212</b> | <b>0</b>   | <b>2162</b> | <b>648</b> | <b>315</b> | <b>1737</b> | <b>11</b> | <b>747</b> | <b>1909</b> | <b>39</b> |
| LANE                              |            |             |            |            |             |            |            |             |           |            |             |           |
|                                   | 0          | 0           | 2          | 0          | 0           | 2          | 1          | 0           | 2         | 0          | 1           | 0         |
| SIGNAL                            | Phasing    |             | RTOR       | Phasing    |             | RTOR       | Phasing    |             | RTOR      | Phasing    |             | RTOR      |
|                                   | Perm       |             | Auto       | Perm       |             | Auto       | Split      |             | Auto      | Split      |             | Auto      |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 721 |
| B:         | 0   |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 955 |
| B:        | 747 |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 583 |
| B:        | 315 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 549 |
| B:         | 0   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  | V/C RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

$V/C = \frac{0 + 721 + 583 + 955}{1425} = 1.585$

LOS = F

Cum Plus Proj AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #12 Santa Monica BL (N) & Wilshire Bl

Cycle (sec): 100 Critical Vol./Cap. (X): 1.356
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Permitted, Prot+Permit), Rights (Include), Min. Green, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of volume and adjustment factors.

Saturation Flow Module table with 12 columns and 4 rows showing saturation flow rates and adjustments.

Capacity Analysis Module table with 12 columns and 3 rows showing volume per saturation and critical moves.

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND |            |            | SOUTHBOUND |             |            | WESTBOUND  |             |           | EASTBOUND  |             |            |
|--------------|------------|------------|------------|------------|-------------|------------|------------|-------------|-----------|------------|-------------|------------|
|              | LT         | TH         | RT         | LT         | TH          | RT         | LT         | TH          | RT        | LT         | TH          | RT         |
| EXISTING     | 98         | 727        | 275        | 54         | 1211        | 381        | 362        | 1594        | 51        | 241        | 1677        | 143        |
| AMBIENT      |            |            |            |            |             |            |            |             |           |            |             |            |
| RELATED      |            |            |            |            |             |            |            |             |           |            |             |            |
| PROJECT      |            |            |            |            |             |            |            |             |           |            |             |            |
| <b>TOTAL</b> | <b>98</b>  | <b>727</b> | <b>275</b> | <b>54</b>  | <b>1211</b> | <b>381</b> | <b>362</b> | <b>1594</b> | <b>51</b> | <b>241</b> | <b>1677</b> | <b>143</b> |
| LANE         | ↵ ↶ ↷      | ↶ ↷ ↵      | ↶ ↷ ↵      | ↶ ↷ ↵      | ↶ ↷ ↵       | ↶ ↷ ↵      | ↵ ↶ ↷      | ↵ ↶ ↷       | ↵ ↶ ↷     | ↵ ↶ ↷      | ↶ ↷ ↵       | ↶ ↷ ↵      |
|              | 1 0 2      | 0 0 1      | 0 1 0      | 1 0 1      | 0 1 0       | 1 0 0      | 1 0 2      | 0 1 0       | 0 1 0     | 1 0 1      | 0 1 0       | 0 1 0      |
| SIGNAL       | Phasing    |            | RTOR       | Phasing    |             | RTOR       | Phasing    |             | RTOR      | Phasing    |             | RTOR       |
|              | Prot-Fix   |            | Auto       | Prot-Fix   |             | Auto       | Prot-Fix   |             | Auto      | Prot-Fix   |             | Auto       |

### Critical Movements Diagram

|  |  |  |                  |            |
|--|--|--|------------------|------------|
|  | <b>SouthBound</b><br>A: <input type="text" value="796"/><br>B: <input type="text" value="54"/> |  |                  |            |
| <b>EastBound</b><br>A: <input type="text" value="910"/><br>B: <input type="text" value="241"/> | ↑  | <b>WestBound</b><br>A: <input type="text" value="548"/><br>B: <input type="text" value="362"/> | <b>V/C RATIO</b> | <b>LOS</b> |
|  |  |  | 0.00 - 0.60      | A          |
|  |  |  | 0.61 - 0.70      | B          |
|  |  |  | 0.71 - 0.80      | C          |
|  |  |  | 0.81 - 0.90      | D          |
|  |  |  | 0.91 - 1.00      | E          |
| A = Adjusted Through/Right Volume<br>B = Adjusted Left Volume<br>* = ATSAC Benefit             |  |  |                  |            |
| <b>Results</b>   |  |  |                  |            |
| North/South Critical Movements = B(N/B) + A(S/B)   |  |  |                  |            |
| West/East Critical Movements = B(W/B) + A(E/B)   |  |  |                  |            |
| $V/C = \frac{98 + 796 + 362 + 910}{1375} = 1.575 \quad LOS = F$                                |  |  |                  |            |

Cum Plus Proj AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #13 Santa Monica Bl (S) & Wilshire Bl
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.454
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 2 rows showing Vol/Sat and Crit Moves.

\*\*\*\*\*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |    |      |           |    |      |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|----|------|-----------|----|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |
| EXISTING                          | 0          | 261 | 650  | 256        | 357 | 0    | 194       | 0  | 97   | 0         | 0  | 0    |
| AMBIENT                           |            |     |      |            |     |      |           |    |      |           |    |      |
| RELATED                           |            |     |      |            |     |      |           |    |      |           |    |      |
| PROJECT                           |            |     |      |            |     |      |           |    |      |           |    |      |
| TOTAL                             | 0          | 261 | 650  | 256        | 357 | 0    | 194       | 0  | 97   | 0         | 0  | 0    |
| LANE                              | ↙          | ↕   | ↗    | ↙          | ↕   | ↗    | ↙         | ↕  | ↗    | ↙         | ↕  | ↗    |
|                                   | 0          | 0   | 2    | 1          | 0   | 3    | 2         | 0  | 0    | 0         | 0  | 0    |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |
|                                   | Perm       |     | OLA  | Prot-Fix   |     | Auto | Perm      |    | Auto | Perm      |    | Auto |

### Critical Movements Diagram

|  |  |  |  |
|--|--|--|--|
|  | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <input type="text" value="119"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="256"/> </div> |  |  |
| <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>EastBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div> | <div style="text-align: center;"> <br/>                 ↑             </div>   | <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>WestBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="107"/> </div> |  |
|  | <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <b>NorthBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="650"/><br/>                 B: <input type="text" value="0"/> </div>      |  |  |

|  |                  |            |
|--|------------------|------------|
|  | <u>V/C RATIO</u> | <u>LOS</u> |
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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**Results**

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{650 + 256 + 107 + 0}{*1425} = 0.641 - 0.03 = 0.611$ 
LOS = B

*ATS*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |  |             |   |            |  |            |   |            |  |           |   |           |
|-----------------------------------|--|-------------|---|------------|--|------------|---|------------|--|-----------|---|-----------|
|                                   | NORTHBOUND                                     |             |   | SOUTHBOUND |  |            | WESTBOUND                               |            |  | EASTBOUND |   |           |
|                                   | LT   | TH          | RT                                      | LT         | TH   | RT         | LT                                      | TH         | RT   | LT        | TH                                      | RT        |
| EXISTING                          | 388  | 1091        | 865                                     | 637        | 722  | 323        | 124                                     | 108        | 143  | 97        | 544                                     | 70        |
| AMBIENT                           |  |             |   |            |  |            |   |            |  |           |   |           |
| RELATED                           |  |             |   |            |  |            |   |            |  |           |   |           |
| PROJECT                           |  |             |   |            |  |            |   |            |  |           |   |           |
| <b>TOTAL</b>                      | <b>388</b>                                     | <b>1091</b> | <b>865</b>                              | <b>637</b> | <b>722</b>                                     | <b>323</b> | <b>124</b>                              | <b>108</b> | <b>143</b>                                     | <b>97</b> | <b>544</b>                              | <b>70</b> |
| LANE                              |  |             |   |            |  |            |   |            |  |           |   |           |
|                                   | 2  | 0           | 2                                       | 0          | 1  | 1          | 0                                       | 2          | 0  | 0         | 1                                       | 0         |
| SIGNAL                            | Phasing: <input type="text" value="Prot-Fix"/> |             | RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Prot-Fix"/> |            | RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Prot-Var"/> |           | RTOR: <input type="text" value="Auto"/> |           |

### Critical Movements Diagram

|            |                                  |
|------------|----------------------------------|
| SouthBound |                                  |
| A:         | <input type="text" value="348"/> |
| B:         | <input type="text" value="350"/> |

|           |                                  |
|-----------|----------------------------------|
| EastBound |                                  |
| A:        | <input type="text" value="272"/> |
| B:        | <input type="text" value="97"/>  |

|           |                                  |
|-----------|----------------------------------|
| WestBound |                                  |
| A:        | <input type="text" value="54"/>  |
| B:        | <input type="text" value="124"/> |

|            |                                  |
|------------|----------------------------------|
| NorthBound |                                  |
| A:         | <input type="text" value="489"/> |
| B:         | <input type="text" value="213"/> |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{489 + 350 + 124 + 272}{*1375} = 0.828 - 0.03 = 0.798$$

ATCS  
LOS = D

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  AM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND   |             |  | SOUTHBOUND |  |            | WESTBOUND  |           |  | EASTBOUND  |  |            |
|--------------|--|-------------|--|------------|--|------------|--|-----------|--|------------|--|------------|
|              | LT   | TH          | RT   | LT         | TH   | RT         | LT   | TH        | RT   | LT         | TH   | RT         |
| EXISTING     | 372  | 1226        | 0  | 11         | 729  | 433        | 11   | 20        | 30   | 241        | 0  | 169        |
| AMBIENT      |  |             |  |            |  |            |  |           |  |            |  |            |
| RELATED      |  |             |  |            |  |            |  |           |  |            |  |            |
| PROJECT      |  |             |  |            |  |            |  |           |  |            |  |            |
| <b>TOTAL</b> | <b>372</b>   | <b>1226</b> | <b>0</b>   | <b>11</b>  | <b>729</b>   | <b>433</b> | <b>11</b>  | <b>20</b> | <b>30</b>  | <b>241</b> | <b>0</b>   | <b>169</b> |
| LANE         |  |             |  |            |  |            |  |           |  |            |  |            |
|              | 1  | 0           | 3  | 1          | 0  | 2          | 0  | 0         | 0  | 2          | 0  | 0          |
| SIGNAL       | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |             | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |           | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |            |

### Critical Movements Diagram

|  |   |                  |            |  |  |
|--|---|------------------|------------|--|--|
|  | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <input type="text" value="433"/><br/>                 B: <input type="text" value="11"/> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>EastBound</b><br/>                 A: <input type="text" value="93"/><br/>                 B: <input type="text" value="133"/> </div> <div style="text-align: center; width: 20%;"> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>WestBound</b><br/>                 A: <input type="text" value="41"/><br/>                 B: <input type="text" value="11"/> </div> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>NorthBound</b><br/>                 A: <input type="text" value="409"/><br/>                 B: <input type="text" value="372"/> </div> |                  |            |  |  |
|  |   | <b>V/C RATIO</b> | <b>LOS</b> |  |  |
|  |   | 0.00 - 0.60      | A          |  |  |
|  |   | 0.61 - 0.70      | B          |  |  |
|  |   | 0.71 - 0.80      | C          |  |  |
|  |   | 0.81 - 0.90      | D          |  |  |
|  |   | 0.91 - 1.00      | E          |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{372 + 433 + 41 + 133}{*1500} = 0.583$$

*ATCS*  
 = 0.583 - 0.03 LOS = A  
 = 0.553



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |  |     |      |  |     |      |  |      |      |  |      |      |
|-----------------------------------|--|-----|------|--|-----|------|--|------|------|--|------|------|
|                                   | NORTHBOUND   |     |      | SOUTHBOUND   |     |      | WESTBOUND  |      |      | EASTBOUND  |      |      |
|                                   | LT   | TH  | RT   | LT   | TH  | RT   | LT   | TH   | RT   | LT   | TH   | RT   |
| EXISTING                          | 113  | 522 | 488  | 111  | 507 | 45   | 291  | 2781 | 58   | 24   | 3113 | 48   |
| AMBIENT                           |  |     |      |  |     |      |  |      |      |  |      |      |
| RELATED                           |  |     |      |  |     |      |  |      |      |  |      |      |
| PROJECT                           |  |     |      |  |     |      |  |      |      |  |      |      |
| TOTAL                             | 113  | 522 | 488  | 111  | 507 | 45   | 291  | 2781 | 58   | 24   | 3113 | 48   |
| LANE                              | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↑</span><span>↶↷</span><span>↷</span><span>↶</span><span>↷</span> </div> |     |      | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↑</span><span>↶↷</span><span>↷</span><span>↶</span><span>↷</span> </div> |     |      | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↑</span><span>↶↷</span><span>↷</span><span>↶</span><span>↷</span> </div> |      |      | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↑</span><span>↶↷</span><span>↷</span><span>↶</span><span>↷</span> </div> |      |      |
|                                   | 1  | 0   | 0    | 1  | 0   | 0    | 1  | 0    | 3    | 1  | 0    | 2    |
| SIGNAL                            | Phasing  |     | RTOR | Phasing  |     | RTOR | Phasing  |      | RTOR | Phasing  |      | RTOR |
|                                   | Perm   |     | Auto | Perm   |     | Auto | Prot-Fix   |      | Auto | Prot-Fix   |      | Auto |

### Critical Movements Diagram

|  |  |                  |            |
|--|--|------------------|------------|
|  | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <input type="text" value="552"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="111"/> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>EastBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="1054"/><br/>                 B: <input type="text" value="24"/> </div> <div style="text-align: center; margin-bottom: 5px;"> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>WestBound</b><br/>                 A: <input type="text" value="927"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="291"/> </div> </div> <div style="border: 1px solid black; padding: 5px;"> <b>NorthBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="1010"/><br/>                 B: <input type="text" value="113"/> </div> |                  |            |
|  |  | <b>V/C RATIO</b> | <b>LOS</b> |
|  |  | 0.00 - 0.60      | A          |
|  |  | 0.61 - 0.70      | B          |
|  |  | 0.71 - 0.80      | C          |
|  |  | 0.81 - 0.90      | D          |
|  |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{1010 + 111 + 291 + 1054}{*1425} = 1.661 - 0.03 \text{ LOS} = F$$

*ATS*  
= 1.631

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |            |            |            |            |            |           |             |           |            |             |           |          |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|------------|------------|------------|------------|------------|------------|-----------|-------------|-----------|------------|-------------|-----------|----------|---|------|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND |            |            | SOUTHBOUND |            |            | WESTBOUND |             |           | EASTBOUND  |             |           |          |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | LT         | TH         | RT         | LT         | TH         | RT         | LT        | TH          | RT        | LT         | TH          | RT        |          |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING                          | 101        | 512        | 265        | 185        | 544        | 245        | 44        | 2575        | 91        | 199        | 3339        | 81        |          |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT                           |            |            |            |            |            |            |           |             |           |            |             |           |          |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |            |            |            |            |            |            |           |             |           |            |             |           |          |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |            |            |            |            |            |            |           |             |           |            |             |           |          |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>TOTAL</b>                      | <b>101</b> | <b>512</b> | <b>265</b> | <b>185</b> | <b>544</b> | <b>245</b> | <b>44</b> | <b>2575</b> | <b>91</b> | <b>199</b> | <b>3339</b> | <b>81</b> |          |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE                              |            |            |            |            |            |            |           |             |           |            |             |           |          |   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | 1          | 0          | 2          | 0          | 0          | 1          | 0         | 1           | 0         | 2          | 0           | 0         | 1        | 0 | 1    | 0 | 3 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 0 | 1 | 0 |
| SIGNAL                            | Phasing    |            | RTOR       | Phasing    |            | RTOR       | Phasing   |             | RTOR      | Phasing    |             | RTOR      | Phasing  |   | RTOR |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | Prot-Var   |            | Auto       | Prot-Var   |            | Auto       | Prot-Var  |             | Auto      | Prot-Var   |             | Auto      | Prot-Var |   | Auto |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="272"/><br/>                 B: <input type="text" value="185"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="1113"/><br/>                 B: <input type="text" value="199"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input type="text" value="858"/><br/>                 B: <input type="text" value="44"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 NorthBound<br/>                 A: <input type="text" value="256"/><br/>                 B: <input type="text" value="101"/> </div> |  | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>V/C RATIO</th> <th>LOS</th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
|--|--|--|--|--|---|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| V/C RATIO  | LOS  |  |  |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60  | A  |  |  |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70  | B  |  |  |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80  | C  |  |  |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90  | D  |  |  |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00  | E  |  |  |  |   |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{256 + 185 + 44 + 1113}{*1375} = 1.092 - 0.03$  LOS = F  
*ATCS = 1.062*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 0          | 0  | 0    | 54         | 0  | 244  | 0         | 2520 | 238  | 1174      | 3217 | 0    |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL                             | 0          | 0  | 0    | 54         | 0  | 244  | 0         | 2520 | 238  | 1174      | 3217 | 0    |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |
|                                   | 0          | 0  | 0    | 2          | 0  | 0    | 0         | 3    | 0    | 2         | 0    | 3    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |    | Auto | Perm       |    | OLA  | Perm      |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="0"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="30"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="1072"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="646"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input style="background-color: #cccccc;" type="text" value="840"/><br/>                 B: <input type="text" value="0"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 NorthBound<br/>                 A: <input style="background-color: #cccccc;" type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div> |  | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>V/C RATIO</th> <th>LOS</th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
|--|---|--|---|--|---|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| V/C RATIO  | LOS   |  |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60  | A   |  |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70  | B   |  |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80  | C   |  |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90  | D   |  |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00  | E   |  |   |  |   |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 30 + 840 + 646}{*1425} = 0.994 - 0.03 = 0.964$  LOS = E

*ATCS*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |      |      |            |     |      |           |    |      |           |    |      |
|-----------------------------------|------------|------|------|------------|-----|------|-----------|----|------|-----------|----|------|
|                                   | NORTHBOUND |      |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |
|                                   | LT         | TH   | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |
| EXISTING                          | 11         | 1990 | 50   | 37         | 864 | 43   | 262       | 11 | 307  | 17        | 11 | 11   |
| AMBIENT                           |            |      |      |            |     |      |           |    |      |           |    |      |
| RELATED                           |            |      |      |            |     |      |           |    |      |           |    |      |
| PROJECT                           |            |      |      |            |     |      |           |    |      |           |    |      |
| TOTAL                             | 11         | 1990 | 50   | 37         | 864 | 43   | 262       | 11 | 307  | 17        | 11 | 11   |
| LANE                              | ↔          | ↕    | ↕    | ↕          | ↕   | ↕    | ↕         | ↕  | ↕    | ↕         | ↕  | ↕    |
|                                   | 1          | 0    | 2    | 0          | 1   | 0    | 0         | 1  | 0    | 0         | 1  | 0    |
| SIGNAL                            | Phasing    |      | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |
|                                   | Perm       |      | Auto | Perm       |     | Auto | Perm      |    | Auto | Perm      |    | Auto |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 302 |
| B:         | 37  |

|   |  |
|---|--|
| ↑ |  |
|---|--|

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 307 |
| B:        | 262 |

|            |           |                  |            |
|------------|-----------|------------------|------------|
| EastBound  | WestBound | <b>V/C RATIO</b> | <b>LOS</b> |
| A: 28      | A: 307    | 0.00 - 0.60      | A          |
| B: 17      | B: 262    | 0.61 - 0.70      | B          |
| NorthBound |           | 0.71 - 0.80      | C          |
| A: 680     | B: 11     | 0.81 - 0.90      | D          |
|            |           | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{680 + 37 + 307 + 17}{*1500} = 0.624 - 0.03 \text{ LOS} = B$$
*ATCS = 0.594*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND |             |           | SOUTHBOUND |            |            | WESTBOUND  |           |            | EASTBOUND |           |           |         |   |      |   |   |   |   |   |   |   |   |   |
|--------------|------------|-------------|-----------|------------|------------|------------|------------|-----------|------------|-----------|-----------|-----------|---------|---|------|---|---|---|---|---|---|---|---|---|
|              | LT         | TH          | RT        | LT         | TH         | RT         | LT         | TH        | RT         | LT        | TH        | RT        |         |   |      |   |   |   |   |   |   |   |   |   |
| EXISTING     | 57         | 1695        | 30        | 51         | 899        | 163        | 134        | 30        | 358        | 11        | 11        | 11        |         |   |      |   |   |   |   |   |   |   |   |   |
| AMBIENT      |            |             |           |            |            |            |            |           |            |           |           |           |         |   |      |   |   |   |   |   |   |   |   |   |
| RELATED      |            |             |           |            |            |            |            |           |            |           |           |           |         |   |      |   |   |   |   |   |   |   |   |   |
| PROJECT      |            |             |           |            |            |            |            |           |            |           |           |           |         |   |      |   |   |   |   |   |   |   |   |   |
| <b>TOTAL</b> | <b>57</b>  | <b>1695</b> | <b>30</b> | <b>51</b>  | <b>899</b> | <b>163</b> | <b>134</b> | <b>30</b> | <b>358</b> | <b>11</b> | <b>11</b> | <b>11</b> |         |   |      |   |   |   |   |   |   |   |   |   |
| LANE         |            |             |           |            |            |            |            |           |            |           |           |           |         |   |      |   |   |   |   |   |   |   |   |   |
|              | 1          | 0           | 2         | 0          | 1          | 0          | 0          | 2         | 0          | 2         | 0         | 1         | 0       | 0 | 0    | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| SIGNAL       | Phasing    |             | RTOR      |            | Phasing    |            | RTOR       |           | Phasing    |           | RTOR      |           | Phasing |   | RTOR |   |   |   |   |   |   |   |   |   |
|              | Perm       |             | Auto      |            | Prot-Fix   |            | Auto       |           | Perm       |           | Auto      |           | Perm    |   | Auto |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

| EastBound                           |     | ↑                                   | WestBound |  | <table style="width: 100%; border-collapse: collapse;"> <tr> <th>V/C RATIO</th> <th>LOS</th> </tr> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
|-------------------------------------|-----|-------------------------------------|-----------|--|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| V/C RATIO                           | LOS |                                     |           |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60                         | A   |                                     |           |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70                         | B   |                                     |           |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80                         | C   |                                     |           |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90                         | D   |                                     |           |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00                         | E   |                                     |           |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| A: <input type="text" value="22"/>  |     | A: <input type="text" value="261"/> |           |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| B: <input type="text" value="11"/>  |     | B: <input type="text" value="134"/> |           |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| SouthBound                          |     | NorthBound                          |           |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| A: <input type="text" value="354"/> |     | A: <input type="text" value="575"/> |           |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| B: <input type="text" value="28"/>  |     | B: <input type="text" value="57"/>  |           |  |  |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{575 + 28 + 261 + 11}{*1425} = 0.544 - 0.03 = 0.514$  LOS = A

*ATCS*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |             |             |             |             |             |             |             |             |             |             |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND  |             |             | SOUTHBOUND  |             |             | WESTBOUND   |             |             | EASTBOUND   |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | LT          | TH          | RT          | LT          | TH          | RT          | LT          | TH          | RT          | LT          | TH          | RT          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING                          | 510         | 1078        | 128         | 195         | 211         | 88          | 0           | 3201        | 656         | 0           | 2272        | 65          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT                           |             |             |             |             |             |             |             |             |             |             |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |             |             |             |             |             |             |             |             |             |             |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |             |             |             |             |             |             |             |             |             |             |             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 510         | 1078        | 128         | 195         | 211         | 88          | 0           | 3201        | 656         | 0           | 2272        | 65          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE                              | ↵ ↶ ↷ ↸ ↹ ↺ | ↵ ↶ ↷ ↸ ↹ ↺ | ↵ ↶ ↷ ↸ ↹ ↺ | ↵ ↶ ↷ ↸ ↹ ↺ | ↵ ↶ ↷ ↸ ↹ ↺ | ↵ ↶ ↷ ↸ ↹ ↺ | ↵ ↶ ↷ ↸ ↹ ↺ | ↵ ↶ ↷ ↸ ↹ ↺ | ↵ ↶ ↷ ↸ ↹ ↺ | ↵ ↶ ↷ ↸ ↹ ↺ | ↵ ↶ ↷ ↸ ↹ ↺ | ↵ ↶ ↷ ↸ ↹ ↺ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | 2           | 0           | 2           | 0           | 1           | 0           | 0           | 2           | 0           | 2           | 0           | 0           | 2 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 |
| SIGNAL                            | Phasing     |             | RTOR        | Phasing     |             | RTOR        | Phasing     |             | RTOR        | Phasing     |             | RTOR        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | Prot-Fix    |             | Auto        | Prot-Fix    |             | Auto        | Perm        |             | Auto        | Perm        |             | Auto        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

|                  | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <input type="text" value="106"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="107"/> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; width: 45%;"> <b>EastBound</b><br/>                 A: <input type="text" value="779"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="0"/> </div> <div style="text-align: center; width: 10%;">                 ↑             </div> <div style="border: 1px solid black; padding: 5px; width: 45%;"> <b>WestBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="964"/><br/>                 B: <input type="text" value="0"/> </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <b>NorthBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="402"/><br/>                 B: <input type="text" value="281"/> </div> | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>V/C RATIO</u></th> <th style="text-align: left;"><u>LOS</u></th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | <u>V/C RATIO</u> | <u>LOS</u> | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
|------------------|--|--|------------------|------------|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| <u>V/C RATIO</u> | <u>LOS</u>   |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60      | A  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70      | B  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80      | C  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90      | D  |  |                  |            |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00      | E  |  |                  |            |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{402 + 107 + 964 + 0}{*1425} = 0.964$  *ATCS* *-0.03* LOS = E  
*= 0.934*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 121        | 57 | 22   | 177        | 40 | 387  | 11        | 3390 | 141  | 271       | 2019 | 20   |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL                             | 121        | 57 | 22   | 177        | 40 | 387  | 11        | 3390 | 141  | 271       | 2019 | 20   |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |
|                                   | 0          | 0  | 0    | 0          | 1  | 0    | 1         | 0    | 2    | 1         | 0    | 2    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |    | Auto | Perm       |    | Auto | Perm      |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 251 |
| B:         | 177 |

|           |      |
|-----------|------|
| WestBound |      |
| A:        | 1177 |
| B:        | 11   |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 680 |
| B:        | 271 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 200 |
| B:         | 121 |

|  |                  |            |  |
|--|------------------|------------|--|
|  | <b>V/C RATIO</b> | <b>LOS</b> |  |
|  | 0.00 - 0.60      | A          |  |
|  | 0.61 - 0.70      | B          |  |
|  | 0.71 - 0.80      | C          |  |
|  | 0.81 - 0.90      | D          |  |
|  | 0.91 - 1.00      | E          |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$V/C = \frac{200 + 177 + 1177 + 271}{*1425} = 1.211$

LOS = F

Cum Plus Proj AM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #23 Spalding Drive & Olympic Boulevard
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.323
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F
\*\*\*\*\*

Table with columns for Street Name (Spalding Drive, Olympic Boulevard), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green (0), and Lanes (0, 1, 2).

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol., and values for Spalding Drive and Olympic Boulevard.

Saturation Flow Module: Table with columns for Sat/Lane, Adjustment, Lanes, Final Sat., and values for Spalding Drive and Olympic Boulevard.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, and values for Spalding Drive and Olympic Boulevard.



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |      |      |            |     |      |           |    |      |           |    |      |  |
|-----------------------------------|------------|------|------|------------|-----|------|-----------|----|------|-----------|----|------|--|
|                                   | NORTHBOUND |      |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |  |
|                                   | LT         | TH   | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |  |
| EXISTING                          | 446        | 1713 | 29   | 52         | 648 | 410  | 25        | 0  | 78   | 34        | 0  | 26   |  |
| AMBIENT                           |            |      |      |            |     |      |           |    |      |           |    |      |  |
| RELATED                           |            |      |      |            |     |      |           |    |      |           |    |      |  |
| PROJECT                           |            |      |      |            |     |      |           |    |      |           |    |      |  |
| TOTAL                             | 446        | 1713 | 29   | 52         | 648 | 410  | 25        | 0  | 78   | 34        | 0  | 26   |  |
| LANE                              |            |      |      |            |     |      |           |    |      |           |    |      |  |
| SIGNAL                            | Phasing    |      | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |  |
|                                   | Prot-Fix   |      | Auto | Perm       |     | Auto | Split     |    | Auto | Split     |    | Auto |  |

### Critical Movements Diagram

|   |   |  |  |
|---|---|--|--|
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="410"/><br/>                 B: <input type="text" value="52"/> </div>  |  |  |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="19"/> </div> |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="78"/><br/>                 B: <input type="text" value="25"/> </div> |  |
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="581"/><br/>                 B: <input type="text" value="245"/> </div> |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

VIC =  $\frac{245 + 410 + 78 + 19}{*1375} = 0.477$  ATCS LOS = A

*= 0.447*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |             |           |            |            |           |           |          |           |           |          |          |
|-----------------------------------|------------|-------------|-----------|------------|------------|-----------|-----------|----------|-----------|-----------|----------|----------|
|                                   | NORTHBOUND |             |           | SOUTHBOUND |            |           | WESTBOUND |          |           | EASTBOUND |          |          |
|                                   | LT         | TH          | RT        | LT         | TH         | RT        | LT        | TH       | RT        | LT        | TH       | RT       |
| EXISTING                          | 27         | 2120        | 11        | 21         | 630        | 31        | 17        | 0        | 67        | 0         | 0        | 0        |
| AMBIENT                           |            |             |           |            |            |           |           |          |           |           |          |          |
| RELATED                           |            |             |           |            |            |           |           |          |           |           |          |          |
| PROJECT                           |            |             |           |            |            |           |           |          |           |           |          |          |
| <b>TOTAL</b>                      | <b>27</b>  | <b>2120</b> | <b>11</b> | <b>21</b>  | <b>630</b> | <b>31</b> | <b>17</b> | <b>0</b> | <b>67</b> | <b>0</b>  | <b>0</b> | <b>0</b> |
| LANE                              | ↙          | ↕           | ↗         | ↙          | ↕          | ↗         | ↙         | ↕        | ↗         | ↙         | ↕        | ↗        |
|                                   | 1          | 0           | 2         | 1          | 0          | 2         | 0         | 0        | 0         | 0         | 0        | 0        |
| SIGNAL                            | Phasing    |             | RTOR      | Phasing    |            | RTOR      | Phasing   |          | RTOR      | Phasing   |          | RTOR     |
|                                   | Perm       |             | Auto      | Perm       |            | Auto      | Perm      |          | Auto      | Perm      |          | Auto     |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 220 |
| B:         | 21  |

|   |  |
|---|--|
| ↑ |  |
|---|--|

|           |    |
|-----------|----|
| WestBound |    |
| A:        | 84 |
| B:        | 17 |

|    |           |  |  |  |
|----|-----------|--|--|--|
|    | EastBound |  |  |  |
| A: | 0         |  |  |  |
| B: | 0         |  |  |  |

|    |            |  |  |  |
|----|------------|--|--|--|
|    | NorthBound |  |  |  |
| A: | 710        |  |  |  |
| B: | 27         |  |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  |                  |  |  |            |
|--|------------------|--|--|------------|
|  |                  |  |  |            |
|  | <b>V/C RATIO</b> |  |  | <b>LOS</b> |
|  | 0.00 - 0.60      |  |  | A          |
|  | 0.61 - 0.70      |  |  | B          |
|  | 0.71 - 0.80      |  |  | C          |
|  | 0.81 - 0.90      |  |  | D          |
|  | 0.91 - 1.00      |  |  | E          |

**Results**

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{710 + 21 + 84 + 0}{1500} = 0.543$       LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |       |       |            |       |       |           |       |       |           |       |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|------------|-------|-------|------------|-------|-------|-----------|-------|-------|-----------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND |       |       | SOUTHBOUND |       |       | WESTBOUND |       |       | EASTBOUND |       |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | LT         | TH    | RT    | LT         | TH    | RT    | LT        | TH    | RT    | LT        | TH    | RT    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING                          | 258        | 1206  | 1006  | 34         | 771   | 19    | 605       | 1297  | 59    | 88        | 1610  | 156   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT                           |            |       |       |            |       |       |           |       |       |           |       |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |            |       |       |            |       |       |           |       |       |           |       |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |            |       |       |            |       |       |           |       |       |           |       |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 258        | 1206  | 1006  | 34         | 771   | 19    | 605       | 1297  | 59    | 88        | 1610  | 156   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE                              | ↙ ↕ ↗      | ↖ ↕ ↘ | ↙ ↕ ↗ | ↙ ↕ ↗      | ↖ ↕ ↘ | ↙ ↕ ↗ | ↙ ↕ ↗     | ↖ ↕ ↘ | ↙ ↕ ↗ | ↙ ↕ ↗     | ↖ ↕ ↘ | ↙ ↕ ↗ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | 2          | 0     | 1     | 0          | 0     | 2     | 0         | 1     | 0     | 1         | 0     | 1     | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 |
| SIGNAL                            | Phasing    |       | RTOR  | Phasing    |       | RTOR  | Phasing   |       | RTOR  | Phasing   |       | RTOR  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | Prot-Fix   |       | OLA   | Perm       |       | Auto  | Perm      |       | Auto  | Prot-Fix  |       | Auto  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 395 |
| B:         | 34  |

↑

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 649 |
| B:        | 333 |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 589 |
| B:        | 88  |

|            |      |
|------------|------|
| NorthBound |      |
| A:         | 1206 |
| B:         | 142  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  |                  |            |
|--|------------------|------------|
|  | <b>V/C RATIO</b> | <b>LOS</b> |
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

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#### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{1206 + 34 + 333 + 589}{*1375} = 1.502$$

*ATCS*  
 = 1.472    LOS = F

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  AM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |    |      |           |      |      |           |      |      |
|-----------------------------------|------------|-----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH  | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 31         | 120 | 219  | 11         | 71 | 39   | 88        | 1682 | 52   | 48        | 2109 | 77   |
| AMBIENT                           |            |     |      |            |    |      |           |      |      |           |      |      |
| RELATED                           |            |     |      |            |    |      |           |      |      |           |      |      |
| PROJECT                           |            |     |      |            |    |      |           |      |      |           |      |      |
| TOTAL                             | 31         | 120 | 219  | 11         | 71 | 39   | 88        | 1682 | 52   | 48        | 2109 | 77   |
| LANE                              |            |     |      |            |    |      |           |      |      |           |      |      |
|                                   | 0          | 0   | 0    | 0          | 0  | 0    | 1         | 0    | 2    | 0         | 0    | 1    |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |     | Auto | Perm       |    | Auto | Prot-Fix  |      | Auto | Perm      |      | Auto |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 121 |
| B:         | 11  |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 729 |
| B:        | 48  |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 841 |
| B:        | 88  |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 370 |
| B:         | 31  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  | V/C RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

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**Results**

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{370 + 11 + 841 + 48}{*1425} = 0.821 - 0.03 = 0.79!$  LOS = D

## INTERSECTION DATA SUMMARY SHEET

|             |                 |             |                              |                |     |  |
|-------------|-----------------|-------------|------------------------------|----------------|-----|--|
| N/S:        | Beverly Glen Bl | W/E:        | Pico Bl                      | I/S No:        | 28  |  |
| AM/PM:      | <b>AM</b>       | Comments:   | Cumulative Plus Project 2010 |                |     |  |
| COUNT DATE: | [ ]             | STUDY DATE: | [ ]                          | GROWTH FACTOR: | [ ] |  |

|          | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|----------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|          | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING | 0          | 0  | 0    | 275        | 0  | 301  | 0         | 1484 | 252  | 511       | 1979 | 0    |
| AMBIENT  |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED  |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT  |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL    | 0          | 0  | 0    | 275        | 0  | 301  | 0         | 1484 | 252  | 511       | 1979 | 0    |
| LANE     | 0          | 0  | 0    | 1          | 0  | 0    | 0         | 2    | 0    | 1         | 0    | 3    |
| SIGNAL   | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|          | Perm       |    | Auto | Perm       |    | Auto | Perm      |      | Auto | Perm      |      | Auto |

### Critical Movements Diagram

|             | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <span style="border: 1px solid black; padding: 2px;">192</span><br/>                 B: <span style="border: 1px solid black; padding: 2px;">192</span> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>EastBound</b><br/>                 A: <span style="border: 1px solid black; padding: 2px;">660</span><br/>                 B: <span style="border: 1px solid black; padding: 2px;">511</span> </div> <div style="text-align: center; margin: 0 10px;"> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>WestBound</b><br/>                 A: <span style="border: 1px solid black; padding: 2px;">742</span><br/>                 B: <span style="border: 1px solid black; padding: 2px;">0</span> </div> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>NorthBound</b><br/>                 A: <span style="border: 1px solid black; padding: 2px;">0</span><br/>                 B: <span style="border: 1px solid black; padding: 2px;">0</span> </div> |  |           |     |             |   |             |   |             |   |             |   |             |   |
|-------------|--|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
|             |  | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>V/C RATIO</th> <th>LOS</th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| V/C RATIO   | LOS  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60 | A  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70 | B  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80 | C  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90 | D  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00 | E  |  |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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#### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{0 + 192 + 742 + 511}{*1500} = 0.893 - 0.03 \text{ LOS} = D$$

*ATCS*  
= 0.863

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING                          | 327        | 0  | 1372 | 21         | 0  | 32   | 266       | 1319 | 197  | 243       | 1876 | 282  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 327        | 0  | 1372 | 21         | 0  | 32   | 266       | 1319 | 197  | 243       | 1876 | 282  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | 2          | 0  | 0    | 0          | 0  | 1    | 0         | 1    | 0    | 0         | 0    | 0    | 1 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | Split      |    | OLA  | Split      |    | Auto | Prot-Fix  |      | Auto | Prot-Fix  |      | Auto |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

|             | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="21"/> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>EastBound</b><br/>                 A: <input type="text" value="719"/><br/>                 B: <input type="text" value="243"/> </div> <div style="text-align: center;"> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>WestBound</b><br/>                 A: <input type="text" value="440"/><br/>                 B: <input type="text" value="266"/> </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px; text-align: center;"> <b>NorthBound</b><br/>                 A: <input type="text" value="1106"/><br/>                 B: <input type="text" value="180"/> </div> |           |     |             |   |             |   |             |   |             |   |             |   |
|-------------|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
|             | <table style="margin-left: auto; margin-right: auto;"> <tr> <th>V/C RATIO</th> <th>LOS</th> </tr> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </table>  | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| V/C RATIO   | LOS  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60 | A  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70 | B  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80 | C  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90 | D  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00 | E  |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{1106 + 21 + 266 + 719}{*1375} = 1.466 - 0.03 \text{ LOS} = F$$

*ATCS = 1.436*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |          |          |            |          |            |           |             |            |             |             |          |
|-----------------------------------|------------|----------|----------|------------|----------|------------|-----------|-------------|------------|-------------|-------------|----------|
|                                   | NORTHBOUND |          |          | SOUTHBOUND |          |            | WESTBOUND |             |            | EASTBOUND   |             |          |
|                                   | LT         | TH       | RT       | LT         | TH       | RT         | LT        | TH          | RT         | LT          | TH          | RT       |
| EXISTING                          | 0          | 0        | 0        | 231        | 0        | 394        | 0         | 1473        | 584        | 1528        | 1741        | 0        |
| AMBIENT                           |            |          |          |            |          |            |           |             |            |             |             |          |
| RELATED                           |            |          |          |            |          |            |           |             |            |             |             |          |
| PROJECT                           |            |          |          |            |          |            |           |             |            |             |             |          |
| <b>TOTAL</b>                      | <b>0</b>   | <b>0</b> | <b>0</b> | <b>231</b> | <b>0</b> | <b>394</b> | <b>0</b>  | <b>1473</b> | <b>584</b> | <b>1528</b> | <b>1741</b> | <b>0</b> |
| LANE                              |            |          |          |            |          |            |           |             |            |             |             |          |
|                                   | 0          | 0        | 0        | 2          | 0        | 0          | 0         | 2           | 0          | 2           | 0           | 3        |
| SIGNAL                            | Phasing    |          | RTOR     | Phasing    |          | RTOR       | Phasing   |             | RTOR       | Phasing     |             | RTOR     |
|                                   | Perm       |          | Auto     | Perm       |          | Auto       | Perm      |             | Auto       | Prot-Fix    |             | Auto     |

### Critical Movements Diagram

|  |  |                  |            |
|--|--|------------------|------------|
|  | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input style="background-color: #e0e0e0;" type="text" value="127"/> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>EastBound</b><br/>                 A: <input type="text" value="580"/><br/>                 B: <input style="background-color: #e0e0e0;" type="text" value="840"/> </div> <div style="text-align: center; margin: 0 20px;"> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>WestBound</b><br/>                 A: <input style="background-color: #e0e0e0;" type="text" value="686"/><br/>                 B: <input type="text" value="0"/> </div> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>NorthBound</b><br/>                 A: <input style="background-color: #e0e0e0;" type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div> |                  |            |
|  |  | <b>V/C RATIO</b> | <b>LOS</b> |
|  |  | 0.00 - 0.60      | A          |
|  |  | 0.61 - 0.70      | B          |
|  |  | 0.71 - 0.80      | C          |
|  |  | 0.81 - 0.90      | D          |
|  |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$V/C = \frac{0 + 127 + 686 + 840}{*1425} = 1.090$

*ATS*  
 $1.090 - 0.03 = 1.060$  LOS = F

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND |           |           | SOUTHBOUND |           |           | WESTBOUND |             |            | EASTBOUND  |             |          |
|--------------|------------|-----------|-----------|------------|-----------|-----------|-----------|-------------|------------|------------|-------------|----------|
|              | LT         | TH        | RT        | LT         | TH        | RT        | LT        | TH          | RT         | LT         | TH          | RT       |
| EXISTING     | 11         | 12        | 11        | 166        | 16        | 38        | 25        | 1957        | 814        | 696        | 1226        | 0        |
| AMBIENT      |            |           |           |            |           |           |           |             |            |            |             |          |
| RELATED      |            |           |           |            |           |           |           |             |            |            |             |          |
| PROJECT      |            |           |           |            |           |           |           |             |            |            |             |          |
| <b>TOTAL</b> | <b>11</b>  | <b>12</b> | <b>11</b> | <b>166</b> | <b>16</b> | <b>38</b> | <b>25</b> | <b>1957</b> | <b>814</b> | <b>696</b> | <b>1226</b> | <b>0</b> |
| LANE         |            |           |           |            |           |           |           |             |            |            |             |          |
|              | 0          | 1         | 0         | 1          | 0         | 0         | 1         | 0           | 3          | 2          | 0           | 2        |
| SIGNAL       | Phasing    |           | RTOR      | Phasing    |           | RTOR      | Phasing   |             | RTOR       | Phasing    |             | RTOR     |
|              | Perm       |           | Auto      | Prot-Fix   |           | OLA       | Perm      |             | Auto       | Prot-Fix   |             | Auto     |

### Critical Movements Diagram

|            |                                 |
|------------|---------------------------------|
| SouthBound |                                 |
| A:         | <input type="text" value="91"/> |
| B:         | <input type="text" value="91"/> |

|           |                                  |
|-----------|----------------------------------|
| EastBound |                                  |
| A:        | <input type="text" value="409"/> |
| B:        | <input type="text" value="383"/> |

|           |                                  |
|-----------|----------------------------------|
| WestBound |                                  |
| A:        | <input type="text" value="768"/> |
| B:        | <input type="text" value="25"/>  |

|            |                                 |
|------------|---------------------------------|
| NorthBound |                                 |
| A:         | <input type="text" value="17"/> |
| B:         | <input type="text" value="11"/> |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSC Benefit

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#### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$V/C = \frac{17 + 91 + 768 + 383}{*1375} = 0.846 - 0.03 = 0.816$$

ATSC  
LOS = D



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |            |           |            |            |           |           |            |            |           |            |           |
|-----------------------------------|------------|------------|-----------|------------|------------|-----------|-----------|------------|------------|-----------|------------|-----------|
|                                   | NORTHBOUND |            |           | SOUTHBOUND |            |           | WESTBOUND |            |            | EASTBOUND |            |           |
|                                   | LT         | TH         | RT        | LT         | TH         | RT        | LT        | TH         | RT         | LT        | TH         | RT        |
| EXISTING                          | 288        | 839        | 75        | 148        | 304        | 11        | 86        | 381        | 325        | 24        | 202        | 77        |
| AMBIENT                           |            |            |           |            |            |           |           |            |            |           |            |           |
| RELATED                           |            |            |           |            |            |           |           |            |            |           |            |           |
| PROJECT                           |            |            |           |            |            |           |           |            |            |           |            |           |
| <b>TOTAL</b>                      | <b>288</b> | <b>839</b> | <b>75</b> | <b>148</b> | <b>304</b> | <b>11</b> | <b>86</b> | <b>381</b> | <b>325</b> | <b>24</b> | <b>202</b> | <b>77</b> |
| LANE                              |            |            |           |            |            |           |           |            |            |           |            |           |
|                                   | 1          | 0          | 1         | 0          | 0          | 1         | 0         | 0          | 1          | 0         | 0          | 1         |
| SIGNAL                            | Phasing    |            | RTOR      | Phasing    |            | RTOR      | Phasing   |            | RTOR       | Phasing   |            | RTOR      |
|                                   | Perm       |            | Auto      | Perm       |            | Auto      | Perm      |            | Auto       | Perm      |            | Auto      |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 315 |
| B:         | 148 |

↑

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 706 |
| B:        | 86  |

|           |     |
|-----------|-----|
| EastBound |     |
| A:        | 202 |
| B:        | 24  |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 839 |
| B:         | 288 |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

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#### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

VIC =  $\frac{839 + 148 + 706 + 24}{*1500} = 1.075$       LOS = F

## INTERSECTION DATA SUMMARY SHEET

|             |  |             |   |                |                                |
|-------------|--|-------------|---|----------------|--------------------------------|
| N/S:        | <input type="text" value="Beverly Glen BI"/> | W/E:        | <input type="text" value="Wilshire BI"/>                  | I/S No:        | <input type="text" value="1"/> |
| AM/PM:      | <input type="text" value="PM"/>              | Comments:   | <input type="text" value="Cumulative Plus Project 2010"/> |                |                                |
| COUNT DATE: | <input type="text"/>                         | STUDY DATE: | <input type="text"/>                                      | GROWTH FACTOR: | <input type="text"/>           |

|                 | NORTHBOUND   |                   |  | SOUTHBOUND        |   |           | WESTBOUND  |             |            | EASTBOUND  |             |            |
|-----------------|--|-------------------|--|-------------------|---|-----------|--|-------------|------------|------------|-------------|------------|
|                 | LT   | TH                | RT   | LT                | TH  | RT        | LT   | TH          | RT         | LT         | TH          | RT         |
| <b>EXISTING</b> | 186  | 1202              | 174  | 115               | 807   | 89        | 137  | 2395        | 210        | 170        | 2500        | 320        |
| AMBIENT         |  |                   |  |                   |   |           |  |             |            |            |             |            |
| RELATED         |  |                   |  |                   |   |           |  |             |            |            |             |            |
| PROJECT         |  |                   |  |                   |   |           |  |             |            |            |             |            |
| <b>TOTAL</b>    | <b>186</b>   | <b>1202</b>       | <b>174</b>   | <b>115</b>        | <b>807</b>  | <b>89</b> | <b>137</b>   | <b>2395</b> | <b>210</b> | <b>170</b> | <b>2500</b> | <b>320</b> |
| <b>LANE</b>     | <br>1 0 1 0 1 0 0  | <br>1 0 1 0 1 0 0 | <br>1 0 2 0 1 0 0  | <br>1 0 3 0 0 1 0 |   |           |  |             |            |            |             |            |
| <b>SIGNAL</b>   | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="OLA"/> |           | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |             |            |            |             |            |

### Critical Movements Diagram

|   |  |   |  |
|---|--|---|--|
|   | SouthBound<br>A: <input type="text" value="448"/><br>B: <input type="text" value="115"/> |   |  |
| EastBound<br>A: <input type="text" value="833"/><br>B: <input type="text" value="170"/> |  | WestBound<br>A: <input type="text" value="868"/><br>B: <input type="text" value="137"/> |  |
|   | NorthBound<br>A: <input type="text" value="688"/><br>B: <input type="text" value="186"/> |   |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  | VIC RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

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**Results**

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$VIC = \frac{688 + 115 + 868 + 170}{*1425} = 1.222 - 0.03 \text{ LOS} = F$$

*ATS*  
*= 1.192*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|--|--|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |  |  |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |  |  |
| EXISTING                          | 383        | 0  | 320  | 0          | 0  | 0    | 561       | 2856 | 0    | 0         | 2421 | 47   |  |  |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| TOTAL                             | 383        | 0  | 320  | 0          | 0  | 0    | 561       | 2856 | 0    | 0         | 2421 | 47   |  |  |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |  |  |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |  |  |
|                                   | Perm       |    | Auto | Perm       |    | Auto | Prot-Fix  |      | Auto | Perm      |      | Auto |  |  |

### Critical Movements Diagram

|   |  |  |   |                                     |
|---|--|--|---|-------------------------------------|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                     A: <input type="text" value="0"/><br/>                     B: <input type="text" value="0"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                     A: <input type="text" value="807"/><br/>                     B: <input type="text" value="0"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                     A: <input type="text" value="952"/><br/>                     B: <input type="text" value="561"/> </div> | <b>V/C RATIO</b><br>0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 | <b>LOS</b><br>A<br>B<br>C<br>D<br>E |
|---|--|--|---|-------------------------------------|

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{383 + 0 + 561 + 807}{*1425} = 1.159 - 0.03 = 1.129$ 

 ATCS  
 LOS = F

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  PM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |    |      |           |    |      |  |  |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|----|------|-----------|----|------|--|--|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |  |  |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |  |  |
| EXISTING                          | 0          | 518 | 51   | 46         | 552 | 0    | 78        | 0  | 175  | 0         | 47 | 198  |  |  |
| AMBIENT                           |            |     |      |            |     |      |           |    |      |           |    |      |  |  |
| RELATED                           |            |     |      |            |     |      |           |    |      |           |    |      |  |  |
| PROJECT                           |            |     |      |            |     |      |           |    |      |           |    |      |  |  |
| TOTAL                             | 0          | 518 | 51   | 46         | 552 | 0    | 78        | 0  | 175  | 0         | 47 | 198  |  |  |
| LANE                              |            |     |      |            |     |      |           |    |      |           |    |      |  |  |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |  |  |
|                                   | Perm       |     | Auto | Perm       |     | Auto | Prot-Fix  |    | Auto | Perm      |    | Auto |  |  |

### Critical Movements Diagram

|  |  |  |  |  |
|--|--|--|--|--|
|  |  | <b>SouthBound</b><br>A: <input type="text" value="552"/><br>B: <input type="text" value="46"/> |  |  |
| <b>EastBound</b><br>A: <input type="text" value="245"/><br>B: <input type="text" value="0"/> |  | <b>WestBound</b><br>A: <input type="text" value="175"/><br>B: <input type="text" value="78"/>  |  |  |
|  |  | <b>NorthBound</b><br>A: <input type="text" value="285"/><br>B: <input type="text" value="0"/>  |  |  |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 552 + 78 + 245}{*1425} = 0.544 - 0.03 \text{ (ATS)} = 0.514$$

LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |      |      |           |      |      |           |      |      |
|-----------------------------------|------------|-----|------|------------|------|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |      |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH  | RT   | LT         | TH   | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| <b>EXISTING</b>                   | 42         | 711 | 145  | 318        | 1114 | 118  | 238       | 3440 | 870  | 180       | 2521 | 0    |
| <b>AMBIENT</b>                    |            |     |      |            |      |      |           |      |      |           |      |      |
| <b>RELATED</b>                    |            |     |      |            |      |      |           |      |      |           |      |      |
| <b>PROJECT</b>                    |            |     |      |            |      |      |           |      |      |           |      |      |
| <b>TOTAL</b>                      | 42         | 711 | 145  | 318        | 1114 | 118  | 238       | 3440 | 870  | 180       | 2521 | 0    |
| <b>LANE</b>                       |            |     |      |            |      |      |           |      |      |           |      |      |
| <b>SIGNAL</b>                     | Phasing    |     | RTOR | Phasing    |      | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Prot-Fix   |     | OLA  | Prot-Fix   |      | OLA  | Prot-Fix  |      | OLA  | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|   |   |   |  |
|---|---|---|--|
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="557"/><br/>                 B: <input type="text" value="175"/> </div> |   |  |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="630"/><br/>                 B: <input type="text" value="99"/> </div> |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="1147"/><br/>                 B: <input type="text" value="131"/> </div> |  |
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="356"/><br/>                 B: <input type="text" value="23"/> </div>  |   |  |

**A = Adjusted Through/Right Volume**  
**B = Adjusted Left Volume**  
**\* = ATSAC Benefit**

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$VIC = \frac{23 + 557 + 1147 + 99}{*1375} = 1.258$$

*ATCS*  
~~1.258~~ - 0.03 = 1.228  
 LOS = F

## INTERSECTION DATA SUMMARY SHEET

|   |   |  |
|---|---|--|
| N/S: <input style="width: 80%;" type="text" value="Beverly Glen BI"/> | WE: <input style="width: 80%;" type="text" value="Santa Monica BI (S)"/>                | I/S No: <input style="width: 80%;" type="text" value="5"/> |
| AM/PM: <input style="width: 50%;" type="text" value="PM"/>            | Comments: <input style="width: 90%;" type="text" value="Cumulative Plus Project 2010"/> |  |
| COUNT DATE: <input style="width: 80%;" type="text"/>                  | STUDY DATE: <input style="width: 80%;" type="text"/>                                    | GROWTH FACTOR: <input style="width: 80%;" type="text"/>    |

|              | NORTHBOUND   |  |  | SOUTHBOUND   |             |           | WESTBOUND |          |          | EASTBOUND |          |            |
|--------------|--|--|--|--|-------------|-----------|-----------|----------|----------|-----------|----------|------------|
|              | LT   | TH   | RT   | LT   | TH          | RT        | LT        | TH       | RT       | LT        | TH       | RT         |
| EXISTING     | 0  | 897  | 0  | 0  | 1228        | 87        | 0         | 0        | 0        | 0         | 0        | 141        |
| AMBIENT      |  |  |  |  |             |           |           |          |          |           |          |            |
| RELATED      |  |  |  |  |             |           |           |          |          |           |          |            |
| PROJECT      |  |  |  |  |             |           |           |          |          |           |          |            |
| <b>TOTAL</b> | <b>0</b>   | <b>897</b>   | <b>0</b>   | <b>0</b>   | <b>1228</b> | <b>87</b> | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b>  | <b>0</b> | <b>141</b> |
| LANE         | <br>0 0 5 0 0 0 0  | <br>0 0 2 0 0 1 0  | <br>0 0 0 0 0 0 0  | <br>0 0 0 0 0 1 0  |             |           |           |          |          |           |          |            |
| SIGNAL       | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |             |           |           |          |          |           |          |            |

### Critical Movements Diagram

|             | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                     A: <input style="width: 80%;" type="text" value="614"/><br/>                     B: <input style="width: 80%;" type="text" value="0"/> </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 20%;"> <b>EastBound</b><br/>                     A: <input style="width: 80%;" type="text" value="141"/><br/>                     B: <input style="width: 80%;" type="text" value="0"/> </div> <div style="text-align: center; width: 20%;"> </div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 20%;"> <b>WestBound</b><br/>                     A: <input style="width: 80%;" type="text" value="0"/><br/>                     B: <input style="width: 80%;" type="text" value="0"/> </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <b>NorthBound</b><br/>                     A: <input style="width: 80%;" type="text" value="179"/><br/>                     B: <input style="width: 80%;" type="text" value="0"/> </div> | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">V/C RATIO</th> <th style="text-align: left;">LOS</th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | V/C RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
|-------------|--|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| V/C RATIO   | LOS  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60 | A  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70 | B  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80 | C  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90 | D  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00 | E  |  |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{0 + 614 + 0 + 141}{1500} = 0.503 \quad \text{LOS} = A$$

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND  |   |   | SOUTHBOUND  |   |   | WESTBOUND   |   |   | EASTBOUND   |   |   |   |   |
|                                   | LT  | TH  | RT  | LT  | TH  | RT  | LT  | TH  | RT  | LT  | TH  | RT  |   |   |
| EXISTING                          | 563   | 0   | 375   | 0   | 0   | 0   | 243   | 3987  | 0   | 0   | 2863  | 121   |   |   |
| AMBIENT                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 563   | 0   | 375   | 0   | 0   | 0   | 243   | 3987  | 0   | 0   | 2863  | 121   |   |   |
| LANE                              | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> | <div style="display: flex; justify-content: space-around; font-size: small;"> <span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span><span>↶</span><span>↷</span> </div> |
| SIGNAL                            | Phasing   |   | RTOR  | Phasing   |   | RTOR  | Phasing   |   | RTOR  | Phasing   |   | RTOR  |   |   |
|                                   | Perm  |   | OLA   | Perm  |   | Auto  | Prot-Fix  |   | Auto  | Perm  |   | OLA   |   |   |

| Critical Movements Diagram   |   | V/C RATIO             | LOS     |
|--|---|-----------------------|---------|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                     A: <input type="text" value="0"/><br/>                     B: <input type="text" value="0"/> </div>  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                     A: <input type="text" value="954"/><br/>                     B: <input type="text" value="0"/> </div>    |                       |         |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                     A: <input type="text" value="1329"/><br/>                     B: <input type="text" value="134"/> </div>  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                     A: <input type="text" value="179"/><br/>                     B: <input type="text" value="313"/> </div> |                       |         |
| <div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 10px;">                     A = Adjusted Through/Right Volume<br/>                     B = Adjusted Left Volume<br/>                     * = ATSAC Benefit                 </div> <div style="text-align: center;"> </div> </div> |   |                       |         |
| <b>Results</b>   |   |                       |         |
| North/South Critical Movements = B(N/B) + A(S/B)   |   |                       |         |
| West/East Critical Movements = A(W/B) + B(E/B)   |   |                       |         |
| V/C = $\frac{313 + 0 + 1329 + 0}{*1425}$   |   | = 1.082               | LOS = F |
|  |   | <i>ATS</i><br>= 1.052 |         |

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |     |      |           |    |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|-----|------|-----------|----|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |     |      | EASTBOUND |    |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH  | RT   | LT        | TH | RT   |
| EXISTING                          | 0          | 0  | 0    | 0          | 0  | 124  | 0         | 161 | 240  | 0         | 0  | 0    |
| AMBIENT                           |            |    |      |            |    |      |           |     |      |           |    |      |
| RELATED                           |            |    |      |            |    |      |           |     |      |           |    |      |
| PROJECT                           |            |    |      |            |    |      |           |     |      |           |    |      |
| TOTAL                             | 0          | 0  | 0    | 0          | 0  | 124  | 0         | 161 | 240  | 0         | 0  | 0    |
| LANE                              | ↵          | ↵  | ↵    | ↵          | ↵  | ↵    | ↵         | ↵   | ↵    | ↵         | ↵  | ↵    |
|                                   | 0          | 0  | 0    | 0          | 0  | 0    | 0         | 0   | 0    | 0         | 0  | 0    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |     | RTOR | Phasing   |    | RTOR |
|                                   | Perm       |    | Auto | Perm       |    | Auto | Perm      |     | Auto | Perm      |    | Auto |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 124 |
| B:         | 0   |

|           |     |
|-----------|-----|
| WestBound |     |
| A:        | 401 |
| B:        | 0   |

|  |           |   |            |  |  |             |     |
|--|-----------|---|------------|--|--|-------------|-----|
|  |           |   |            |  |  |             |     |
|  | EastBound |   |            |  |  | V/C RATIO   | LOS |
|  | A:        | 0 |            |  |  | 0.00 - 0.60 | A   |
|  | B:        | 0 |            |  |  | 0.61 - 0.70 | B   |
|  |           |   | NorthBound |  |  | 0.71 - 0.80 | C   |
|  | A:        | 0 |            |  |  | 0.81 - 0.90 | D   |
|  | B:        | 0 |            |  |  | 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 124 + 401 + 0}{1500} = 0.350$       LOS = A



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND  |          |            | SOUTHBOUND |          |          | WESTBOUND  |             |          | EASTBOUND |             |            |
|--------------|-------------|----------|------------|------------|----------|----------|------------|-------------|----------|-----------|-------------|------------|
|              | LT          | TH       | RT         | LT         | TH       | RT       | LT         | TH          | RT       | LT        | TH          | RT         |
| EXISTING     | 1239        | 0        | 353        | 0          | 0        | 0        | 300        | 3358        | 0        | 0         | 2808        | 606        |
| AMBIENT      |             |          |            |            |          |          |            |             |          |           |             |            |
| RELATED      |             |          |            |            |          |          |            |             |          |           |             |            |
| PROJECT      |             |          |            |            |          |          |            |             |          |           |             |            |
| <b>TOTAL</b> | <b>1239</b> | <b>0</b> | <b>353</b> | <b>0</b>   | <b>0</b> | <b>0</b> | <b>300</b> | <b>3358</b> | <b>0</b> | <b>0</b>  | <b>2808</b> | <b>606</b> |
| LANE         | ↙ ↕ ↗       | ↖ ↕ ↘    | ↙ ↕ ↗      | ↙ ↕ ↗      | ↖ ↕ ↘    | ↙ ↕ ↗    | ↙ ↕ ↗      | ↖ ↕ ↘       | ↙ ↕ ↗    | ↙ ↕ ↗     | ↖ ↕ ↘       | ↙ ↕ ↗      |
|              | 3           | 0        | 0          | 0          | 0        | 0        | 2          | 0           | 3        | 0         | 0           | 0          |
| SIGNAL       | Phasing     |          | RTOR       |            | Phasing  |          | RTOR       |             | Phasing  |           | RTOR        |            |
|              | Perm        |          | OLA        |            | Perm     |          | Auto       |             | Prot-Fix |           | Auto        |            |

### Critical Movements Diagram

|   |   |  |                  |            |
|---|---|--|------------------|------------|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div>  |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input type="text" value="1119"/><br/>                 B: <input type="text" value="165"/> </div> | <u>V/C RATIO</u> | <u>LOS</u> |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="702"/><br/>                 B: <input type="text" value="0"/> </div> | <div style="border: 1px solid black; padding: 20px; width: 50px; height: 50px; margin: 0 auto;">                 ↑             </div> |  | 0.00 - 0.60      | A          |
|   |   |  | 0.61 - 0.70      | B          |
|   |   |  | 0.71 - 0.80      | C          |
|   |   |  | 0.81 - 0.90      | D          |
|   |   |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

**Results**

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{458 + 0 + 1119 + 0}{*1425} = 1.037 - 0.03 = 1.007$  LOS = F

*ATCS*

## INTERSECTION DATA SUMMARY SHEET

|  |   |   |
|--|---|---|
| N/S: <input style="width: 80%;" type="text" value="Century Park E"/> | W/E: <input style="width: 80%;" type="text" value="Santa Monica Bl (N)"/>               | I/S No: <input style="width: 80%;" type="text" value="10"/> |
| AM/PM: <input style="width: 50%;" type="text" value="PM"/>           | Comments: <input style="width: 90%;" type="text" value="Cumulative Plus Project 2010"/> |   |
| COUNT DATE: <input style="width: 80%;" type="text"/>                 | STUDY DATE: <input style="width: 80%;" type="text"/>                                    | GROWTH FACTOR: <input style="width: 80%;" type="text"/>     |

|              | NORTHBOUND  |                   |  | SOUTHBOUND        |  |          | WESTBOUND   |             |          | EASTBOUND |             |            |
|--------------|---|-------------------|--|-------------------|--|----------|---|-------------|----------|-----------|-------------|------------|
|              | LT  | TH                | RT   | LT                | TH   | RT       | LT  | TH          | RT       | LT        | TH          | RT         |
| EXISTING     | 884   | 0                 | 894  | 0                 | 0  | 0        | 213   | 2991        | 0        | 0         | 3060        | 259        |
| AMBIENT      |   |                   |  |                   |  |          |   |             |          |           |             |            |
| RELATED      |   |                   |  |                   |  |          |   |             |          |           |             |            |
| PROJECT      |   |                   |  |                   |  |          |   |             |          |           |             |            |
| <b>TOTAL</b> | <b>884</b>  | <b>0</b>          | <b>894</b>   | <b>0</b>          | <b>0</b>   | <b>0</b> | <b>213</b>  | <b>2991</b> | <b>0</b> | <b>0</b>  | <b>3060</b> | <b>259</b> |
| LANE         | <br>2 0 0 0 0 2 0   | <br>0 0 0 0 0 0 0 | <br>2 0 4 0 0 0 0  | <br>1 0 4 0 0 1 0 |  |          |   |             |          |           |             |            |
| SIGNAL       | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="OLA"/> |                   | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |          | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="OLA"/> |             |          |           |             |            |

### Critical Movements Diagram

|   |  |  |   |     |  |
|---|--|--|---|-----|--|
|   | SouthBound<br>A: <input style="width: 80%;" type="text" value="0"/><br>B: <input style="width: 80%;" type="text" value="0"/> |  | WestBound<br>A: <input style="width: 80%;" type="text" value="748"/><br>B: <input style="width: 80%;" type="text" value="117"/> |     |  |
| EastBound<br>A: <input style="width: 80%;" type="text" value="765"/><br>B: <input style="width: 80%;" type="text" value="0"/> |  | NorthBound<br>A: <input style="width: 80%;" type="text" value="375"/><br>B: <input style="width: 80%;" type="text" value="486"/> | V/C RATIO   | LOS |  |
|   |  |  | 0.00 - 0.60   | A   |  |
|   |  |  | 0.61 - 0.70   | B   |  |
|   |  |  | 0.71 - 0.80   | C   |  |
|   |  |  | 0.81 - 0.90   | D   |  |
|   |  |  | 0.91 - 1.00   | E   |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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#### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{486 + 0 + 117 + 765}{*1425} = 0.890 - 0.03$  LOS = D  
*ATCS*  
*= 0.860*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |      |      |            |      |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|------------|------|------|------------|------|------|-----------|------|------|-----------|------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND |      |      | SOUTHBOUND |      |      | WESTBOUND |      |      | EASTBOUND |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | LT         | TH   | RT   | LT         | TH   | RT   | LT        | TH   | RT   | LT        | TH   | RT   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING                          | 0          | 1442 | 217  | 0          | 1534 | 1003 | 239       | 1873 | 48   | 925       | 1753 | 30   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT                           |            |      |      |            |      |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |            |      |      |            |      |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |            |      |      |            |      |      |           |      |      |           |      |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 0          | 1442 | 217  | 0          | 1534 | 1003 | 239       | 1873 | 48   | 925       | 1753 | 30   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE                              | 0          | 0    | 2    | 0          | 0    | 1    | 0         | 0    | 0    | 2         | 0    | 1    | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| SIGNAL                            | Phasing    |      | RTOR | Phasing    |      | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | Perm       |      | Auto | Perm       |      | Auto | Split     |      | Auto | Split     |      | Auto |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

|                                     |   |                                     |
|-------------------------------------|---|-------------------------------------|
| SouthBound                          |   | WestBound                           |
| A: <input type="text" value="634"/> | ↑ | A: <input type="text" value="640"/> |
| B: <input type="text" value="0"/>   |   | B: <input type="text" value="239"/> |
| EastBound                           |   | NorthBound                          |
| A: <input type="text" value="893"/> |   | A: <input type="text" value="721"/> |
| B: <input type="text" value="893"/> |   | B: <input type="text" value="0"/>   |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = A(W/B) + A(E/B)

V/C =  $\frac{721 + 0 + 640 + 893}{1425} = 1.582$       LOS = F

Cum Plus Proj PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #12 Santa Monica BL (N) & Wilshire Bl

Cycle (sec): 100 Critical Vol./Cap. (X): 1.272
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module table with 12 columns representing different volume categories and their values.

Saturation Flow Module table with 12 columns representing saturation flow values and adjustments.

Capacity Analysis Module table with 12 columns representing capacity analysis values.

## INTERSECTION DATA SUMMARY SHEET

|   |   |   |
|---|---|---|
| N/S: <input style="width: 90%;" type="text" value="Santa Monica BI (S)"/> | W/E: <input style="width: 90%;" type="text" value="Wilshire BI"/>                       | I/S No: <input style="width: 90%;" type="text" value="13"/> |
| AM/PM: <input style="width: 100px;" type="text" value="PM"/>              | Comments: <input style="width: 90%;" type="text" value="Cumulative Plus Project 2010"/> |   |
| COUNT DATE: <input style="width: 100px;" type="text"/>                    | STUDY DATE: <input style="width: 100px;" type="text"/>                                  | GROWTH FACTOR: <input style="width: 100px;" type="text"/>   |

|              | NORTHBOUND   |                   |  | SOUTHBOUND        |  |                   | WESTBOUND  |                   |  | EASTBOUND         |  |                   |
|--------------|--|-------------------|--|-------------------|--|-------------------|--|-------------------|--|-------------------|--|-------------------|
|              | LT   | TH                | RT   | LT                | TH   | RT                | LT   | TH                | RT   | LT                | TH   | RT                |
| EXISTING     | 138  | 1166              | 506  | 41                | 685  | 367               | 326  | 1632              | 77   | 262               | 1620   | 55                |
| AMBIENT      |  |                   |  |                   |  |                   |  |                   |  |                   |  |                   |
| RELATED      |  |                   |  |                   |  |                   |  |                   |  |                   |  |                   |
| PROJECT      |  |                   |  |                   |  |                   |  |                   |  |                   |  |                   |
| <b>TOTAL</b> | <b>138</b>   | <b>1166</b>       | <b>506</b>   | <b>41</b>         | <b>685</b>   | <b>367</b>        | <b>326</b>   | <b>1632</b>       | <b>77</b>  | <b>262</b>        | <b>1620</b>  | <b>55</b>         |
| LANE         | <br>1 0 2 0 0 1 0  | <br>1 0 1 0 1 0 0 | <br>1 0 2 0 1 0 0  | <br>1 0 1 0 1 0 0 | <br>1 0 1 0 1 0 0  | <br>1 0 1 0 1 0 0 | <br>1 0 1 0 1 0 0  | <br>1 0 1 0 1 0 0 | <br>1 0 1 0 1 0 0  | <br>1 0 1 0 1 0 0 | <br>1 0 1 0 1 0 0  | <br>1 0 1 0 1 0 0 |
| SIGNAL       | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |                   | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |                   |

### Critical Movements Diagram

|  |   |  |  |
|--|---|--|--|
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                     A: <input style="width: 60px;" type="text" value="526"/><br/>                     B: <input style="width: 60px;" type="text" value="41"/> </div>  |  |  |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                     A: <input style="width: 60px;" type="text" value="838"/><br/>                     B: <input style="width: 60px;" type="text" value="262"/> </div> |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                     A: <input style="width: 60px;" type="text" value="570"/><br/>                     B: <input style="width: 60px;" type="text" value="326"/> </div> |  |
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                     A: <input style="width: 60px;" type="text" value="583"/><br/>                     B: <input style="width: 60px;" type="text" value="138"/> </div> |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  | <u>V/C RATIO</u> | <u>LOS</u> |
|--|------------------|------------|
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

---

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{138 + 526 + 326 + 838}{1375} = 1.329$       LOS = F

Cum Plus Proj PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #13 Santa Monica Bl (S) & Wilshire Bl

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap. (X): 1.242
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Protected), Rights (Include), Min. Green (0 0 0), and Lanes (1 0 2 0 1).

Volume Module table with 12 columns and 11 rows. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module table with 12 columns and 5 rows. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with 12 columns and 3 rows. Rows include Vol/Sat, Crit Moves, and a row of asterisks.

\*\*\*\*\*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |    |      |           |    |      |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|----|------|-----------|----|------|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |    |      | EASTBOUND |    |      |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH | RT   | LT        | TH | RT   |
| EXISTING                          | 0          | 375 | 96   | 35         | 316 | 0    | 892       | 0  | 410  | 0         | 0  | 0    |
| AMBIENT                           |            |     |      |            |     |      |           |    |      |           |    |      |
| RELATED                           |            |     |      |            |     |      |           |    |      |           |    |      |
| PROJECT                           |            |     |      |            |     |      |           |    |      |           |    |      |
| TOTAL                             | 0          | 375 | 96   | 35         | 316 | 0    | 892       | 0  | 410  | 0         | 0  | 0    |
| LANE                              |            |     |      |            |     |      |           |    |      |           |    |      |
|                                   | 0          | 0   | 2    | 1          | 0   | 3    | 2         | 0  | 0    | 0         | 0  | 0    |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |
|                                   | Perm       |     | OLA  | Prot-Fix   |     | Auto | Perm      |    | Auto | Perm      |    | Auto |

### Critical Movements Diagram

|  |  |  |  |
|--|--|--|--|
|  | <b>SouthBound</b><br>A: <input type="text" value="105"/><br>B: <input type="text" value="35"/> |  |  |
| <b>EastBound</b><br>A: <input type="text" value="0"/><br>B: <input type="text" value="0"/> | <br>↑  | <b>WestBound</b><br>A: <input type="text" value="208"/><br>B: <input type="text" value="491"/> |  |
|  | <b>NorthBound</b><br>A: <input type="text" value="188"/><br>B: <input type="text" value="0"/>  |  |  |

|             | VIC RATIO | LOS |
|-------------|-----------|-----|
| 0.00 - 0.60 | A         |     |
| 0.61 - 0.70 | B         |     |
| 0.71 - 0.80 | C         |     |
| 0.81 - 0.90 | D         |     |
| 0.91 - 1.00 | E         |     |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$VIC = \frac{188 + 35 + 491 + 0}{*1425} = 0.431 - 0.03 \text{ LOS} = A$$

*ATCS*  
= 0.401

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  PM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND                                     |            |   | SOUTHBOUND |  |            | WESTBOUND                               |            |  | EASTBOUND  |   |            |
|--------------|--|------------|---|------------|--|------------|---|------------|--|------------|---|------------|
|              | LT   | TH         | RT                                      | LT         | TH   | RT         | LT                                      | TH         | RT   | LT         | TH                                      | RT         |
| EXISTING     | 347  | 779        | 131                                     | 154        | 1170   | 294        | 270                                     | 610        | 390  | 263        | 215                                     | 454        |
| AMBIENT      |  |            |   |            |  |            |   |            |  |            |   |            |
| RELATED      |  |            |   |            |  |            |   |            |  |            |   |            |
| PROJECT      |  |            |   |            |  |            |   |            |  |            |   |            |
| <b>TOTAL</b> | <b>347</b>                                     | <b>779</b> | <b>131</b>                              | <b>154</b> | <b>1170</b>                                    | <b>294</b> | <b>270</b>                              | <b>610</b> | <b>390</b>                                     | <b>263</b> | <b>215</b>                              | <b>454</b> |
| LANE         |  |            |   |            |  |            |   |            |  |            |   |            |
|              | 2  | 0          | 2                                       | 0          | 1  | 1          | 0                                       | 0          | 0  | 1          | 0                                       | 2          |
| SIGNAL       | Phasing: <input type="text" value="Prot-Fix"/> |            | RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Prot-Fix"/> |            | RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Prot-Var"/> |            | RTOR: <input type="text" value="Auto"/> |            |

### Critical Movements Diagram

|            |                                  |
|------------|----------------------------------|
| SouthBound |                                  |
| A:         | <input type="text" value="488"/> |
| B:         | <input type="text" value="85"/>  |

↑

|           |                                  |
|-----------|----------------------------------|
| EastBound |                                  |
| A:        | <input type="text" value="359"/> |
| B:        | <input type="text" value="263"/> |

|           |                                  |
|-----------|----------------------------------|
| WestBound |                                  |
| A:        | <input type="text" value="348"/> |
| B:        | <input type="text" value="270"/> |

|            |                                  |
|------------|----------------------------------|
| NorthBound |                                  |
| A:         | <input type="text" value="260"/> |
| B:         | <input type="text" value="191"/> |

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

VIC =  $\frac{191 + 488 + 270 + 359}{*1375} = 0.881$

ATCS  
 = 0.881 - 0.03 LOS = D  
 = 0.851



## INTERSECTION DATA SUMMARY SHEET

|  |   |   |
|--|---|---|
| N/S: <input style="width: 90%;" type="text" value="Century Park E"/> | W/E: <input style="width: 90%;" type="text" value="Constellation BI"/>                  | I/S No: <input style="width: 90%;" type="text" value="16"/> |
| AM/PM: <input style="width: 100px;" type="text" value="PM"/>         | Comments: <input style="width: 90%;" type="text" value="Cumulative Plus Project 2010"/> |   |
| COUNT DATE: <input style="width: 100px;" type="text"/>               | STUDY DATE: <input style="width: 100px;" type="text"/>                                  | GROWTH FACTOR: <input style="width: 100px;" type="text"/>   |

|              | NORTHBOUND   |                   |  | SOUTHBOUND        |  |            | WESTBOUND  |           |  | EASTBOUND  |  |            |
|--------------|--|-------------------|--|-------------------|--|------------|--|-----------|--|------------|--|------------|
|              | LT   | TH                | RT   | LT                | TH   | RT         | LT   | TH        | RT   | LT         | TH   | RT         |
| EXISTING     | 185  | 635               | 0  | 51                | 1003   | 237        | 0  | 11        | 32   | 705        | 0  | 603        |
| AMBIENT      |  |                   |  |                   |  |            |  |           |  |            |  |            |
| RELATED      |  |                   |  |                   |  |            |  |           |  |            |  |            |
| PROJECT      |  |                   |  |                   |  |            |  |           |  |            |  |            |
| <b>TOTAL</b> | <b>185</b>   | <b>635</b>        | <b>0</b>   | <b>51</b>         | <b>1003</b>  | <b>237</b> | <b>0</b>   | <b>11</b> | <b>32</b>  | <b>705</b> | <b>0</b>   | <b>603</b> |
| LANE         | <br>1 0 3 0 0 0 0  | <br>1 0 2 0 0 1 0 | <br>0 0 0 0 0 0 1  | <br>2 0 0 0 0 2 0 |  |            |  |           |  |            |  |            |
| SIGNAL       | Phasing <input type="text" value="Perm"/> RTOR <input type="text" value="Auto"/> |                   | Phasing <input type="text" value="Perm"/> RTOR <input type="text" value="Auto"/> |                   | Phasing <input type="text" value="Perm"/> RTOR <input type="text" value="Auto"/> |            | Phasing <input type="text" value="Perm"/> RTOR <input type="text" value="Auto"/> |           | Phasing <input type="text" value="Perm"/> RTOR <input type="text" value="Auto"/> |            | Phasing <input type="text" value="Perm"/> RTOR <input type="text" value="Auto"/> |            |

### Critical Movements Diagram

|   |  |  |  |
|---|--|--|--|
|   | SouthBound<br>A: <input style="width: 80%;" type="text" value="502"/><br>B: <input style="width: 80%;" type="text" value="51"/>  |  |  |
| EastBound<br>A: <input style="width: 80%;" type="text" value="332"/><br>B: <input style="width: 80%;" type="text" value="388"/> |  | WestBound<br>A: <input style="width: 80%;" type="text" value="32"/><br>B: <input style="width: 80%;" type="text" value="0"/> |  |
|   | NorthBound<br>A: <input style="width: 80%;" type="text" value="212"/><br>B: <input style="width: 80%;" type="text" value="185"/> |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  | VIC RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

---

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$VIC = \frac{185 + 502 + 32 + 388}{*1500} = 0.668$$

*ATCS*  
 = 0.668 - 0.03 LOS = B  
 = 0.638

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |            |            |            |            |           |            |             |           |           |             |            |
|-----------------------------------|------------|------------|------------|------------|------------|-----------|------------|-------------|-----------|-----------|-------------|------------|
|                                   | NORTHBOUND |            |            | SOUTHBOUND |            |           | WESTBOUND  |             |           | EASTBOUND |             |            |
|                                   | LT         | TH         | RT         | LT         | TH         | RT        | LT         | TH          | RT        | LT        | TH          | RT         |
| EXISTING                          | 132        | 568        | 209        | 73         | 820        | 59        | 505        | 3632        | 48        | 55        | 2248        | 168        |
| AMBIENT                           |            |            |            |            |            |           |            |             |           |           |             |            |
| RELATED                           |            |            |            |            |            |           |            |             |           |           |             |            |
| PROJECT                           |            |            |            |            |            |           |            |             |           |           |             |            |
| <b>TOTAL</b>                      | <b>132</b> | <b>568</b> | <b>209</b> | <b>73</b>  | <b>820</b> | <b>59</b> | <b>505</b> | <b>3632</b> | <b>48</b> | <b>55</b> | <b>2248</b> | <b>168</b> |
| LANE                              |            |            |            |            |            |           |            |             |           |           |             |            |
|                                   | 1          | 0          | 0          | 1          | 0          | 0         | 1          | 0           | 3         | 1         | 0           | 2          |
| SIGNAL                            | Phasing    |            | RTOR       | Phasing    |            | RTOR      | Phasing    |             | RTOR      | Phasing   |             | RTOR       |
|                                   | Perm       |            | Auto       | Perm       |            | Auto      | Prot-Fix   |             | Auto      | Prot-Fix  |             | Auto       |

### Critical Movements Diagram

|   |   |  |  |
|---|---|--|--|
|   | <b>SouthBound</b><br>A: <input type="text" value="879"/><br>B: <input type="text" value="73"/>  |  |  |
| <b>EastBound</b><br>A: <input type="text" value="805"/><br>B: <input type="text" value="55"/> |   | <b>WestBound</b><br>A: <input type="text" value="920"/><br>B: <input type="text" value="505"/> |  |
|   | <b>NorthBound</b><br>A: <input type="text" value="777"/><br>B: <input type="text" value="132"/> |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|             | VIC RATIO | LOS |
|-------------|-----------|-----|
| 0.00 - 0.60 | A         |     |
| 0.61 - 0.70 | B         |     |
| 0.71 - 0.80 | C         |     |
| 0.81 - 0.90 | D         |     |
| 0.91 - 1.00 | E         |     |

---

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

VIC =  $\frac{132 + 879 + 505 + 805}{*1425} = 1.559$

ATCS  
 -0.03  
 = 1.529

LOS = F

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |      |      |           |      |      |  |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|------|------|-----------|------|------|--|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |      |      | EASTBOUND |      |      |  |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH   | RT   | LT        | TH   | RT   |  |
| EXISTING                          | 73         | 387 | 63   | 203        | 691 | 341  | 241       | 3785 | 189  | 192       | 2134 | 101  |  |
| AMBIENT                           |            |     |      |            |     |      |           |      |      |           |      |      |  |
| RELATED                           |            |     |      |            |     |      |           |      |      |           |      |      |  |
| PROJECT                           |            |     |      |            |     |      |           |      |      |           |      |      |  |
| TOTAL                             | 73         | 387 | 63   | 203        | 691 | 341  | 241       | 3785 | 189  | 192       | 2134 | 101  |  |
| LANE                              |            |     |      |            |     |      |           |      |      |           |      |      |  |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |  |
|                                   | Prot-Var   |     | Auto | Prot-Var   |     | Auto | Prot-Var  |      | Auto | Prot-Var  |      | Auto |  |

### Critical Movements Diagram

|                                     |   |                                     |
|-------------------------------------|---|-------------------------------------|
| EastBound                           | ↑ | WestBound                           |
| A: <input type="text" value="711"/> |   | A: <input type="text" value="994"/> |
| B: <input type="text" value="192"/> |   | B: <input type="text" value="241"/> |

|                                     |
|-------------------------------------|
| SouthBound                          |
| A: <input type="text" value="346"/> |
| B: <input type="text" value="203"/> |

|                                     |
|-------------------------------------|
| NorthBound                          |
| A: <input type="text" value="194"/> |
| B: <input type="text" value="73"/>  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$VIC = \frac{73 + 346 + 994 + 192}{*1375} = 1.097 - 0.03 \text{ LOS} = F$$

*ATCS*  
= 1.067

## INTERSECTION DATA SUMMARY SHEET

|             |                |             |                              |                |     |  |
|-------------|----------------|-------------|------------------------------|----------------|-----|--|
| N/S:        | Century Park W | W/E:        | Olympic Bl                   | I/S No:        | 19  |  |
| AM/PM:      | <b>PM</b>      | Comments:   | Cumulative Plus Project 2010 |                |     |  |
| COUNT DATE: | [ ]            | STUDY DATE: | [ ]                          | GROWTH FACTOR: | [ ] |  |

|          | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |      |      | EASTBOUND |      |      |
|----------|------------|-----|------|------------|-----|------|-----------|------|------|-----------|------|------|
|          | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING | 0          | 0   | 0    | 243        | 0   | 1448 | 0         | 3552 | 105  | 330       | 2553 | 0    |
| AMBIENT  | [ ]        | [ ] | [ ]  | [ ]        | [ ] | [ ]  | [ ]       | [ ]  | [ ]  | [ ]       | [ ]  | [ ]  |
| RELATED  | [ ]        | [ ] | [ ]  | [ ]        | [ ] | [ ]  | [ ]       | [ ]  | [ ]  | [ ]       | [ ]  | [ ]  |
| PROJECT  | [ ]        | [ ] | [ ]  | [ ]        | [ ] | [ ]  | [ ]       | [ ]  | [ ]  | [ ]       | [ ]  | [ ]  |
| TOTAL    | 0          | 0   | 0    | 243        | 0   | 1448 | 0         | 3552 | 105  | 330       | 2553 | 0    |
| LANE     | ↙          | ↕   | ↗    | ↙          | ↕   | ↗    | ↙         | ↕    | ↗    | ↙         | ↕    | ↗    |
|          | 0          | 0   | 0    | 2          | 0   | 0    | 0         | 0    | 3    | 2         | 0    | 3    |
| SIGNAL   | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|          | Perm       |     | Auto | Perm       |     | OLA  | Perm      |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|                                      |                                       |                                     |  |
|--------------------------------------|---------------------------------------|-------------------------------------|--|
|                                      | <b>SouthBound</b><br>A: 615<br>B: 134 |                                     |  |
| <b>EastBound</b><br>A: 851<br>B: 182 | ↑<br>(North arrow)                    | <b>WestBound</b><br>A: 1184<br>B: 0 |  |
| <b>NorthBound</b><br>A: 0<br>B: 0    |                                       |                                     |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|                |  |
|----------------|--|
| <b>Results</b> | $\text{North/South Critical Movements} = B(N/B) + A(S/B)$ $\text{West/East Critical Movements} = A(W/B) + B(E/B)$ $\text{VIC} = \frac{0 + 615 + 1184 + 182}{*1425} = 1.320 - 0.03 = 1.290$ |
|----------------|--|

LOS = F

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|------------|-----|------|------------|------|------|-----------|----|------|-----------|----|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |      |      | WESTBOUND |    |      | EASTBOUND |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | LT         | TH  | RT   | LT         | TH   | RT   | LT        | TH | RT   | LT        | TH | RT   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| EXISTING                          | 14         | 962 | 209  | 138        | 1856 | 45   | 186       | 11 | 237  | 22        | 11 | 13   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| AMBIENT                           |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| RELATED                           |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| PROJECT                           |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| TOTAL                             | 14         | 962 | 209  | 138        | 1856 | 45   | 186       | 11 | 237  | 22        | 11 | 13   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| LANE                              |            |     |      |            |      |      |           |    |      |           |    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | 1          | 0   | 2    | 0          | 1    | 0    | 0         | 1  | 0    | 2         | 0  | 1    | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |      | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|                                   | Perm       |     | Auto | Perm       |      | Auto | Perm      |    | Auto | Perm      |    | Auto |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

### Critical Movements Diagram

| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="634"/><br/>                 B: <input type="text" value="138"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="33"/><br/>                 B: <input type="text" value="22"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input type="text" value="237"/><br/>                 B: <input type="text" value="186"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 NorthBound<br/>                 A: <input type="text" value="390"/><br/>                 B: <input type="text" value="14"/> </div> |  | <table border="1"> <thead> <tr> <th>VIC RATIO</th> <th>LOS</th> </tr> </thead> <tbody> <tr><td>0.00 - 0.60</td><td>A</td></tr> <tr><td>0.61 - 0.70</td><td>B</td></tr> <tr><td>0.71 - 0.80</td><td>C</td></tr> <tr><td>0.81 - 0.90</td><td>D</td></tr> <tr><td>0.91 - 1.00</td><td>E</td></tr> </tbody> </table> | VIC RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
|--|---|---|---|--|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| VIC RATIO  | LOS   |   |   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60  | A   |   |   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70  | B   |   |   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80  | C   |   |   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90  | D   |   |   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00  | E   |   |   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$$VIC = \frac{14 + 634 + 237 + 22}{*1500} = 0.535 - 0.03 \text{ LOS} = A = 0.505$$

*ATCS*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  PM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |      |      |           |    |      |           |    |      |  |
|-----------------------------------|------------|-----|------|------------|------|------|-----------|----|------|-----------|----|------|--|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |      |      | WESTBOUND |    |      | EASTBOUND |    |      |  |
|                                   | LT         | TH  | RT   | LT         | TH   | RT   | LT        | TH | RT   | LT        | TH | RT   |  |
| EXISTING                          | 25         | 871 | 132  | 241        | 1796 | 52   | 65        | 11 | 83   | 75        | 37 | 44   |  |
| AMBIENT                           |            |     |      |            |      |      |           |    |      |           |    |      |  |
| RELATED                           |            |     |      |            |      |      |           |    |      |           |    |      |  |
| PROJECT                           |            |     |      |            |      |      |           |    |      |           |    |      |  |
| TOTAL                             | 25         | 871 | 132  | 241        | 1796 | 52   | 65        | 11 | 83   | 75        | 37 | 44   |  |
| LANE                              |            |     |      |            |      |      |           |    |      |           |    |      |  |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |      | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |  |
|                                   | Perm       |     | Auto | Prot-Fix   |      | Auto | Perm      |    | Auto | Perm      |    | Auto |  |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 616 |
| B:         | 133 |

↑

|           |    |
|-----------|----|
| EastBound |    |
| A:        | 78 |
| B:        | 75 |

|           |    |
|-----------|----|
| WestBound |    |
| A:        | 80 |
| B:        | 65 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 334 |
| B:         | 25  |

|  | VIC RATIO   | LOS |
|--|-------------|-----|
|  | 0.00 - 0.60 | A   |
|  | 0.61 - 0.70 | B   |
|  | 0.71 - 0.80 | C   |
|  | 0.81 - 0.90 | D   |
|  | 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

$$VIC = \frac{25 + 616 + 80 + 75}{*1425} = 0.489 - 0.03 \text{ LOS} = A$$
*ATCS*  
*= 0.459*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |     |      |            |     |      |           |      |      |           |      |      |  |
|-----------------------------------|------------|-----|------|------------|-----|------|-----------|------|------|-----------|------|------|--|
|                                   | NORTHBOUND |     |      | SOUTHBOUND |     |      | WESTBOUND |      |      | EASTBOUND |      |      |  |
|                                   | LT         | TH  | RT   | LT         | TH  | RT   | LT        | TH   | RT   | LT        | TH   | RT   |  |
| EXISTING                          | 57         | 319 | 148  | 759        | 693 | 568  | 0         | 2877 | 374  | 0         | 2724 | 137  |  |
| AMBIENT                           |            |     |      |            |     |      |           |      |      |           |      |      |  |
| RELATED                           |            |     |      |            |     |      |           |      |      |           |      |      |  |
| PROJECT                           |            |     |      |            |     |      |           |      |      |           |      |      |  |
| TOTAL                             | 57         | 319 | 148  | 759        | 693 | 568  | 0         | 2877 | 374  | 0         | 2724 | 137  |  |
| LANE                              |            |     |      |            |     |      |           |      |      |           |      |      |  |
| SIGNAL                            | Phasing    |     | RTOR | Phasing    |     | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |  |
|                                   | Prot-Fix   |     | Auto | Prot-Fix   |     | Auto | Perm      |      | Auto | Perm      |      | Auto |  |

### Critical Movements Diagram

|   |  |   |  |
|---|--|---|--|
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="347"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="417"/> </div> |   |  |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="954"/><br/>                 B: <input type="text" value="0"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="813"/><br/>                 B: <input style="background-color: #cccccc;" type="text" value="0"/> </div> |  |
|   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input style="background-color: #cccccc;" type="text" value="156"/><br/>                 B: <input type="text" value="31"/> </div>  |   |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| VIC RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

$$VIC = \frac{156 + 417 + 0 + 954}{*1425} = 1.002 - 0.03 \text{ (ATCS)} \text{ LOS} = \text{E}$$

*= 0.972*

## INTERSECTION DATA SUMMARY SHEET

|             |  |             |   |                |                                 |
|-------------|--|-------------|---|----------------|---------------------------------|
| N/S:        | <input type="text" value="Spalding Dr"/> | W/E:        | <input type="text" value="Olympic Bl"/>                   | I/S No:        | <input type="text" value="23"/> |
| AM/PM:      | <input type="text" value="PM"/>          | Comments:   | <input type="text" value="Cumulative Plus Project 2010"/> |                |                                 |
| COUNT DATE: | <input type="text"/>                     | STUDY DATE: | <input type="text"/>                                      | GROWTH FACTOR: | <input type="text"/>            |

|              | NORTHBOUND                        |           |                                   | SOUTHBOUND                        |           |                                   | WESTBOUND                         |             |                                   | EASTBOUND                             |             |                                   |
|--------------|-----------------------------------|-----------|-----------------------------------|-----------------------------------|-----------|-----------------------------------|-----------------------------------|-------------|-----------------------------------|---------------------------------------|-------------|-----------------------------------|
|              | LT                                | TH        | RT                                | LT                                | TH        | RT                                | LT                                | TH          | RT                                | LT                                    | TH          | RT                                |
| EXISTING     | 22                                | 21        | 30                                | 275                               | 86        | 377                               | 30                                | 2719        | 113                               | 230                                   | 2685        | 15                                |
| AMBIENT      |                                   |           |                                   |                                   |           |                                   |                                   |             |                                   |                                       |             |                                   |
| RELATED      |                                   |           |                                   |                                   |           |                                   |                                   |             |                                   |                                       |             |                                   |
| PROJECT      |                                   |           |                                   |                                   |           |                                   |                                   |             |                                   |                                       |             |                                   |
| <b>TOTAL</b> | <b>22</b>                         | <b>21</b> | <b>30</b>                         | <b>275</b>                        | <b>86</b> | <b>377</b>                        | <b>30</b>                         | <b>2719</b> | <b>113</b>                        | <b>230</b>                            | <b>2685</b> | <b>15</b>                         |
| LANE         |                                   |           |                                   |                                   |           |                                   |                                   |             |                                   |                                       |             |                                   |
| SIGNAL       | Phasing                           |           | RTOR                              | Phasing                           |           | RTOR                              | Phasing                           |             | RTOR                              | Phasing                               |             | RTOR                              |
|              | <input type="text" value="Perm"/> |           | <input type="text" value="Auto"/> | <input type="text" value="Perm"/> |           | <input type="text" value="Auto"/> | <input type="text" value="Perm"/> |             | <input type="text" value="Auto"/> | <input type="text" value="Prot-Fix"/> |             | <input type="text" value="Auto"/> |

### Critical Movements Diagram

|                                     |                                     |  |                                     |  |
|-------------------------------------|-------------------------------------|--|-------------------------------------|--|
|                                     | <b>SouthBound</b>                   |  |                                     |  |
|                                     | A: <input type="text" value="361"/> |  |                                     |  |
|                                     | B: <input type="text" value="275"/> |  |                                     |  |
| <b>EastBound</b>                    |                                     |  | <b>WestBound</b>                    |  |
| A: <input type="text" value="900"/> |                                     |  | A: <input type="text" value="944"/> |  |
| B: <input type="text" value="230"/> |                                     |  | B: <input type="text" value="30"/>  |  |
|                                     | <b>NorthBound</b>                   |  |                                     |  |
|                                     | A: <input type="text" value="73"/>  |  |                                     |  |
|                                     | B: <input type="text" value="22"/>  |  |                                     |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|                                  |  |
|----------------------------------|--|
| <b>Results</b>                   |  |
| North/South Critical Movements = | $B(N/B) + A(S/B)$                            |
| West/East Critical Movements =   | $A(W/B) + B(E/B)$                            |
| V/C =                            | $\frac{22 + 361 + 944 + 230}{*1425} = 1.023$ |
| LOS =                            | F  |



Cum Plus Proj PM

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #23 Spalding Drive & Olympic Boulevard

Cycle (sec): 100 Critical Vol./Cap. (X): 1.083
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F

Table with columns for Street Name (Spalding Drive, Olympic Boulevard), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. across four approaches.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. across four approaches.

Capacity Analysis Module table with columns for Vol/Sat and Crit Moves across four approaches.

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  PM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND   |            |  | SOUTHBOUND |   |           | WESTBOUND   |          |   | EASTBOUND  |  |            |
|--------------|--|------------|--|------------|---|-----------|---|----------|---|------------|--|------------|
|              | LT   | TH         | RT   | LT         | TH  | RT        | LT  | TH       | RT  | LT         | TH   | RT         |
| EXISTING     | 27   | 693        | 55   | 140        | 1876  | 36        | 52  | 0        | 54  | 276        | 0  | 335        |
| AMBIENT      |  |            |  |            |   |           |   |          |   |            |  |            |
| RELATED      |  |            |  |            |   |           |   |          |   |            |  |            |
| PROJECT      |  |            |  |            |   |           |   |          |   |            |  |            |
| <b>TOTAL</b> | <b>27</b>  | <b>693</b> | <b>55</b>  | <b>140</b> | <b>1876</b>   | <b>36</b> | <b>52</b>   | <b>0</b> | <b>54</b>   | <b>276</b> | <b>0</b>   | <b>335</b> |
| LANE         |  |            |  |            |   |           |   |          |   |            |  |            |
| SIGNAL       | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Split"/> RTOR: <input type="text" value="Auto"/> |           | Phasing: <input type="text" value="Split"/> RTOR: <input type="text" value="Auto"/> |          | Phasing: <input type="text" value="Split"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Auto"/> RTOR: <input type="text" value="Auto"/> |            |

### Critical Movements Diagram

|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="637"/><br/>                 B: <input type="text" value="140"/> </div> |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
|--|---|--|--|-----------|-----|-------------|---|-------------|---|-------------|---|-------------|---|-------------|---|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="328"/><br/>                 B: <input type="text" value="152"/> </div>                       |   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="54"/><br/>                 B: <input type="text" value="52"/> </div> | <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">VIC RATIO</th> <th style="text-align: left;">LOS</th> </tr> </thead> <tbody> <tr> <td>0.00 - 0.60</td> <td>A</td> </tr> <tr> <td>0.61 - 0.70</td> <td>B</td> </tr> <tr> <td>0.71 - 0.80</td> <td>C</td> </tr> <tr> <td>0.81 - 0.90</td> <td>D</td> </tr> <tr> <td>0.91 - 1.00</td> <td>E</td> </tr> </tbody> </table> | VIC RATIO | LOS | 0.00 - 0.60 | A | 0.61 - 0.70 | B | 0.71 - 0.80 | C | 0.81 - 0.90 | D | 0.91 - 1.00 | E |
| VIC RATIO  | LOS   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.00 - 0.60  | A   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.61 - 0.70  | B   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.71 - 0.80  | C   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.81 - 0.90  | D   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| 0.91 - 1.00  | E   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| <p>A = Adjusted Through/Right Volume<br/>                 B = Adjusted Left Volume<br/>                 * = ATSAC Benefit</p>  |   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |
| <p><b>Results</b></p> <p>North/South Critical Movements = B(N/B) + A(S/B)</p> <p>West/East Critical Movements = A(W/B) + A(E/B)</p> <p>VIC = <math>\frac{15 + 637 + 54 + 328}{*1375} = 0.682</math> <sup>ATSAC</sup> <del>0.03</del> LOS = B = 0.652</p> |   |  |  |           |     |             |   |             |   |             |   |             |   |             |   |

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|                 | NORTHBOUND |     |      | SOUTHBOUND |      |      | WESTBOUND |    |      | EASTBOUND |    |      |  |
|-----------------|------------|-----|------|------------|------|------|-----------|----|------|-----------|----|------|--|
|                 | LT         | TH  | RT   | LT         | TH   | RT   | LT        | TH | RT   | LT        | TH | RT   |  |
| <b>EXISTING</b> | 11         | 705 | 20   | 33         | 1939 | 11   | 17        | 0  | 29   | 0         | 0  | 0    |  |
| <b>AMBIENT</b>  |            |     |      |            |      |      |           |    |      |           |    |      |  |
| <b>RELATED</b>  |            |     |      |            |      |      |           |    |      |           |    |      |  |
| <b>PROJECT</b>  |            |     |      |            |      |      |           |    |      |           |    |      |  |
| <b>TOTAL</b>    | 11         | 705 | 20   | 33         | 1939 | 11   | 17        | 0  | 29   | 0         | 0  | 0    |  |
| <b>LANE</b>     |            |     |      |            |      |      |           |    |      |           |    |      |  |
| <b>SIGNAL</b>   | Phasing    |     | RTOR | Phasing    |      | RTOR | Phasing   |    | RTOR | Phasing   |    | RTOR |  |
|                 | Perm       |     | Auto | Perm       |      | Auto | Perm      |    | Auto | Perm      |    | Auto |  |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 650 |
| B:         | 33  |

|           |   |
|-----------|---|
| EastBound |   |
| A:        | 0 |
| B:        | 0 |

|           |    |
|-----------|----|
| WestBound |    |
| A:        | 46 |
| B:        | 17 |

|            |     |
|------------|-----|
| NorthBound |     |
| A:         | 242 |
| B:         | 11  |

|  |  |  |                  |            |
|--|--|--|------------------|------------|
|  |  |  | <b>V/C RATIO</b> | <b>LOS</b> |
|  |  |  | 0.00 - 0.60      | A          |
|  |  |  | 0.61 - 0.70      | B          |
|  |  |  | 0.71 - 0.80      | C          |
|  |  |  | 0.81 - 0.90      | D          |
|  |  |  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$V/C = \frac{11 + 650 + 46 + 0}{1500} = 0.471$

LOS = A

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND  |            |  | SOUTHBOUND |  |           | WESTBOUND  |             |  | EASTBOUND |  |            |
|--------------|---|------------|--|------------|--|-----------|--|-------------|--|-----------|--|------------|
|              | LT  | TH         | RT   | LT         | TH   | RT        | LT   | TH          | RT   | LT        | TH   | RT         |
| EXISTING     | 322   | 947        | 435  | 75         | 1651   | 61        | 1051   | 1720        | 40   | 88        | 1153   | 396        |
| AMBIENT      |   |            |  |            |  |           |  |             |  |           |  |            |
| RELATED      |   |            |  |            |  |           |  |             |  |           |  |            |
| PROJECT      |   |            |  |            |  |           |  |             |  |           |  |            |
| <b>TOTAL</b> | <b>322</b>  | <b>947</b> | <b>435</b>   | <b>75</b>  | <b>1651</b>  | <b>61</b> | <b>1051</b>  | <b>1720</b> | <b>40</b>  | <b>88</b> | <b>1153</b>  | <b>396</b> |
| LANE         |   |            |  |            |  |           |  |             |  |           |  |            |
| SIGNAL       | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="OLA"/> |            | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |            | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |           | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |             | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |           | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> |            |

### Critical Movements Diagram

|   |  |  |  |
|---|--|--|--|
|   | <b>SouthBound</b><br>A: <input type="text" value="856"/><br>B: <input type="text" value="75"/> |  |  |
| <b>EastBound</b><br>A: <input type="text" value="516"/><br>B: <input type="text" value="88"/>   |  | <b>WestBound</b><br>A: <input type="text" value="587"/><br>B: <input type="text" value="578"/> |  |
| <b>NorthBound</b><br>A: <input type="text" value="947"/><br>B: <input type="text" value="177"/> |  |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

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**Results**

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = B(W/B) + A(E/B)

V/C =  $\frac{177 + 856 + 578 + 516}{*1375} = 1.477 - 0.03$  LOS = F  
*ATCS = 1.447*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|          | NORTHBOUND   |  |  | SOUTHBOUND   |     |    | WESTBOUND |      |    | EASTBOUND |      |    |
|----------|--|--|--|--|-----|----|-----------|------|----|-----------|------|----|
|          | LT   | TH   | RT   | LT   | TH  | RT | LT        | TH   | RT | LT        | TH   | RT |
| EXISTING | 91   | 63   | 124  | 11   | 226 | 48 | 166       | 2115 | 31 | 49        | 1245 | 44 |
| AMBIENT  |  |  |  |  |     |    |           |      |    |           |      |    |
| RELATED  |  |  |  |  |     |    |           |      |    |           |      |    |
| PROJECT  |  |  |  |  |     |    |           |      |    |           |      |    |
| TOTAL    | 91   | 63   | 124  | 11   | 226 | 48 | 166       | 2115 | 31 | 49        | 1245 | 44 |
| LANE     | ↙ ↕ ↗<br>0 0 0 1 0 0 0   | ↙ ↕ ↗<br>0 0 0 1 0 0 0   | ↙ ↕ ↗<br>1 0 2 0 1 0 0   | ↙ ↕ ↗<br>1 0 2 0 0 1 0   |     |    |           |      |    |           |      |    |
| SIGNAL   | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Prot-Fix"/> RTOR: <input type="text" value="Auto"/> | Phasing: <input type="text" value="Perm"/> RTOR: <input type="text" value="Auto"/> |     |    |           |      |    |           |      |    |

### Critical Movements Diagram

|                                     |  |
|-------------------------------------|--|
| SouthBound                          |  |
| A: <input type="text" value="285"/> |  |
| B: <input type="text" value="11"/>  |  |

|                                     |  |
|-------------------------------------|--|
| EastBound                           |  |
| A: <input type="text" value="623"/> |  |
| B: <input type="text" value="49"/>  |  |

|                                     |  |
|-------------------------------------|--|
| WestBound                           |  |
| A: <input type="text" value="715"/> |  |
| B: <input type="text" value="166"/> |  |

|                                     |  |
|-------------------------------------|--|
| NorthBound                          |  |
| A: <input type="text" value="278"/> |  |
| B: <input type="text" value="91"/>  |  |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

#### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{91 + 285 + 166 + 623}{*1425} = 0.748 - 0.03 \text{ LOS} = C$$

*ATCS*  
= 0.718

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

|              | NORTHBOUND |          |          | SOUTHBOUND |          |            | WESTBOUND |             |            | EASTBOUND  |             |          |
|--------------|------------|----------|----------|------------|----------|------------|-----------|-------------|------------|------------|-------------|----------|
|              | LT         | TH       | RT       | LT         | TH       | RT         | LT        | TH          | RT         | LT         | TH          | RT       |
| EXISTING     | 0          | 0        | 0        | 366        | 0        | 466        | 0         | 1852        | 292        | 253        | 1239        | 0        |
| AMBIENT      |            |          |          |            |          |            |           |             |            |            |             |          |
| RELATED      |            |          |          |            |          |            |           |             |            |            |             |          |
| PROJECT      |            |          |          |            |          |            |           |             |            |            |             |          |
| <b>TOTAL</b> | <b>0</b>   | <b>0</b> | <b>0</b> | <b>366</b> | <b>0</b> | <b>466</b> | <b>0</b>  | <b>1852</b> | <b>292</b> | <b>253</b> | <b>1239</b> | <b>0</b> |
| LANE         | ↙ ↕ ↘      | ↙ ↕ ↘    | ↙ ↕ ↘    | ↙ ↕ ↘      | ↙ ↕ ↘    | ↙ ↕ ↘      | ↙ ↕ ↘     | ↙ ↕ ↘       | ↙ ↕ ↘      | ↙ ↕ ↘      | ↙ ↕ ↘       | ↙ ↕ ↘    |
|              | 0 0 0      | 0 0 0    | 0 0 0    | 1 0 0      | 0 0 0    | 1 1        | 0 0 2     | 0 1 0       | 0 0        | 1 0 3      | 0 0 0       | 0 0 0    |
| SIGNAL       | Phasing    |          | RTOR     | Phasing    |          | RTOR       | Phasing   |             | RTOR       | Phasing    |             | RTOR     |
|              | Perm       |          | Auto     | Perm       |          | Auto       | Perm      |             | Auto       | Perm       |             | Auto     |

### Critical Movements Diagram

|   |   |   |   |                                     |
|---|---|---|---|-------------------------------------|
|   | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SouthBound</b><br/>                 A: <input type="text" value="277"/><br/>                 B: <input type="text" value="277"/> </div> |   |   |                                     |
| <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>EastBound</b><br/>                 A: <input type="text" value="413"/><br/>                 B: <input type="text" value="253"/> </div> | ↑<br>↑  | <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>WestBound</b><br/>                 A: <input type="text" value="715"/><br/>                 B: <input type="text" value="0"/> </div> | <b>V/C RATIO</b><br>0.00 - 0.60<br>0.61 - 0.70<br>0.71 - 0.80<br>0.81 - 0.90<br>0.91 - 1.00 | <b>LOS</b><br>A<br>B<br>C<br>D<br>E |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

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### Results

North/South Critical Movements = B(N/B) + A(S/B)  
 West/East Critical Movements = A(W/B) + B(E/B)

V/C =  $\frac{0 + 277 + 715 + 253}{*1500} = 0.760 - 0.03 = 0.730$  LOS = C

*ATS*

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 315        | 0  | 642  | 117        | 0  | 257  | 1125      | 1443 | 73   | 78        | 1335 | 483  |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL                             | 315        | 0  | 642  | 117        | 0  | 257  | 1125      | 1443 | 73   | 78        | 1335 | 483  |
| LANE                              |            |    |      |            |    |      |           |      |      |           |      |      |
|                                   | 2          | 0  | 0    | 1          | 0  | 0    | 1         | 0    | 3    | 1         | 0    | 2    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Split      |    | OLA  | Split      |    | Auto | Prot-Fix  |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|            |     |
|------------|-----|
| SouthBound |     |
| A:         | 218 |
| B:         | 117 |

|           |      |
|-----------|------|
| WestBound |      |
| A:        | 481  |
| B:        | 1125 |

| V/C RATIO   | LOS |
|-------------|-----|
| 0.00 - 0.60 | A   |
| 0.61 - 0.70 | B   |
| 0.71 - 0.80 | C   |
| 0.81 - 0.90 | D   |
| 0.91 - 1.00 | E   |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{173 + 218 + 1125 + 606}{*1375} = 1.473 - 0.03 \text{ LOS} = F$$

*ATCS*  
= 1.443

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |          |          |            |          |             |           |             |            |            |             |          |
|-----------------------------------|------------|----------|----------|------------|----------|-------------|-----------|-------------|------------|------------|-------------|----------|
|                                   | NORTHBOUND |          |          | SOUTHBOUND |          |             | WESTBOUND |             |            | EASTBOUND  |             |          |
|                                   | LT         | TH       | RT       | LT         | TH       | RT          | LT        | TH          | RT         | LT         | TH          | RT       |
| EXISTING                          | 0          | 0        | 0        | 735        | 0        | 1284        | 0         | 1607        | 366        | 393        | 1773        | 0        |
| AMBIENT                           |            |          |          |            |          |             |           |             |            |            |             |          |
| RELATED                           |            |          |          |            |          |             |           |             |            |            |             |          |
| PROJECT                           |            |          |          |            |          |             |           |             |            |            |             |          |
| <b>TOTAL</b>                      | <b>0</b>   | <b>0</b> | <b>0</b> | <b>735</b> | <b>0</b> | <b>1284</b> | <b>0</b>  | <b>1607</b> | <b>366</b> | <b>393</b> | <b>1773</b> | <b>0</b> |
| LANE                              | ↙          | ↕        | ↗        | ↙          | ↕        | ↗           | ↙         | ↕           | ↗          | ↙          | ↕           | ↗        |
|                                   | 0          | 0        | 0        | 2          | 0        | 0           | 0         | 2           | 1          | 2          | 0           | 3        |
| SIGNAL                            | Phasing    |          | RTOR     | Phasing    |          | RTOR        | Phasing   |             | RTOR       | Phasing    |             | RTOR     |
|                                   | Perm       |          | Auto     | Perm       |          | Auto        | Perm      |             | Auto       | Prot-Fix   |             | Auto     |

### Critical Movements Diagram

|  |   |  |  |
|--|---|--|--|
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>SouthBound</b><br/>                 A: <input type="text" value="598"/><br/>                 B: <input type="text" value="404"/> </div> |  |  |
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>EastBound</b><br/>                 A: <input type="text" value="591"/><br/>                 B: <input type="text" value="216"/> </div> | <div style="border: 1px solid black; padding: 20px; width: 50px; margin: 0 auto;">                 ↑             </div>   | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>WestBound</b><br/>                 A: <input type="text" value="658"/><br/>                 B: <input type="text" value="0"/> </div> |  |
|  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <b>NorthBound</b><br/>                 A: <input type="text" value="0"/><br/>                 B: <input type="text" value="0"/> </div>     |  |  |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

|  | <u>V/C RATIO</u> | <u>LOS</u> |
|--|------------------|------------|
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

---

**Results**

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = A(W/B) + B(E/B)

$V/C = \frac{0 + 598 + 658 + 216}{*1425} = 0.963 - 0.03 \text{ LOS} = E$

*A TCS*  
*0.933*



## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM: **PM** Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |    |      |            |    |      |           |      |      |           |      |      |
|-----------------------------------|------------|----|------|------------|----|------|-----------|------|------|-----------|------|------|
|                                   | NORTHBOUND |    |      | SOUTHBOUND |    |      | WESTBOUND |      |      | EASTBOUND |      |      |
|                                   | LT         | TH | RT   | LT         | TH | RT   | LT        | TH   | RT   | LT        | TH   | RT   |
| EXISTING                          | 11         | 22 | 14   | 673        | 12 | 489  | 11        | 1475 | 218  | 195       | 2319 | 0    |
| AMBIENT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| RELATED                           |            |    |      |            |    |      |           |      |      |           |      |      |
| PROJECT                           |            |    |      |            |    |      |           |      |      |           |      |      |
| TOTAL                             | 11         | 22 | 14   | 673        | 12 | 489  | 11        | 1475 | 218  | 195       | 2319 | 0    |
| LANE                              | ↙          | ↕  | ↗    | ↙          | ↕  | ↗    | ↙         | ↕    | ↗    | ↙         | ↕    | ↗    |
|                                   | 0          | 1  | 0    | 1          | 0  | 0    | 1         | 0    | 3    | 2         | 0    | 2    |
|                                   | 0          | 1  | 0    | 0          | 1  | 0    | 0         | 1    | 0    | 0         | 1    | 0    |
| SIGNAL                            | Phasing    |    | RTOR | Phasing    |    | RTOR | Phasing   |      | RTOR | Phasing   |      | RTOR |
|                                   | Perm       |    | Auto | Prot-Fix   |    | OLA  | Perm      |      | Auto | Prot-Fix  |      | Auto |

### Critical Movements Diagram

|  |  |  |             |   |  |             |  |
|--|--|--|-------------|---|--|-------------|--|
| <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="391"/><br/>                 B: <input type="text" value="391"/> </div> |  | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 WestBound<br/>                 A: <input type="text" value="492"/><br/>                 B: <input type="text" value="11"/> </div> | ↑<br> <br>↑ | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 EastBound<br/>                 A: <input type="text" value="773"/><br/>                 B: <input type="text" value="107"/> </div> | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 NorthBound<br/>                 A: <input type="text" value="29"/><br/>                 B: <input type="text" value="11"/> </div> | ↓<br> <br>↓ | <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">                 SouthBound<br/>                 A: <input type="text" value="391"/><br/>                 B: <input type="text" value="391"/> </div> |
|--|--|--|-------------|---|--|-------------|--|

|  |                  |            |
|--|------------------|------------|
|  | <u>V/C RATIO</u> | <u>LOS</u> |
|  | 0.00 - 0.60      | A          |
|  | 0.61 - 0.70      | B          |
|  | 0.71 - 0.80      | C          |
|  | 0.81 - 0.90      | D          |
|  | 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSAC Benefit

---

### Results

North/South Critical Movements = A(N/B) + B(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{29 + 391 + 11 + 773}{*1375} = 0.806 - 0.03 \text{ LOS} = \text{D}$$

*ATCS*  
= 0.776

## INTERSECTION DATA SUMMARY SHEET

N/S:  W/E:  I/S No:

AM/PM:  PM Comments:

COUNT DATE:  STUDY DATE:  GROWTH FACTOR:

| Volume/Lane/Signal Configurations |            |            |            |            |            |           |           |            |            |           |            |            |  |
|-----------------------------------|------------|------------|------------|------------|------------|-----------|-----------|------------|------------|-----------|------------|------------|--|
|                                   | NORTHBOUND |            |            | SOUTHBOUND |            |           | WESTBOUND |            |            | EASTBOUND |            |            |  |
|                                   | LT         | TH         | RT         | LT         | TH         | RT        | LT        | TH         | RT         | LT        | TH         | RT         |  |
| EXISTING                          | 68         | 544        | 113        | 276        | 829        | 11        | 74        | 183        | 217        | 31        | 426        | 240        |  |
| AMBIENT                           |            |            |            |            |            |           |           |            |            |           |            |            |  |
| RELATED                           |            |            |            |            |            |           |           |            |            |           |            |            |  |
| PROJECT                           |            |            |            |            |            |           |           |            |            |           |            |            |  |
| <b>TOTAL</b>                      | <b>68</b>  | <b>544</b> | <b>113</b> | <b>276</b> | <b>829</b> | <b>11</b> | <b>74</b> | <b>183</b> | <b>217</b> | <b>31</b> | <b>426</b> | <b>240</b> |  |
| LANE                              |            |            |            |            |            |           |           |            |            |           |            |            |  |
| SIGNAL                            | Phasing    |            | RTOR       | Phasing    |            | RTOR      | Phasing   |            | RTOR       | Phasing   |            | RTOR       |  |
|                                   | Perm       |            | Auto       | Perm       |            | Auto      | Perm      |            | Auto       | Perm      |            | Auto       |  |

### Critical Movements Diagram

|           |   |  |  |
|-----------|---|--|--|
| EastBound | A: <input type="text" value="426"/><br>B: <input type="text" value="31"/> | SouthBound<br>A: <input type="text" value="840"/><br>B: <input type="text" value="276"/> | WestBound<br>A: <input type="text" value="400"/><br>B: <input type="text" value="74"/> |
|-----------|---|--|--|

|                  |            |
|------------------|------------|
| <b>V/C RATIO</b> | <b>LOS</b> |
| 0.00 - 0.60      | A          |
| 0.61 - 0.70      | B          |
| 0.71 - 0.80      | C          |
| 0.81 - 0.90      | D          |
| 0.91 - 1.00      | E          |

A = Adjusted Through/Right Volume  
 B = Adjusted Left Volume  
 \* = ATSSAC Benefit

---

### Results

North/South Critical Movements = B(N/B) + A(S/B)

West/East Critical Movements = B(W/B) + A(E/B)

$$V/C = \frac{68 + 840 + 74 + 426}{*1500} = 0.869 \quad \text{LOS} = D$$

**APPENDIX F**

**MANUAL TRAFFIC COUNTS AT ALLEY AND CONSTELLATION BOULEVARD**



MANUAL COUNTS ON ALLEY NORTH OF CONSTELLATION BOULEVARD  
Thursday, August 5, 2004, 7:00 to 9:00 AM

| Time           | In / Out | From To Century Park East (Right In/Left Out) |       |                                      |       |                                    |       |                               |       |                         |       | From To Ave of the Stars (Left In/Right Out) |       |                              |       |                                |          |                         |       |                              |       | Totals   |       |                                 |       |   |           |           |           |           |    |     |     |    |     |    |
|----------------|----------|---|-------|--------------------------------------|-------|------------------------------------|-------|-------------------------------|-------|-------------------------|-------|--|-------|------------------------------|-------|--------------------------------|----------|-------------------------|-------|------------------------------|-------|--|-------|---------------------------------|-------|---|-----------|-----------|-----------|-----------|----|-----|-----|----|-----|----|
|                |          | Restaurant Parking Lot                        |       | Wait Loading Deck & Delivery Parking |       | Truck Tunnel Exit & Parking Garage |       | Alley Between Parking Garages |       | Surface Parking On Site |       | Subtotal: All Existing Users                 |       | Truck Tunnel Existing Garage |       | Alley Between Existing Garages |          | Surface Parking On Site |       | Subtotal: All Existing Users |       | Subtotal: Wait, Truck Tunnel & Parking Garages |       | Grand Total: All Existing Users |       | Grand Total: Wait, Truck Tunnel & Parking Garages |           |           |           |           |    |     |     |    |     |    |
|                |          | Car   | Truck | Car                                  | Truck | Car                                | Truck | Car                           | Truck | Car                     | Truck | Car  | Truck | Car                          | Truck | Car                            | Truck    | Car                     | Truck | Car                          | Truck | Car  | Truck | Car                             | Truck | Car   | Truck     | Car       | Truck     |           |    |     |     |    |     |    |
| 7:15           | In       | 2   | 0     | 0                                    | 2     | 7                                  | 5     | 5                             | 0     | 0                       | 19    | 2  | 21    | 12                           | 2     | 14                             | right in | 1                       | 1     | 6                            | 0     | 0  | 3     | 11                              | 0     | 11  | 7         | 0         | 7         | left in   | 30 | 2   | 32  | 19 | 2   | 21 |
|                | Out      | 0   | 0     | 1                                    | 0     | 1                                  | 0     | 0                             | 0     | 0                       | 0     | 2  | 2     | 0                            | 2     | 2                              | left out | 0                       | 1     | 0                            | 0     | 0  | 0     | 1                               | 0     | 1   | 1         | 0         | 1         | right out | 1  | 2   | 3   | 1  | 2   | 3  |
| 7:15-7:30      | In       | 1   | 1     | 1                                    | 8     | 1                                  | 2     | 2                             | 0     | 13                      | 0     | 13   | 10    | 0                            | 10    | right in                       | 1        | 1                       | 4     | 5                            | 3     | 14   | 0     | 14                              | 10    | 0   | 10        | left in   | 27        | 0         | 27 | 20  | 0   | 20 |     |    |
|                | Out      | 0   | 0     | 0                                    | 0     | 0                                  | 0     | 0                             | 0     | 0                       | 0     | 0  | 0     | 0                            | 0     | left out                       | 0        | 0                       | 0     | 1                            | 0     | 1  | 0     | 1                               | 0     | 1   | right out | 1         | 0         | 1         | 1  | 0   | 1   | 0  | 1   |    |
| 7:30-7:45      | In       | 1   | 0     | 2                                    | 4     | 0                                  | 0     | 0                             | 0     | 7                       | 0     | 7  | 6     | 0                            | 6     | right in                       | 3        | 0                       | 3     | 8                            | 0     | 19   | 3     | 22                              | 16    | 3   | 19        | left in   | 26        | 3         | 29 | 22  | 3   | 25 |     |    |
|                | Out      | 0   | 0     | 0                                    | 0     | 0                                  | 0     | 0                             | 0     | 0                       | 0     | 0  | 0     | 0                            | 0     | left out                       | 0        | 0                       | 1     | 1                            | 0     | 1  | 1     | 2                               | 1     | 2   | right out | 1         | 1         | 2         | 1  | 1   | 2   | 1  | 1   | 2  |
| 7:45-8         | In       | 3   | 1     | 6                                    | 5     | 0                                  | 0     | 1                             | 0     | 17                      | 0     | 17   | 14    | 0                            | 14    | right in                       | 0        | 1                       | 7     | 1                            | 10    | 0  | 18    | 2                               | 20    | 18  | 2         | 20        | left in   | 35        | 2  | 37  | 32  | 2  | 34  |    |
|                | Out      | 0   | 0     | 0                                    | 0     | 0                                  | 0     | 0                             | 0     | 0                       | 1     | 1  | 0     | 1                            | 1     | left out                       | 0        | 0                       | 1     | 3                            | 0     | 1  | 4     | 5                               | 1     | 4   | 5         | right out | 1         | 5         | 6  | 1   | 5   | 6  |     |    |
| 8-8:15         | In       | 2   | 0     | 6                                    | 7     | 0                                  | 0     | 0                             | 0     | 15                      | 0     | 15   | 13    | 0                            | 13    | right in                       | 1        | 0                       | 15    | 1                            | 16    | 0  | 32    | 2                               | 34    | 31  | 2         | 33        | left in   | 47        | 2  | 49  | 44  | 2  | 46  |    |
|                | Out      | 0   | 0     | 1                                    | 0     | 0                                  | 0     | 0                             | 0     | 1                       | 1     | 2  | 1     | 1                            | 2     | left out                       | 0        | 0                       | 2     | 3                            | 2     | 0  | 3     | 5                               | 8     | 3   | 5         | 8         | right out | 4         | 6  | 10  | 4   | 6  | 10  |    |
| 8:15-8:30      | In       | 1   | 1     | 0                                    | 19    | 10                                 | 0     | 0                             | 0     | 30                      | 1     | 31   | 29    | 0                            | 29    | right in                       | 1        | 0                       | 26    | 15                           | 0     | 42   | 0     | 42                              | 41    | 0   | 41        | left in   | 72        | 1         | 73 | 70  | 0   | 70 |     |    |
|                | Out      | 0   | 0     | 0                                    | 1     | 1                                  | 0     | 0                             | 0     | 2                       | 0     | 2  | 2     | 0                            | 2     | left out                       | 1        | 0                       | 1     | 4                            | 2     | 0  | 4     | 4                               | 8     | 3   | 4         | 7         | right out | 6         | 4  | 10  | 5   | 4  | 9   |    |
| 8:30-8:45      | In       | 2   | 1     | 13                                   | 4     | 0                                  | 0     | 0                             | 0     | 20                      | 0     | 20   | 18    | 0                            | 18    | right in                       | 4        | 1                       | 23    | 26                           | 0     | 56   | 0     | 56                              | 52    | 0   | 52        | left in   | 76        | 0         | 76 | 70  | 0   | 70 |     |    |
|                | Out      | 0   | 0     | 0                                    | 1     | 1                                  | 0     | 0                             | 0     | 1                       | 0     | 1  | 1     | 0                            | 1     | left out                       | 1        | 0                       | 2     | 2                            | 2     | 0  | 5     | 2                               | 7     | 4   | 2         | 6         | right out | 6         | 2  | 8   | 5   | 2  | 7   |    |
| 8:45-9         | In       | 4   | 0     | 17                                   | 2     | 0                                  | 0     | 0                             | 0     | 23                      | 0     | 23   | 19    | 0                            | 19    | right in                       | 5        | 1                       | 33    | 29                           | 0     | 68   | 0     | 68                              | 63    | 0   | 63        | left in   | 91        | 0         | 91 | 82  | 0   | 82 |     |    |
|                | Out      | 0   | 0     | 1                                    | 0     | 0                                  | 0     | 0                             | 0     | 1                       | 0     | 1  | 1     | 0                            | 1     | left out                       | 0        | 1                       | 3     | 1                            | 0     | 4  | 1     | 5                               | 4     | 1   | 5         | right out | 5         | 1         | 6  | 5   | 1   | 6  |     |    |
| Two-Hour Total | In       | 16  | 1     | 3                                    | 2     | 80                                 | 0     | 38                            | 0     | 144                     | 3     | 147  | 121   | 2                            | 123   | right in                       | 16       | 0                       | 122   | 2                            | 111   | 0  | 260   | 7                               | 267   | 236   | 7         | 245       | left in   | 404       | 10 | 414 | 359 | 9  | 368 |    |
|                | Out      | 0   | 0     | 2                                    | 3     | 1                                  | 2     | 1                             | 0     | 5                       | 4     | 9  | 5     | 4                            | 9     | left out                       | 2        | 0                       | 3     | 11                           | 13    | 5  | 20    | 17                              | 37    | 18  | 17        | 35        | right out | 25        | 21 | 46  | 23  | 21 | 44  |    |
| Total          |          | 16  | 1     | 3                                    | 4     | 83                                 | 1     | 40                            | 1     | 149                     | 7     | 156  | 126   | 6                            | 132   |                                | 18       | 0                       | 133   | 15                           | 116   | 1  | 280   | 24                              | 304   | 256   | 24        | 280       |           | 429       | 31 | 460 | 382 | 30 | 412 |    |

Note: 1. Counts are of individual cars unless "truck" is stated  
 2. Surface Parking Lot Count @ 7:00 AM & 16 and @ 8:45 AM = 32(0/0)  
 3. Surface Parking Lot Count @ 7:00 AM = 16 and @ 8:45 AM = 32(0/0)



**APPENDIX G**

**LEVEL OF SERVICE WORKSHEETS FOR DRIVEWAY ANALYSIS**





Cum Plus Project AM

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*

Intersection: Alley & Constellation

\*\*\*\*\*

Average Delay (sec/veh): 2.7 Worst Case Level Of Service: C[ 22.7]

\*\*\*\*\*

Street Name: Alley Contellation Bl

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 1 0 0 0 1 0 1 2 0 0 0 0 2 1 0

-----|-----|-----|-----|

Volume Module:

Base Vol: 0 0 0 28 0 71 192 404 0 0 841 89

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 28 0 71 192 404 0 0 841 89

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 28 0 71 192 404 0 0 841 89

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Final Vol.: 0 0 0 28 0 71 192 404 0 0 841 89

-----|-----|-----|-----|

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 6.8 xxxx 6.9 4.1 xxxx xxxxx xxxxx xxxx xxxxx

FollowUpTim:xxxxx xxxx xxxxx 3.5 xxxx 3.3 2.2 xxxx xxxxx xxxxx xxxx xxxxx

-----|-----|-----|-----|

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxx 1404 xxxx 325 930 xxxx xxxxx xxxx xxxx xxxxx

Potent Cap.: xxxx xxxx xxxxx 133 xxxx 677 744 xxxx xxxxx xxxx xxxx xxxxx

Move Cap.: xxxx xxxx xxxxx 103 xxxx 677 744 xxxx xxxxx xxxx xxxx xxxxx

Volume/Cap: xxxx xxxx xxxx 0.27 xxxx 0.10 0.26 xxxx xxxx xxxx xxxx xxxxx

-----|-----|-----|-----|

Level Of Service Module:

Queue: xxxxx xxxx xxxxx 1.0 xxxx 0.3 1.0 xxxx xxxxx xxxxx xxxx xxxxx

Stopped Del:xxxxx xxxx xxxxx 52.4 xxxx 10.9 11.5 xxxx xxxxx xxxxx xxxx xxxxx

LOS by Move: \* \* \* F \* B B \* \* \* \* \*

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

Shrd StpDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx 1.0 xxxx xxxxx xxxxx xxxx xxxxx

Shared LOS: \* \* \* \* \* B \* \* \* \* \*

ApproachDel: xxxxxx 22.7 xxxxxx xxxxxx

ApproachLOS: \* C \* \*

Cum Plus Project AM

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

\*\*\*\*\*
Intersection: Avenue of the Stars & Project Driveway
\*\*\*\*\*

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: B[ 12.1]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes for Avenue of the Stars and Project Driveway.

Table for Volume Module showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol.

Table for Critical Gap Module showing Critical Gp and FollowUpTim.

Table for Capacity Module showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Table for Level Of Service Module showing Queue, Stopped Del, LOS by Move, Movement, Shared Cap., Shared Queue, Shrd StpDel, Shared LOS, ApproachDel, and ApproachLOS.

Cum Plus Project AM

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*
Intersection: Project Driveway & Constellation
\*\*\*\*\*

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: C[ 16.6]
\*\*\*\*\*

Table with columns for Street Name, Project Driveway, and Constellation Bl. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Vol. Rows include various volume and adjustment factors.

Critical Gap Module table with columns for Critical Gp and FollowUpTim. Rows include gap and follow-up time data.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Rows include capacity and volume data.

Level Of Service Module table with columns for Queue, Stopped Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd StpDel, Shared LOS, ApproachDel, and ApproachLOS. Rows include level of service and delay data.

Cum Plus Project PM

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*
Intersection: Alley & Constellation
\*\*\*\*\*
Average Delay (sec/veh): 7.4 Worst Case Level Of Service: D[ 32.2]
\*\*\*\*\*

Street Name: Alley Constellation Bl
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 1 0 0 0 1 0 1 2 0 0 0 0 2 1 0

Volume Module:
Base Vol: 0 0 0 213 0 330 25 1338 0 0 439 41
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 0 213 0 330 25 1338 0 0 439 41
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 0 213 0 330 25 1338 0 0 439 41
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Final Vol.: 0 0 0 213 0 330 25 1338 0 0 439 41

Critical Gap Module:
Critical Gp:xxxxx xxxxx xxxxxx 6.8 xxxxx 6.9 4.1 xxxxx xxxxxx xxxxxx xxxxx xxxxxx
FollowUpTim:xxxxxx xxxxx xxxxxx 3.5 xxxxx 3.3 2.2 xxxxx xxxxxx xxxxxx xxxxx xxxxxx

Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxxx 956 xxxxx 167 480 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Potent Cap.: xxxxx xxxxx xxxxxx 260 xxxxx 854 1093 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Move Cap.: xxxxx xxxxx xxxxxx 255 xxxxx 854 1093 xxxxx xxxxxx xxxxx xxxxx xxxxxx
Volume/Cap: xxxxx xxxxx xxxxx 0.83 xxxxx 0.39 0.02 xxxxx xxxxx xxxxx xxxxx xxxxx

Level Of Service Module:
Queue: xxxxxx xxxxx xxxxxx 6.7 xxxxx 1.8 0.1 xxxxx xxxxxx xxxxxx xxxxx xxxxxx
Stopped Del:xxxxxx xxxxx xxxxxx 63.7 xxxxx 11.8 8.4 xxxxx xxxxxx xxxxxx xxxxx xxxxxx
LOS by Move: \* \* \* F \* B A \* \* \* \* \*
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
SharedQueue:xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 0.1 xxxxx xxxxxx xxxxxx xxxxx xxxxxx
Shrd StpDel:xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx 8.4 xxxxx xxxxxx xxxxxx xxxxx xxxxxx
Shared LOS: \* \* \* \* \* A \* \* \* \* \*
ApproachDel: xxxxxxx 32.2 xxxxxxx xxxxxxx
ApproachLOS: \* D \* \*

Cum Plus Project PM

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*

Intersection: Avenue of the Stars & Project Driveway

\*\*\*\*\*

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: B[ 12.7]

\*\*\*\*\*

|              |                     |   |             |   |                  |   |            |   |           |   |           |   |   |   |   |   |   |   |   |   |
|--------------|---------------------|---|-------------|---|------------------|---|------------|---|-----------|---|-----------|---|---|---|---|---|---|---|---|---|
| Street Name: | Avenue of the Stars |   |             |   | Project Driveway |   |            |   |           |   |           |   |   |   |   |   |   |   |   |   |
| 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     |   |            |   | Stop Sign |   | Stop Sign |   |   |   |   |   |   |   |   |   |
| Rights:      | Include             |   |             |   | Include          |   |            |   | Include   |   | Include   |   |   |   |   |   |   |   |   |   |
| Lanes:       | 0                   | 0 | 2           | 1 | 0                | 0 | 0          | 3 | 0         | 0 | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

|                |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Volume Module: |      |      |      |      |      |      |      |      |      |      |      |      |
| Base Vol:      | 0    | 1609 | 33   | 0    | 1666 | 0    | 0    | 0    | 0    | 0    | 0    | 17   |
| 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    | 1609 | 33   | 0    | 1666 | 0    | 0    | 0    | 0    | 0    | 0    | 17   |
| 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    | 1609 | 33   | 0    | 1666 | 0    | 0    | 0    | 0    | 0    | 0    | 17   |
| Reduct Vol:    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Final Vol.:    | 0    | 1609 | 33   | 0    | 1666 | 0    | 0    | 0    | 0    | 0    | 0    | 17   |

|                      |       |      |       |       |      |       |       |      |       |       |      |     |
|----------------------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-----|
| Critical Gap Module: |       |      |       |       |      |       |       |      |       |       |      |     |
| Critical Gp:         | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | 6.9 |
| FollowUpTim:         | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx | xxxx | 3.3 |

|                  |      |      |       |      |      |       |      |      |       |      |      |      |
|------------------|------|------|-------|------|------|-------|------|------|-------|------|------|------|
| Capacity Module: |      |      |       |      |      |       |      |      |       |      |      |      |
| Cnflct Vol:      | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | 553  |
| Potent Cap.:     | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | 482  |
| Move Cap.:       | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | xxxxx | xxxx | xxxx | 482  |
| Volume/Cap:      | xxxx | xxxx | xxxx  | xxxx | xxxx | xxxx  | xxxx | xxxx | xxxx  | xxxx | xxxx | 0.04 |

|                          |         |      |         |       |         |       |         |      |         |       |      |       |
|--------------------------|---------|------|---------|-------|---------|-------|---------|------|---------|-------|------|-------|
| Level Of Service Module: |         |      |         |       |         |       |         |      |         |       |      |       |
| Queue:                   | xxxxx   | xxxx | xxxxx   | xxxxx | xxxx    | xxxxx | xxxxx   | xxxx | xxxxx   | xxxxx | xxxx | 0.1   |
| Stopped Del:             | xxxxx   | xxxx | xxxxx   | xxxxx | xxxx    | xxxxx | xxxxx   | xxxx | xxxxx   | xxxxx | xxxx | 12.7  |
| LOS by Move:             | *       | *    | *       | *     | *       | *     | *       | *    | *       | *     | *    | B     |
| 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 |
| Shared Queue:            | xxxxx   | xxxx | xxxxx   | xxxxx | xxxx    | xxxxx | xxxxx   | xxxx | xxxxx   | xxxxx | xxxx | xxxxx |
| Shrd StpDel:             | xxxxx   | xxxx | xxxxx   | xxxxx | xxxx    | xxxxx | xxxxx   | xxxx | xxxxx   | xxxxx | xxxx | xxxxx |
| Shared LOS:              | *       | *    | *       | *     | *       | *     | *       | *    | *       | *     | *    | *     |
| ApproachDel:             | xxxxxxx |      | xxxxxxx |       | xxxxxxx |       | xxxxxxx |      | xxxxxxx |       | 12.7 |       |
| ApproachLOS:             | *       |      | *       |       | *       |       | *       |      | *       |       | B    |       |

Cum Plus Project PM

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

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Intersection: Project Driveway & Constellation

\*\*\*\*\*

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: C [ 18.0]

\*\*\*\*\*

| Street Name: | Project Driveway |   |   |             |   |   | Constellation Bl |   |   |              |   |   |
|--------------|------------------|---|---|-------------|---|---|------------------|---|---|--------------|---|---|
| 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 | 1                | 0 | 3 | 0            | 0 | 2 |

Volume Module:

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Base Vol:    | 0    | 0    | 0    | 8    | 0    | 10   | 10   | 1358 | 0    | 0    | 772  | 24   |
| 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    | 8    | 0    | 10   | 10   | 1358 | 0    | 0    | 772  | 24   |
| 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    | 8    | 0    | 10   | 10   | 1358 | 0    | 0    | 772  | 24   |
| Reduct Vol:  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Final Vol.:  | 0    | 0    | 0    | 8    | 0    | 10   | 10   | 1358 | 0    | 0    | 772  | 24   |

Critical Gap Module:

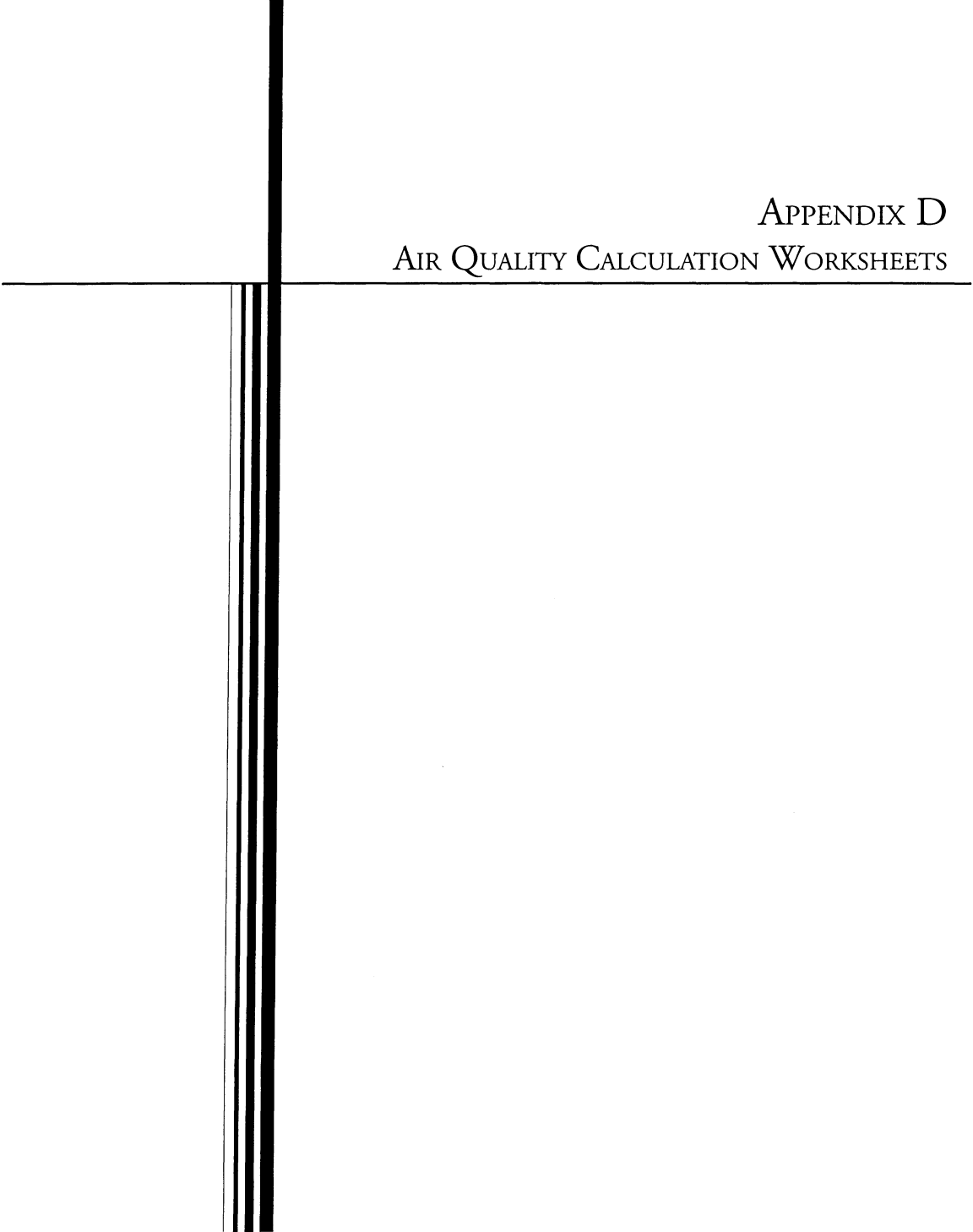
|              |       |      |       |     |      |     |     |      |       |       |      |       |
|--------------|-------|------|-------|-----|------|-----|-----|------|-------|-------|------|-------|
| Critical Gp: | xxxxx | xxxx | xxxxx | 6.8 | xxxx | 6.9 | 4.1 | xxxx | xxxxx | xxxxx | xxxx | xxxxx |
| FollowUpTim: | xxxxx | xxxx | xxxxx | 3.5 | xxxx | 3.3 | 2.2 | xxxx | xxxxx | xxxxx | xxxx | xxxxx |

Capacity Module:

|              |      |      |       |      |      |      |      |      |       |      |      |       |
|--------------|------|------|-------|------|------|------|------|------|-------|------|------|-------|
| Cnflct Vol:  | xxxx | xxxx | xxxxx | 1257 | xxxx | 269  | 796  | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Potent Cap.: | xxxx | xxxx | xxxxx | 166  | xxxx | 735  | 835  | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Move Cap.:   | xxxx | xxxx | xxxxx | 164  | xxxx | 735  | 835  | xxxx | xxxxx | xxxx | xxxx | xxxxx |
| Volume/Cap:  | xxxx | xxxx | xxxx  | 0.05 | xxxx | 0.01 | 0.01 | xxxx | xxxx  | xxxx | xxxx | xxxx  |

Level Of Service Module:

|               |         |      |       |       |      |       |         |      |       |         |      |       |
|---------------|---------|------|-------|-------|------|-------|---------|------|-------|---------|------|-------|
| Queue:        | xxxxx   | xxxx | xxxxx | 0.2   | xxxx | 0.0   | 0.0     | xxxx | xxxxx | xxxxx   | xxxx | xxxxx |
| Stopped Del:  | xxxxx   | xxxx | xxxxx | 28.0  | xxxx | 10.0  | 9.4     | xxxx | xxxxx | xxxxx   | 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 | xxxxx | xxxx  | xxxx | xxxxx | xxxx    | xxxx | xxxxx | xxxx    | xxxx | xxxxx |
| Shared Queue: | xxxxx   | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx   | xxxx | xxxxx | xxxxx   | xxxx | xxxxx |
| Shrd StpDel:  | xxxxx   | xxxx | xxxxx | xxxxx | xxxx | xxxxx | xxxxx   | xxxx | xxxxx | xxxxx   | xxxx | xxxxx |
| Shared LOS:   | *       | *    | *     | *     | *    | *     | *       | *    | *     | *       | *    | *     |
| ApproachDel:  | xxxxxxx |      |       | 18.0  |      |       | xxxxxxx |      |       | xxxxxxx |      |       |
| ApproachLOS:  | *       |      |       | C     |      |       | *       |      |       | *       |      |       |



APPENDIX D  
AIR QUALITY CALCULATION WORKSHEETS

# **10131 Constellation Boulevard**

## **Draft Environmental Impact Report**

Air Quality Assessment Files

Provided by PCR Services Corporation

October 2005

- D-1 Project Construction Emissions
- D-2 SCAQMD Rule 403 (Fugitive Dust) Control Requirements
- D-3 Project Operation Emissions



# Appendix D-1

- Construction Emissions Inventory
  - Regional Construction Emissions
    - URBEMIS2002 Output Files
      - Full Buildout
      - Interim Buildout

08/01/2005 1:28 PM

URBEMIS 2002 For Windows 8.7.0

File Name: V:\AQNOISE DIVISION\Active Projects\Century City - Constellation Blvd\URBEMIS 8-5\Construction and Proposed UsesRevised  
 Final urb  
 Project Name: 10131 Constellation Blvd - Proposed Uses  
 Project Location: South Coast Air Basin (Los Angeles area)  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day - Summer)

Construction Start Month and Year: May, 2007  
 Construction Duration: 48  
 Total Land Use Area to be Developed: 5.5 acres  
 Maximum Acreage Disturbed Per Day: 5.5 acres  
 Single Family Units: 0 Multi-Family Units: 483  
 Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

| Source                           | ROG   | NOx    | CO     | SO2  | PM10<br>TOTAL | PM10<br>EXHAUST | PM10<br>DUST |
|----------------------------------|-------|--------|--------|------|---------------|-----------------|--------------|
| *** 2007***                      |       |        |        |      |               |                 |              |
| Phase 1 - Demolition Emissions   |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 13.36         | -               | 13.36        |
| Off-Road Diesel                  | 8.98  | 68.53  | 66.46  | -    | 3.05          | 3.05            | 0.00         |
| On-Road Diesel                   | 2.09  | 37.44  | 7.80   | 0.08 | 1.08          | 0.89            | 0.19         |
| Worker Trips                     | 0.07  | 0.11   | 2.06   | 0.00 | 0.01          | 0.00            | 0.01         |
| Maximum lbs/day                  | 11.14 | 106.08 | 76.32  | 0.08 | 17.50         | 3.94            | 13.56        |
| Phase 2 - Site Grading Emissions |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 210.10        | -               | 210.10       |
| Off-Road Diesel                  | 10.39 | 66.30  | 84.84  | -    | 2.29          | 2.29            | 0.00         |
| On-Road Diesel                   | 2.85  | 62.89  | 10.60  | 0.11 | 1.46          | 1.21            | 0.25         |
| Worker Trips                     | 0.05  | 0.03   | 0.65   | 0.00 | 0.01          | 0.00            | 0.01         |
| Maximum lbs/day                  | 13.29 | 129.22 | 96.09  | 0.11 | 213.86        | 3.50            | 210.36       |
| Phase 3 - Building Construction  |       |        |        |      |               |                 |              |
| Bldg Const Off-Road Diesel       | 16.94 | 122.84 | 129.66 | -    | 5.21          | 5.21            | 0.00         |
| Bldg Const Worker Trips          | 1.03  | 0.59   | 12.48  | 0.00 | 0.19          | 0.01            | 0.18         |
| Arch Coatings Off-Gas            | 0.00  | -      | -      | -    | -             | -               | -            |
| Arch Coatings Worker Trips       | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Off-Gas                  | 0.00  | -      | -      | -    | -             | -               | -            |
| Asphalt Off-Road Diesel          | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| Asphalt On-Road Diesel           | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Worker Trips             | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 17.97 | 123.43 | 142.15 | 0.00 | 5.40          | 5.22            | 0.18         |
| Max lbs/day all phases           | 17.97 | 129.22 | 142.15 | 0.11 | 215.58        | 5.22            | 210.36       |
| *** 2008***                      |       |        |        |      |               |                 |              |
| Phase 1 - Demolition Emissions   |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 2 - Site Grading Emissions |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 3 - Building Construction  |       |        |        |      |               |                 |              |
| Bldg Const Off-Road Diesel       | 16.94 | 117.58 | 133.19 | -    | 4.73          | 4.73            | 0.00         |
| Bldg Const Worker Trips          | 0.95  | 0.55   | 11.64  | 0.00 | 0.19          | 0.01            | 0.18         |
| Arch Coatings Off-Gas            | 0.00  | -      | -      | -    | -             | -               | -            |
| Arch Coatings Worker Trips       | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Off-Gas                  | 0.00  | -      | -      | -    | -             | -               | -            |
| Asphalt Off-Road Diesel          | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| Asphalt On-Road Diesel           | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Worker Trips             | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 17.89 | 118.13 | 144.82 | 0.00 | 4.92          | 4.74            | 0.18         |
| Max lbs/day all phases           | 17.89 | 118.13 | 144.82 | 0.00 | 4.92          | 4.74            | 0.18         |
| *** 2009***                      |       |        |        |      |               |                 |              |
| Phase 1 - Demolition Emissions   |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 2 - Site Grading Emissions |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 3 - Building Construction  |       |        |        |      |               |                 |              |
| Bldg Const Off-Road Diesel       | 16.94 | 112.36 | 136.84 | -    | 4.41          | 4.41            | 0.00         |
| Bldg Const Worker Trips          | 0.86  | 0.50   | 10.73  | 0.00 | 0.19          | 0.01            | 0.18         |
| Arch Coatings Off-Gas            | 0.00  | -      | -      | -    | -             | -               | -            |
| Arch Coatings Worker Trips       | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Off-Gas                  | 0.00  | -      | -      | -    | -             | -               | -            |
| Asphalt Off-Road Diesel          | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| Asphalt On-Road Diesel           | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Worker Trips             | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 17.80 | 112.87 | 147.57 | 0.00 | 4.60          | 4.42            | 0.18         |
| Max lbs/day all phases           | 17.80 | 112.87 | 147.57 | 0.00 | 4.60          | 4.42            | 0.18         |

\*\*\* 2010\*\*\*

| Phase 1 - Demolition Emissions |      |      |      |      |      |      |      |
|--------------------------------|------|------|------|------|------|------|------|
| Fugitive Dust                  | -    | -    | -    | -    | 0.00 | -    | 0.00 |
| Off-Road Diesel                | 0.00 | 0.00 | 0.00 | -    | 0.00 | 0.00 | 0.00 |
| On-Road Diesel                 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Worker Trips                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day                | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Phase 2 - Site Grading Emissions |      |      |      |      |      |      |      |
|----------------------------------|------|------|------|------|------|------|------|
| Fugitive Dust                    | -    | -    | -    | -    | 0.00 | -    | 0.00 |
| Off-Road Diesel                  | 0.00 | 0.00 | 0.00 | -    | 0.00 | 0.00 | 0.00 |
| On-Road Diesel                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Worker Trips                     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day                  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Phase 3 - Building Construction |       |        |        |      |      |      |      |
|---------------------------------|-------|--------|--------|------|------|------|------|
| Bldg Const Off-Road Diesel      | 16.94 | 107.53 | 140.36 | -    | 4.02 | 4.02 | 0.00 |
| Bldg Const Worker Trips         | 0.78  | 0.46   | 9.88   | 0.00 | 0.19 | 0.01 | 0.18 |
| Arch Coatings Off-Gas           | 58.26 | -      | -      | -    | -    | -    | -    |
| Arch Coatings Worker Trips      | 0.78  | 0.46   | 9.88   | 0.00 | 0.19 | 0.01 | 0.18 |
| Asphalt Off-Gas                 | 0.00  | -      | -      | -    | -    | -    | -    |
| Asphalt Off-Road Diesel         | 0.00  | 0.00   | 0.00   | -    | 0.00 | 0.00 | 0.00 |
| Asphalt On-Road Diesel          | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Asphalt Worker Trips            | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day                 | 76.76 | 108.45 | 160.12 | 0.00 | 4.40 | 4.04 | 0.36 |
| Max lbs/day all phases          | 76.76 | 108.45 | 160.12 | 0.00 | 4.40 | 4.04 | 0.36 |

\*\*\* 2011\*\*\*

| Phase 1 - Demolition Emissions |      |      |      |      |      |      |      |
|--------------------------------|------|------|------|------|------|------|------|
| Fugitive Dust                  | -    | -    | -    | -    | 0.00 | -    | 0.00 |
| Off-Road Diesel                | 0.00 | 0.00 | 0.00 | -    | 0.00 | 0.00 | 0.00 |
| On-Road Diesel                 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Worker Trips                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day                | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Phase 2 - Site Grading Emissions |      |      |      |      |      |      |      |
|----------------------------------|------|------|------|------|------|------|------|
| Fugitive Dust                    | -    | -    | -    | -    | 0.00 | -    | 0.00 |
| Off-Road Diesel                  | 0.00 | 0.00 | 0.00 | -    | 0.00 | 0.00 | 0.00 |
| On-Road Diesel                   | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Worker Trips                     | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day                  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Phase 3 - Building Construction |       |        |        |      |      |      |      |
|---------------------------------|-------|--------|--------|------|------|------|------|
| Bldg Const Off-Road Diesel      | 16.94 | 107.53 | 140.36 | -    | 4.02 | 4.02 | 0.00 |
| Bldg Const Worker Trips         | 0.78  | 0.46   | 9.88   | 0.00 | 0.19 | 0.01 | 0.18 |
| Arch Coatings Off-Gas           | 58.26 | -      | -      | -    | -    | -    | -    |
| Arch Coatings Worker Trips      | 0.78  | 0.46   | 9.88   | 0.00 | 0.19 | 0.01 | 0.18 |
| Asphalt Off-Gas                 | 0.00  | -      | -      | -    | -    | -    | -    |
| Asphalt Off-Road Diesel         | 0.00  | 0.00   | 0.00   | -    | 0.00 | 0.00 | 0.00 |
| Asphalt On-Road Diesel          | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Asphalt Worker Trips            | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day                 | 76.76 | 108.45 | 160.12 | 0.00 | 4.40 | 4.04 | 0.36 |
| Max lbs/day all phases          | 76.76 | 108.45 | 160.12 | 0.00 | 4.40 | 4.04 | 0.36 |

Phase 1 - Demolition Assumptions  
 Start Month/Year for Phase 1: May '07  
 Phase 1 Duration: 1 months  
 Building Volume Total (cubic feet): 350000  
 Building Volume Daily (cubic feet): 31820  
 On-Road Truck Travel (VMT): 1767

| Off-Road Equipment |                           |            |             |           |
|--------------------|---------------------------|------------|-------------|-----------|
| No.                | Type                      | Horsepower | Load Factor | Hours/Day |
| 1                  | Concrete/Industrial saws  | 84         | 0.730       | 7.5       |
| 1                  | Crushing/Processing Equip | 154        | 0.780       | 7.5       |
| 1                  | Other Equipment           | 190        | 0.620       | 7.5       |
| 1                  | Rubber Tired Dozers       | 352        | 0.590       | 7.5       |
| 1                  | Tractor/Loaders/Backhoes  | 79         | 0.465       | 7.5       |

Phase 2 - Site Grading Assumptions  
 Start Month/Year for Phase 2: Jun '07  
 Phase 2 Duration: 5 months  
 On-Road Truck Travel (VMT): 2402

| Off-Road Equipment |                          |            |             |           |
|--------------------|--------------------------|------------|-------------|-----------|
| No.                | Type                     | Horsepower | Load Factor | Hours/Day |
| 1                  | Bore/Drill Rigs          | 218        | 0.750       | 7.5       |
| 1                  | Cranes                   | 190        | 0.430       | 6.0       |
| 2                  | Excavators               | 180        | 0.580       | 7.5       |
| 1                  | Other Equipment          | 190        | 0.620       | 7.5       |
| 2                  | Tractor/Loaders/Backhoes | 79         | 0.465       | 7.5       |

Phase 3 - Building Construction Assumptions  
 Start Month/Year for Phase 3: Nov '07  
 Phase 3 Duration: 42.0 months  
 Start Month/Year for SubPhase Building: Nov '07  
 SubPhase Building Duration: 42 months

| Off-Road Equipment |                          |            |             |           |
|--------------------|--------------------------|------------|-------------|-----------|
| No.                | Type                     | Horsepower | Load Factor | Hours/Day |
| 2                  | Concrete/Industrial saws | 84         | 0.730       | 5.0       |
| 3                  | Cranes                   | 190        | 0.430       | 4.0       |
| 6                  | Other Equipment          | 190        | 0.620       | 6.5       |
| 2                  | Rough Terrain Forklifts  | 94         | 0.475       | 6.5       |
| 1                  | Skid Steer Loaders       | 62         | 0.515       | 6.5       |
| 3                  | Tractor/Loaders/Backhoes | 79         | 0.465       | 6.5       |

Start Month/Year for SubPhase Architectural Coatings: Jan '10  
 SubPhase Architectural Coatings Duration: 16 months  
 SubPhase Asphalt Turned OFF

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

| Source                           | ROG   | Nox    | CO     | SO2  | PM10<br>TOTAL | PM10<br>EXHAUST | PM10<br>DUST |
|----------------------------------|-------|--------|--------|------|---------------|-----------------|--------------|
| *** 2007***                      |       |        |        |      |               |                 |              |
| Phase 1 - Demolition Emissions   |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 13.36         | -               | 13.36        |
| Off-Road Diesel                  | 8.53  | 65.10  | 63.14  | -    | 2.90          | 2.90            | 0.00         |
| On-Road Diesel                   | 2.09  | 37.44  | 7.80   | 0.08 | 1.08          | 0.89            | 0.19         |
| Worker Trips                     | 0.07  | 0.11   | 2.06   | 0.00 | 0.01          | 0.00            | 0.01         |
| Maximum lbs/day                  | 10.69 | 102.65 | 73.00  | 0.08 | 17.35         | 3.79            | 13.56        |
| Phase 2 - Site Grading Emissions |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 105.05        | -               | 105.05       |
| Off-Road Diesel                  | 9.87  | 62.98  | 80.60  | -    | 2.18          | 2.18            | 0.00         |
| On-Road Diesel                   | 2.85  | 62.89  | 10.60  | 0.11 | 1.46          | 1.21            | 0.25         |
| Worker Trips                     | 0.05  | 0.03   | 0.65   | 0.00 | 0.01          | 0.00            | 0.01         |
| Maximum lbs/day                  | 12.77 | 125.91 | 91.85  | 0.11 | 108.70        | 3.39            | 105.31       |
| Phase 3 - Building Construction  |       |        |        |      |               |                 |              |
| Bldg Const Off-Road Diesel       | 16.09 | 116.70 | 123.18 | -    | 4.95          | 4.95            | 0.00         |
| Bldg Const Worker Trips          | 1.03  | 0.59   | 12.48  | 0.00 | 0.19          | 0.01            | 0.18         |
| Arch Coatings Off-Gas            | 0.00  | -      | -      | -    | -             | -               | -            |
| Arch Coatings Worker Trips       | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Off-Gas                  | 0.00  | -      | -      | -    | -             | -               | -            |
| Asphalt Off-Road Diesel          | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| Asphalt On-Road Diesel           | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Worker Trips             | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 17.13 | 117.29 | 135.66 | 0.00 | 5.14          | 4.96            | 0.18         |
| Max lbs/day all phases           | 17.13 | 125.91 | 135.66 | 0.11 | 110.27        | 4.96            | 105.31       |
| *** 2008***                      |       |        |        |      |               |                 |              |
| Phase 1 - Demolition Emissions   |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 2 - Site Grading Emissions |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 3 - Building Construction  |       |        |        |      |               |                 |              |
| Bldg Const Off-Road Diesel       | 16.09 | 111.70 | 126.53 | -    | 4.49          | 4.49            | 0.00         |
| Bldg Const Worker Trips          | 0.95  | 0.55   | 11.64  | 0.00 | 0.19          | 0.01            | 0.18         |
| Arch Coatings Off-Gas            | 0.00  | -      | -      | -    | -             | -               | -            |
| Arch Coatings Worker Trips       | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Off-Gas                  | 0.00  | -      | -      | -    | -             | -               | -            |
| Asphalt Off-Road Diesel          | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| Asphalt On-Road Diesel           | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Worker Trips             | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 17.04 | 112.25 | 138.16 | 0.00 | 4.69          | 4.51            | 0.18         |
| Max lbs/day all phases           | 17.04 | 112.25 | 138.16 | 0.00 | 4.69          | 4.51            | 0.18         |
| *** 2009***                      |       |        |        |      |               |                 |              |
| Phase 1 - Demolition Emissions   |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 2 - Site Grading Emissions |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 3 - Building Construction  |       |        |        |      |               |                 |              |
| Bldg Const Off-Road Diesel       | 16.09 | 106.74 | 130.00 | -    | 4.19          | 4.19            | 0.00         |
| Bldg Const Worker Trips          | 0.86  | 0.50   | 10.73  | 0.00 | 0.19          | 0.01            | 0.18         |
| Arch Coatings Off-Gas            | 0.00  | -      | -      | -    | -             | -               | -            |
| Arch Coatings Worker Trips       | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Off-Gas                  | 0.00  | -      | -      | -    | -             | -               | -            |
| Asphalt Off-Road Diesel          | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| Asphalt On-Road Diesel           | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Worker Trips             | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 16.96 | 107.25 | 140.73 | 0.00 | 4.38          | 4.20            | 0.18         |
| Max lbs/day all phases           | 16.96 | 107.25 | 140.73 | 0.00 | 4.38          | 4.20            | 0.18         |
| *** 2010***                      |       |        |        |      |               |                 |              |
| Phase 1 - Demolition Emissions   |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 2 - Site Grading Emissions |       |        |        |      |               |                 |              |
| Fugitive Dust                    | -     | -      | -      | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00   | 0.00   | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00   | 0.00   | 0.00 | 0.00          | 0.00            | 0.00         |

Phase 3 - Building Construction

|                            |       |        |        |      |      |      |      |
|----------------------------|-------|--------|--------|------|------|------|------|
| Bldg Const Off-Road Diesel | 16.09 | 102.15 | 133.34 | -    | 3.82 | 3.82 | 0.00 |
| Bldg Const Worker Trips    | 0.78  | 0.46   | 9.88   | 0.00 | 0.19 | 0.01 | 0.18 |
| Arch Coatings Off-Gas      | 58.26 | -      | -      | -    | -    | -    | -    |
| Arch Coatings Worker Trips | 0.78  | 0.46   | 9.88   | 0.00 | 0.19 | 0.01 | 0.18 |
| Asphalt Off-Gas            | 0.00  | -      | -      | -    | -    | -    | -    |
| Asphalt Off-Road Diesel    | 0.00  | 0.00   | 0.00   | -    | 0.00 | 0.00 | 0.00 |
| Asphalt On-Road Diesel     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Asphalt Worker Trips       | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day            | 75.92 | 103.08 | 153.10 | 0.00 | 4.20 | 3.84 | 0.36 |
| Max lbs/day all phases     | 75.92 | 103.08 | 153.10 | 0.00 | 4.20 | 3.84 | 0.36 |

\*\*\* 2011\*\*\*

Phase 1 - Demolition Emissions

|                 |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|
| Fugitive Dust   | -    | -    | -    | -    | 0.00 | -    | 0.00 |
| Off-Road Diesel | 0.00 | 0.00 | 0.00 | -    | 0.00 | 0.00 | 0.00 |
| On-Road Diesel  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Worker Trips    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Phase 2 - Site Grading Emissions

|                 |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|
| Fugitive Dust   | -    | -    | -    | -    | 0.00 | -    | 0.00 |
| Off-Road Diesel | 0.00 | 0.00 | 0.00 | -    | 0.00 | 0.00 | 0.00 |
| On-Road Diesel  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Worker Trips    | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Phase 3 - Building Construction

|                            |       |        |        |      |      |      |      |
|----------------------------|-------|--------|--------|------|------|------|------|
| Bldg Const Off-Road Diesel | 16.09 | 102.15 | 133.34 | -    | 3.82 | 3.82 | 0.00 |
| Bldg Const Worker Trips    | 0.78  | 0.46   | 9.88   | 0.00 | 0.19 | 0.01 | 0.18 |
| Arch Coatings Off-Gas      | 58.26 | -      | -      | -    | -    | -    | -    |
| Arch Coatings Worker Trips | 0.78  | 0.46   | 9.88   | 0.00 | 0.19 | 0.01 | 0.18 |
| Asphalt Off-Gas            | 0.00  | -      | -      | -    | -    | -    | -    |
| Asphalt Off-Road Diesel    | 0.00  | 0.00   | 0.00   | -    | 0.00 | 0.00 | 0.00 |
| Asphalt On-Road Diesel     | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Asphalt Worker Trips       | 0.00  | 0.00   | 0.00   | 0.00 | 0.00 | 0.00 | 0.00 |
| Maximum lbs/day            | 75.92 | 103.08 | 153.10 | 0.00 | 4.20 | 3.84 | 0.36 |
| Max lbs/day all phases     | 75.92 | 103.08 | 153.10 | 0.00 | 4.20 | 3.84 | 0.36 |

Construction-Related Mitigation Measures

- Phase 1: Off-Road Diesel Exhaust: Keep engines tuned  
Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
- Phase 2: Soil Disturbance: Rule 403 + additional watering  
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 50.0%)
- Phase 2: Off-Road Diesel Exhaust: Keep engines in tune  
Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
- Phase 3: Off-Road Diesel Exhaust: Keep engines tuned  
Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)

Phase 1 - Demolition Assumptions  
 Start Month/Year for Phase 1: May '07  
 Phase 1 Duration: 1 months  
 Building Volume Total (cubic feet): 350000  
 Building Volume Daily (cubic feet): 31820  
 On-Road Truck Travel (VMT): 1767

Off-Road Equipment

| No. | Type                      | Horsepower | Load Factor | Hours/Day |
|-----|---------------------------|------------|-------------|-----------|
| 1   | Concrete/Industrial saws  | 84         | 0.730       | 7.5       |
| 1   | Crushing/Processing Equip | 154        | 0.780       | 7.5       |
| 1   | Other Equipment           | 190        | 0.620       | 7.5       |
| 1   | Rubber Tired Dozers       | 352        | 0.590       | 7.5       |
| 1   | Tractor/Loaders/Backhoes  | 79         | 0.465       | 7.5       |

Phase 2 - Site Grading Assumptions  
 Start Month/Year for Phase 2: Jun '07  
 Phase 2 Duration: 5 months  
 On-Road Truck Travel (VMT): 2402

Off-Road Equipment

| No. | Type                     | Horsepower | Load Factor | Hours/Day |
|-----|--------------------------|------------|-------------|-----------|
| 1   | Bore/Drill Rigs          | 218        | 0.750       | 7.5       |
| 1   | Cranes                   | 190        | 0.430       | 6.0       |
| 2   | Excavators               | 180        | 0.580       | 7.5       |
| 1   | Other Equipment          | 190        | 0.620       | 7.5       |
| 2   | Tractor/Loaders/Backhoes | 79         | 0.465       | 7.5       |

Phase 3 - Building Construction Assumptions  
 Start Month/Year for Phase 3: Nov '07  
 Phase 3 Duration: 42.0 months  
 Start Month/Year for SubPhase Building: Nov '07  
 SubPhase Building Duration: 42 months

Off-Road Equipment

| No. | Type                     | Horsepower | Load Factor | Hours/Day |
|-----|--------------------------|------------|-------------|-----------|
| 2   | Concrete/Industrial saws | 84         | 0.730       | 5.0       |
| 3   | Cranes                   | 190        | 0.430       | 4.0       |
| 6   | Other Equipment          | 190        | 0.620       | 6.5       |
| 2   | Rough Terrain Forklifts  | 94         | 0.475       | 6.5       |
| 1   | Skid Steer Loaders       | 62         | 0.515       | 6.5       |
| 3   | Tractor/Loaders/Backhoes | 79         | 0.465       | 6.5       |

Start Month/Year for SubPhase Architectural Coatings: Jan '10  
 SubPhase Architectural Coatings Duration: 16 months  
 SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Condominium/townhouse high rise have changed from the defaults 5.26/7.55 to 4.180124223/5.5

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Site Grading Fugitive Dust Emission Rate changed from 10 to 38.2

Site Grading Truck Haul Capacity (yds<sup>3</sup>) changed from 20 to 14

Phase 1 mitigation measure Off-Road Diesel Exhaust: Keep engines tuned has been changed from off to on.

Phase 2 mitigation measure Soil Disturbance: Rule 403 + additional watering has been changed from off to on.

Phase 2 mitigation measure Off-Road Diesel Exhaust: Keep engines in tune has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Keep engines tuned has been changed from off to on.

Changes made to the default values for Area

The natural gas residential percentage changed from 60 to 100.

The wood stove percentage changed from 35 to 0.

The wood fireplace percentage changed from 10 to 0.

The natural gas fireplace percentage changed from 55 to 100.

The landscape year changed from 2005 to 2010.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2010.

08/01/2005 5:34 PM

URBEMIS 2002 For Windows 8.7.0

File Name: V:\QNOISE DIVISION\Active Projects\Century City - Constellation Blvd\URBEMIS 8-5\Interim Year-Construction.urb  
 Project Name: 10131 Constellation Blvd - Proposed Uses  
 Project Location: South Coast Air Basin (Los Angeles area)  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day - Summer)

Construction Start Month and Year: May, 2008  
 Construction Duration: 24  
 Total Land Use Area to be Developed: 5.5 acres  
 Maximum Acreage Disturbed Per Day: 5.5 acres  
 Single Family Units: 0 Multi-Family Units: 116  
 Retail/Office/Institutional/Industrial Square Footage: 0

## CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

| Source                           | ROG   | NOx   | CO    | SO2  | PM10<br>TOTAL | PM10<br>EXHAUST | PM10<br>DUST |
|----------------------------------|-------|-------|-------|------|---------------|-----------------|--------------|
| *** 2008***                      |       |       |       |      |               |                 |              |
| Phase 1 - Demolition Emissions   |       |       |       |      |               |                 |              |
| Fugitive Dust                    | -     | -     | -     | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00  | 0.00  | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 2 - Site Grading Emissions |       |       |       |      |               |                 |              |
| Fugitive Dust                    | -     | -     | -     | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00  | 0.00  | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 3 - Building Construction  |       |       |       |      |               |                 |              |
| Bldg Const Off-Road Diesel       | 7.07  | 48.73 | 55.70 | -    | 1.94          | 1.94            | 0.00         |
| Bldg Const Worker Trips          | 0.67  | 0.82  | 16.06 | 0.01 | 0.07          | 0.03            | 0.04         |
| Arch Coatings Off-Gas            | 18.66 | -     | -     | -    | -             | -               | -            |
| Arch Coatings Worker Trips       | 0.23  | 0.13  | 2.79  | 0.00 | 0.04          | 0.00            | 0.04         |
| Asphalt Off-Gas                  | 0.00  | -     | -     | -    | -             | -               | -            |
| Asphalt Off-Road Diesel          | 0.00  | 0.00  | 0.00  | -    | 0.00          | 0.00            | 0.00         |
| Asphalt On-Road Diesel           | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Worker Trips             | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 26.61 | 49.68 | 74.55 | 0.01 | 2.05          | 1.97            | 0.08         |
| Max lbs/day all phases           | 26.61 | 49.68 | 74.55 | 0.01 | 2.05          | 1.97            | 0.08         |
| *** 2009***                      |       |       |       |      |               |                 |              |
| Phase 1 - Demolition Emissions   |       |       |       |      |               |                 |              |
| Fugitive Dust                    | -     | -     | -     | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00  | 0.00  | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 2 - Site Grading Emissions |       |       |       |      |               |                 |              |
| Fugitive Dust                    | -     | -     | -     | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00  | 0.00  | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 3 - Building Construction  |       |       |       |      |               |                 |              |
| Bldg Const Off-Road Diesel       | 7.07  | 46.65 | 57.17 | -    | 1.81          | 1.81            | 0.00         |
| Bldg Const Worker Trips          | 0.65  | 0.81  | 15.84 | 0.01 | 0.07          | 0.03            | 0.04         |
| Arch Coatings Off-Gas            | 18.66 | -     | -     | -    | -             | -               | -            |
| Arch Coatings Worker Trips       | 0.21  | 0.12  | 2.58  | 0.00 | 0.04          | 0.00            | 0.04         |
| Asphalt Off-Gas                  | 0.00  | -     | -     | -    | -             | -               | -            |
| Asphalt Off-Road Diesel          | 0.00  | 0.00  | 0.00  | -    | 0.00          | 0.00            | 0.00         |
| Asphalt On-Road Diesel           | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Worker Trips             | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 26.57 | 47.58 | 75.59 | 0.01 | 1.92          | 1.84            | 0.08         |
| Max lbs/day all phases           | 26.57 | 47.58 | 75.59 | 0.01 | 1.92          | 1.84            | 0.08         |
| *** 2010***                      |       |       |       |      |               |                 |              |
| Phase 1 - Demolition Emissions   |       |       |       |      |               |                 |              |
| Fugitive Dust                    | -     | -     | -     | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00  | 0.00  | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 2 - Site Grading Emissions |       |       |       |      |               |                 |              |
| Fugitive Dust                    | -     | -     | -     | -    | 0.00          | -               | 0.00         |
| Off-Road Diesel                  | 0.00  | 0.00  | 0.00  | -    | 0.00          | 0.00            | 0.00         |
| On-Road Diesel                   | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Worker Trips                     | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Phase 3 - Building Construction  |       |       |       |      |               |                 |              |
| Bldg Const Off-Road Diesel       | 7.07  | 44.71 | 58.59 | -    | 1.66          | 1.66            | 0.00         |
| Bldg Const Worker Trips          | 0.63  | 0.80  | 15.63 | 0.01 | 0.07          | 0.03            | 0.04         |
| Arch Coatings Off-Gas            | 0.00  | -     | -     | -    | -             | -               | -            |
| Arch Coatings Worker Trips       | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Off-Gas                  | 0.00  | -     | -     | -    | -             | -               | -            |
| Asphalt Off-Road Diesel          | 0.00  | 0.00  | 0.00  | -    | 0.00          | 0.00            | 0.00         |
| Asphalt On-Road Diesel           | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Asphalt Worker Trips             | 0.00  | 0.00  | 0.00  | 0.00 | 0.00          | 0.00            | 0.00         |
| Maximum lbs/day                  | 7.69  | 45.51 | 74.22 | 0.01 | 1.72          | 1.68            | 0.04         |
| Max lbs/day all phases           | 7.69  | 45.51 | 74.22 | 0.01 | 1.72          | 1.68            | 0.04         |

Phase 2 - Site Grading Assumptions: Phase Turned OFF

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '08  
 Phase 3 Duration: 24.0 months  
 Start Month/Year for SubPhase Building: May '08  
 SubPhase Building Duration: 24 months

| No. | Type                     | Horsepower | Load Factor | Hours/Day |
|-----|--------------------------|------------|-------------|-----------|
| 2   | Concrete/Industrial saws | 84         | 0.730       | 5.0       |
| 1   | Cranes                   | 190        | 0.430       | 4.0       |
| 2   | Other Equipment          | 190        | 0.620       | 6.5       |
| 1   | Rough Terrain Forklifts  | 94         | 0.475       | 6.5       |
| 1   | Skid Steer Loaders       | 62         | 0.515       | 6.5       |
| 1   | Tractor/Loaders/Backhoes | 79         | 0.465       | 6.5       |

Start Month/Year for SubPhase Architectural Coatings: Nov '08  
 SubPhase Architectural Coatings Duration: 12 months  
 SubPhase Asphalt Turned OFF

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

| Source                           | ROG   | NOx   | CO    | SO2  | PM10 TOTAL | PM10 EXHAUST | PM10 DUST |
|----------------------------------|-------|-------|-------|------|------------|--------------|-----------|
| *** 2008***                      |       |       |       |      |            |              |           |
| Phase 1 - Demolition Emissions   |       |       |       |      |            |              |           |
| Fugitive Dust                    | -     | -     | -     | -    | 0.00       | -            | 0.00      |
| Off-Road Diesel                  | 0.00  | 0.00  | 0.00  | -    | 0.00       | 0.00         | 0.00      |
| On-Road Diesel                   | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Worker Trips                     | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Maximum lbs/day                  | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Phase 2 - Site Grading Emissions |       |       |       |      |            |              |           |
| Fugitive Dust                    | -     | -     | -     | -    | 0.00       | -            | 0.00      |
| Off-Road Diesel                  | 0.00  | 0.00  | 0.00  | -    | 0.00       | 0.00         | 0.00      |
| On-Road Diesel                   | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Worker Trips                     | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Maximum lbs/day                  | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Phase 3 - Building Construction  |       |       |       |      |            |              |           |
| Bldg Const Off-Road Diesel       | 6.72  | 46.29 | 52.91 | -    | 1.84       | 1.84         | 0.00      |
| Bldg Const Worker Trips          | 0.67  | 0.82  | 16.06 | 0.01 | 0.07       | 0.03         | 0.04      |
| Arch Coatings Off-Gas            | 18.66 | -     | -     | -    | -          | -            | -         |
| Arch Coatings Worker Trips       | 0.23  | 0.13  | 2.79  | 0.00 | 0.04       | 0.00         | 0.04      |
| Asphalt Off-Gas                  | 0.00  | -     | -     | -    | -          | -            | -         |
| Asphalt Off-Road Diesel          | 0.00  | 0.00  | 0.00  | -    | 0.00       | 0.00         | 0.00      |
| Asphalt On-Road Diesel           | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Asphalt Worker Trips             | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Maximum lbs/day                  | 26.26 | 47.24 | 71.76 | 0.01 | 1.95       | 1.87         | 0.08      |
| Max lbs/day all phases           | 26.26 | 47.24 | 71.76 | 0.01 | 1.95       | 1.87         | 0.08      |
| *** 2009***                      |       |       |       |      |            |              |           |
| Phase 1 - Demolition Emissions   |       |       |       |      |            |              |           |
| Fugitive Dust                    | -     | -     | -     | -    | 0.00       | -            | 0.00      |
| Off-Road Diesel                  | 0.00  | 0.00  | 0.00  | -    | 0.00       | 0.00         | 0.00      |
| On-Road Diesel                   | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Worker Trips                     | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Maximum lbs/day                  | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Phase 2 - Site Grading Emissions |       |       |       |      |            |              |           |
| Fugitive Dust                    | -     | -     | -     | -    | 0.00       | -            | 0.00      |
| Off-Road Diesel                  | 0.00  | 0.00  | 0.00  | -    | 0.00       | 0.00         | 0.00      |
| On-Road Diesel                   | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Worker Trips                     | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Maximum lbs/day                  | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Phase 3 - Building Construction  |       |       |       |      |            |              |           |
| Bldg Const Off-Road Diesel       | 6.72  | 44.32 | 54.31 | -    | 1.72       | 1.72         | 0.00      |
| Bldg Const Worker Trips          | 0.65  | 0.81  | 15.84 | 0.01 | 0.07       | 0.03         | 0.04      |
| Arch Coatings Off-Gas            | 18.66 | -     | -     | -    | -          | -            | -         |
| Arch Coatings Worker Trips       | 0.21  | 0.12  | 2.58  | 0.00 | 0.04       | 0.00         | 0.04      |
| Asphalt Off-Gas                  | 0.00  | -     | -     | -    | -          | -            | -         |
| Asphalt Off-Road Diesel          | 0.00  | 0.00  | 0.00  | -    | 0.00       | 0.00         | 0.00      |
| Asphalt On-Road Diesel           | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Asphalt Worker Trips             | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Maximum lbs/day                  | 26.22 | 45.25 | 72.73 | 0.01 | 1.83       | 1.75         | 0.08      |
| Max lbs/day all phases           | 26.22 | 45.25 | 72.73 | 0.01 | 1.83       | 1.75         | 0.08      |
| *** 2010***                      |       |       |       |      |            |              |           |
| Phase 1 - Demolition Emissions   |       |       |       |      |            |              |           |
| Fugitive Dust                    | -     | -     | -     | -    | 0.00       | -            | 0.00      |
| Off-Road Diesel                  | 0.00  | 0.00  | 0.00  | -    | 0.00       | 0.00         | 0.00      |
| On-Road Diesel                   | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Worker Trips                     | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Maximum lbs/day                  | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Phase 2 - Site Grading Emissions |       |       |       |      |            |              |           |
| Fugitive Dust                    | -     | -     | -     | -    | 0.00       | -            | 0.00      |
| Off-Road Diesel                  | 0.00  | 0.00  | 0.00  | -    | 0.00       | 0.00         | 0.00      |
| On-Road Diesel                   | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Worker Trips                     | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Maximum lbs/day                  | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Phase 3 - Building Construction  |       |       |       |      |            |              |           |
| Bldg Const Off-Road Diesel       | 6.72  | 42.47 | 55.66 | -    | 1.58       | 1.58         | 0.00      |
| Bldg Const Worker Trips          | 0.63  | 0.80  | 15.63 | 0.01 | 0.07       | 0.03         | 0.04      |
| Arch Coatings Off-Gas            | 0.00  | -     | -     | -    | -          | -            | -         |
| Arch Coatings Worker Trips       | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Asphalt Off-Gas                  | 0.00  | -     | -     | -    | -          | -            | -         |
| Asphalt Off-Road Diesel          | 0.00  | 0.00  | 0.00  | -    | 0.00       | 0.00         | 0.00      |
| Asphalt On-Road Diesel           | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Asphalt Worker Trips             | 0.00  | 0.00  | 0.00  | 0.00 | 0.00       | 0.00         | 0.00      |
| Maximum lbs/day                  | 7.34  | 43.27 | 71.30 | 0.01 | 1.64       | 1.60         | 0.04      |
| Max lbs/day all phases           | 7.34  | 43.27 | 71.30 | 0.01 | 1.64       | 1.60         | 0.04      |

Construction-Related Mitigation Measures

Phase 2 - Site Grading Assumptions: Phase Turned OFF



Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '08

Phase 3 Duration: 24.0 months

Start Month/Year for SubPhase Building: May '08

SubPhase Building Duration: 24 months

Off-Road Equipment

| No. | Type                     | Horsepower | Load Factor | Hours/Day |
|-----|--------------------------|------------|-------------|-----------|
| 2   | Concrete/Industrial saws | 84         | 0.730       | 5.0       |
| 1   | Cranes                   | 190        | 0.430       | 4.0       |
| 2   | Other Equipment          | 190        | 0.620       | 6.5       |
| 1   | Rough Terrain Forklifts  | 94         | 0.475       | 6.5       |
| 1   | Skid Steer Loaders       | 62         | 0.515       | 6.5       |
| 1   | Tractor/Loaders/Backhoes | 79         | 0.465       | 6.5       |

Start Month/Year for SubPhase Architectural Coatings: Nov '08

SubPhase Architectural Coatings Duration: 12 months

SubPhase Asphalt Turned OFF

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Phase 3 mitigation measure Off-Road Diesel Exhaust: Keep engines tuned  
has been changed from off to on.

# Appendix D-2

- SCAQMD Rule 403 (Fugitive Dust) Control Requirements
  - SCAQMD Rule 403 Measures For High Wind Conditions
  - SCAQMD Rule 403 Measures For Normal Wind Conditions



(Adopted May 7, 1976) (Amended November 6, 1992)  
(Amended July 9, 1993) (Amended February 14, 1997)  
(Amended December 11, 1998)(Amended April 2, 2004)

**RULE 403. FUGITIVE DUST**

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

- (1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.
- (2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.
- (3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.
- (4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.
- (5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

- (6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.
- (7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.
- (8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.
- (9) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.
- (10) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.
- (11) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:
  - (A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;
  - (B) been paved or otherwise covered by a permanent structure; or
  - (C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.
- (12) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

- (13) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.
- (14) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.
- (15) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.
- (16) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.
- (17) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.
- (18) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic meters (5,000 cubic yards) or more three times during the most recent 365-day period.
- (19) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.
- (20) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.
- (21) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

- (22) PM<sub>10</sub> means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.
- (23) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.
- (24) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.
- (25) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.
- (26) SIMULTANEOUS SAMPLING means the operation of two PM<sub>10</sub> samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.
- (27) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.
- (28) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.
- (29) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

- (30) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.
  - (31) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.
  - (32) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.
  - (33) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.
  - (34) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.
- (d) Requirements
- (1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:
    - (A) the dust remains visible in the atmosphere beyond the property line of the emission source; or
    - (B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.
  - (2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.
  - (3) No person shall cause or allow PM<sub>10</sub> levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent



method for PM<sub>10</sub> monitoring. If sampling is conducted, samplers shall be:

- (A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM<sub>10</sub>.
  - (B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.
- (4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.
- (5) After January 1, 2005, no person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.
- (A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.
  - (B) Pave the surface extending at least 100 feet and at least 20 feet wide.
  - (C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.
  - (D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.
  - (E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

- (e) Additional Requirements for Large Operations
  - (1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:
    - (A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;
    - (B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;
    - (C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;
    - (D) after January 1, 2005, install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;
    - (E) after January 1, 2005, identify a dust control supervisor that:
      - (i) is employed by or contracted with the property owner or developer;
      - (ii) is on the site or available on-site within 30 minutes during working hours;
      - (iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;
      - (iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and
    - (F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Agricultural operations directly related to the raising of fowls or animals and agricultural operations, provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(B) Agricultural operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation practices contained in the Rule 403 Agricultural Handbook;

- (ii) completes and maintains the self-monitoring form documenting sufficient conservation practices, as described in the Rule 403 Agricultural Handbook; and
  - (iii) makes the completed self-monitoring form available to the Executive Officer upon request.
- (C) Agricultural operations outside the South Coast Air Basin, until January 1, 2005, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:
  - (i) voluntarily implements the conservation practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and
  - (ii) completes and maintains the self-monitoring form documenting sufficient conservation practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and
  - (iii) makes the completed self-monitoring form available to the Executive Officer upon request.
- (D) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.
- (E) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.
- (F) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.
- (G) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.
- (H) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

- (i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and
  - (ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.
- (I) sandblasting operations.
- (2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:
- (A) When wind gusts exceed 25 miles per hour, provided that:
    - (i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;
    - (ii) records are maintained in accordance with subparagraph (e)(1)(C).
  - (B) To unpaved roads, provided such roads:
    - (i) are used solely for the maintenance of wind-generating equipment; or
    - (ii) are unpaved public alleys as defined in Rule 1186; or
    - (iii) are service roads that meet all of the following criteria:
      - (a) are less than 50 feet in width at all points along the road;
      - (b) are within 25 feet of the property line; and
      - (c) have a traffic volume less than 20 vehicle-trips per day.
  - (C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.

- (3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.
- (4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:
  - (A) Blasting operations which have been permitted by the California Division of Industrial Safety; and
  - (B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.
- (5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).
- (6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.
- (7) The provisions of subdivision (e) shall not apply to:
  - (A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.
  - (B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.
  - (C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.
- (8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan

provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

**(h) Fees**

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM<sub>10</sub> pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

**TABLE 1**  
**BEST AVAILABLE CONTROL MEASURES**  
**(Applicable to All Construction Activity Sources)**

| Source Category       | Control Measure   | Guidance  |
|-----------------------|---|---|
| Backfilling           | 01-1 Stabilize backfill material when not actively handling; and<br>01-2 Stabilize backfill material during handling; and<br>01-3 Stabilize soil at completion of activity.   | <ul style="list-style-type: none"> <li>✓ Mix backfill soil with water prior to moving</li> <li>✓ Dedicate water truck or high capacity hose to backfilling equipment</li> <li>✓ Empty loader bucket slowly so that no dust plumes are generated</li> <li>✓ Minimize drop height from loader bucket</li> </ul> |
| Clearing and grubbing | 02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and<br>02-2 Stabilize soil during clearing and grubbing activities; and<br>02-3 Stabilize soil immediately after clearing and grubbing activities. | <ul style="list-style-type: none"> <li>✓ Maintain live perennial vegetation where possible</li> <li>✓ Apply water in sufficient quantity to prevent generation of dust plumes</li> </ul>  |
| Clearing forms        | 03-1 Use water spray to clear forms; or<br>03-2 Use sweeping and water spray to clear forms; or<br>03-3 Use vacuum system to clear forms.   | <ul style="list-style-type: none"> <li>✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements</li> </ul>   |
| Crushing              | 04-1 Stabilize surface soils prior to operation of support equipment; and<br>04-2 Stabilize material after crushing.  | <ul style="list-style-type: none"> <li>✓ Follow permit conditions for crushing equipment</li> <li>✓ Pre-water material prior to loading into crusher</li> <li>✓ Monitor crusher emissions opacity</li> <li>✓ Apply water to crushed material to prevent dust plumes</li> </ul>                                |



**TABLE 1**  
**BEST AVAILABLE CONTROL MEASURES**  
**(Applicable to All Construction Activity Sources)**

| Source Category                | Control Measure   | Guidance  |
|--------------------------------|---|---|
| Cut and fill                   | <p>05-1 Pre-water soils prior to cut and fill activities; and</p> <p>05-2 Stabilize soil during and after cut and fill activities.</p>  | <p>✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration</p> <p>✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts</p>  |
| Demolition – mechanical/manual | <p>06-1 Stabilize wind erodible surfaces to reduce dust; and</p> <p>06-2 Stabilize surface soil where support equipment and vehicles will operate; and</p> <p>06-3 Stabilize loose soil and demolition debris; and</p> <p>06-4 Comply with AQMD Rule 1403.</p>                                    | <p>✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes</p>  |
| Disturbed soil                 | <p>07-1 Stabilize disturbed soil throughout the construction site; and</p> <p>07-2 Stabilize disturbed soil between structures</p>  | <p>✓ Limit vehicular traffic and disturbances on soils where possible</p> <p>✓ If interior block walls are planned, install as early as possible</p> <p>✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes</p>  |
| Earth-moving activities        | <p>08-1 Pre-apply water to depth of proposed cuts; and</p> <p>08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and</p> <p>08-3 Stabilize soils once earth-moving activities are complete.</p> | <p>✓ Grade each project phase separately, timed to coincide with construction phase</p> <p>✓ Upwind fencing can prevent material movement on site</p> <p>✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes</p> |

**TABLE 1**  
**BEST AVAILABLE CONTROL MEASURES**  
**(Applicable to All Construction Activity Sources)**

| Source Category                       | Control Measure   | Guidance   |
|---------------------------------------|---|--|
| Importing/exporting of bulk materials | 09-1 Stabilize material while loading to reduce fugitive dust emissions; and<br>09-2 Maintain at least six inches of freeboard on haul vehicles; and<br>09-3 Stabilize material while transporting to reduce fugitive dust emissions; and<br>09-4 Stabilize material while unloading to reduce fugitive dust emissions; and<br>09-5 Comply with Vehicle Code Section 23114. | <ul style="list-style-type: none"> <li>✓ Use tarps or other suitable enclosures on haul trucks</li> <li>✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage</li> <li>✓ Comply with track-out prevention/mitigation requirements</li> <li>✓ Provide water while loading and unloading to reduce visible dust plumes</li> </ul>        |
| Landscaping                           | 10-1 Stabilize soils, materials, slopes   | <ul style="list-style-type: none"> <li>✓ Apply water to materials to stabilize</li> <li>✓ Maintain materials in a crusted condition</li> <li>✓ Maintain effective cover over materials</li> <li>✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes</li> <li>✓ Hydroseed prior to rain season</li> </ul> |
| Road shoulder maintenance             | 11-1 Apply water to unpaved shoulders prior to clearing; and<br>11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.   | <ul style="list-style-type: none"> <li>✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs</li> <li>✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs</li> </ul>  |

**TABLE 1**  
**BEST AVAILABLE CONTROL MEASURES**  
**(Applicable to All Construction Activity Sources)**

| Source Category                          | Control Measure  | Guidance   |
|--|--|--|
| Screening                                | 12-1 Pre-water material prior to screening; and<br>12-2 Limit fugitive dust emissions to opacity and plume length standards; and<br>12-3 Stabilize material immediately after screening.   | <ul style="list-style-type: none"> <li>✓ Dedicate water truck or high capacity hose to screening operation</li> <li>✓ Drop material through the screen slowly and minimize drop height</li> <li>✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point</li> </ul> |
| Staging areas                            | 13-1 Stabilize staging areas during use; and<br>13-2 Stabilize staging area soils at project completion.   | <ul style="list-style-type: none"> <li>✓ Limit size of staging area</li> <li>✓ Limit vehicle speeds to 15 miles per hour</li> <li>✓ Limit number and size of staging area entrances/exists</li> </ul>  |
| Stockpiles/<br>Bulk Material<br>Handling | 14-1 Stabilize stockpiled materials.<br>14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage. | <ul style="list-style-type: none"> <li>✓ Add or remove material from the downwind portion of the storage pile</li> <li>✓ Maintain storage piles to avoid steep sides or faces</li> </ul>   |

**TABLE 1**  
**BEST AVAILABLE CONTROL MEASURES**  
**(Applicable to All Construction Activity Sources)**

| Source Category                           | Control Measure  | Guidance   |
|---|--|--|
| Traffic areas for construction activities | 15-1 Stabilize all off-road traffic and parking areas; and<br>15-2 Stabilize all haul routes; and<br>15-3 Direct construction traffic over established haul routes.                          | <ul style="list-style-type: none"> <li>✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas</li> <li>✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes</li> </ul>   |
| Trenching                                 | 16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and<br>16-2 Stabilize soils at the completion of trenching activities.                          | <ul style="list-style-type: none"> <li>✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches, soak soils via the pre-trench and resuming trenching</li> <li>✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment</li> </ul> |
| Truck loading                             | 17-1 Pre-water material prior to loading; and<br>17-2 Ensure that freeboard exceeds six inches (CVC 23114)   | <ul style="list-style-type: none"> <li>✓ Empty loader bucket such that no visible dust plumes are created</li> <li>✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading</li> </ul>  |
| Turf Overseeding                          | 18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and<br>18-2 Cover haul vehicles prior to exiting the site. | <ul style="list-style-type: none"> <li>✓ Haul waste material immediately off-site</li> </ul>   |

**TABLE 1**  
**BEST AVAILABLE CONTROL MEASURES**  
 (Applicable to All Construction Activity Sources)

| Source Category            | Control Measure  | Guidance  |
|----------------------------|--|---|
| Unpaved roads/parking lots | 19-1 Stabilize soils to meet the applicable performance standards; and<br>19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.   | ✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements |
| Vacant land                | 20-1 In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures. |   |

**TABLE 2**  
**DUST CONTROL MEASURES FOR LARGE OPERATIONS**

| <b>FUGITIVE DUST SOURCE CATEGORY</b>   | <b>CONTROL ACTIONS</b>  |
|--|---|
| <b>Earth-moving (except construction cutting and filling areas, and mining operations)</b> | <p>(1a) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR</p> <p>(1a-1) For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.</p>   |
| <b>Earth-moving:<br/>Construction fill areas:</b>  | <p>(1b) Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.</p> |

TABLE 2 (Continued)

| FUGITIVE DUST SOURCE CATEGORY  | CONTROL ACTIONS  |
|--|--|
| <b>Earth-moving:<br/>Construction cut areas<br/>and mining operations:</b> | (1c) Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.   |
| <b>Disturbed surface areas<br/>(except completed<br/>grading areas)</b>    | (2a/b) Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.   |
| <b>Disturbed surface<br/>areas: Completed<br/>grading areas</b>            | (2c) Apply chemical stabilizers within five working days of grading completion; OR<br><br>(2d) Take actions (3a) or (3c) specified for inactive disturbed surface areas.   |
| <b>Inactive disturbed<br/>surface areas</b>                                | (3a) Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR<br><br>(3b) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR<br><br>(3c) Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR<br><br>(3d) Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas. |

TABLE 2 (Continued)

| FUGITIVE DUST SOURCE CATEGORY | CONTROL ACTIONS   |
|-------------------------------|---|
| <b>Unpaved Roads</b>          | <p>(4a) Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR</p> <p>(4b) Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR</p> <p>(4c) Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.</p>   |
| <b>Open storage piles</b>     | <p>(5a) Apply chemical stabilizers; OR</p> <p>(5b) Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR</p> <p>(5c) Install temporary coverings; OR</p> <p>(5d) Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.</p> |
| <b>All Categories</b>         | (6a) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.   |



TABLE 3

## CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

| FUGITIVE DUST SOURCE CATEGORY  | CONTROL MEASURES  |
|--------------------------------|---|
| <b>Earth-moving</b>            | (1A) Cease all active operations; OR<br>(2A) Apply water to soil not more than 15 minutes prior to moving such soil.  |
| <b>Disturbed surface areas</b> | (0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR<br>(1B) Apply chemical stabilizers prior to wind event; OR<br>(2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR<br>(3B) Take the actions specified in Table 2, Item (3c); OR<br>(4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas. |
| <b>Unpaved roads</b>           | (1C) Apply chemical stabilizers prior to wind event; OR<br>(2C) Apply water twice per hour during active operation; OR<br>(3C) Stop all vehicular traffic.  |
| <b>Open storage piles</b>      | (1D) Apply water twice per hour; OR<br>(2D) Install temporary coverings.  |
| <b>Paved road track-out</b>    | (1E) Cover all haul vehicles; OR<br>(2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.  |
| <b>All Categories</b>          | (1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.   |

# Appendix D-3

- Operation Emissions Inventory
  - Regional Operation Emissions
    - Regional Emission Summary Sheet
    - Stationary Source Emissions
    - Area Source Emissions
    - URBEMIS2002 Output Files
  - Local Operation Emissions
    - One-hour CO Summary Sheet
    - Eight-hour CO Summary Sheet
    - CALINE4 Output Files
    - EMFAC2002 Emission Rates



# 10131 Constellation Boulevard

## Regional Emission Calculations (lbs/day)

|                               | CO           | NOx         | PM10         | ROC         | SOx          |
|-------------------------------|--------------|-------------|--------------|-------------|--------------|
| <b>Existing Use Emissions</b> |              |             |              |             |              |
| Mobile                        | 271.0        | 37.4        | 31.9         | 21.4        | 0.2          |
| Area                          | 2.1          | 0.3         | 0.0          | 0.5         | 0.0          |
| Stationary                    | 0.6          | 3.6         | 0.1          | 0.0         | 0.4          |
| <b>Total Existing</b>         | <b>273.7</b> | <b>41.3</b> | <b>32.1</b>  | <b>21.9</b> | <b>0.6</b>   |
| <b>Proposed Use Emissions</b> |              |             |              |             |              |
| Mobile                        | 171.0        | 16.0        | 20.5         | 32.0        | 0.1          |
| Area                          | 4.0          | 6.0         | 0.2          | 19.4        | 0.0          |
| Stationary                    | 1.5          | 8.6         | 0.3          | 0.1         | 0.9          |
| <b>Total Project</b>          | <b>176.5</b> | <b>30.6</b> | <b>21.0</b>  | <b>51.4</b> | <b>1.0</b>   |
| <b>Net Project Emissions</b>  |              |             |              |             |              |
| Net Mobile                    | -100.0       | -21.4       | -11.5        | 10.6        | -0.1         |
| Net Area                      | 1.9          | 5.7         | 0.2          | 18.9        | 0.0          |
| Net Stationary                | 0.9          | 4.9         | 0.2          | 0.0         | 0.5          |
| Total Net                     | -97.2        | -10.8       | -11.1        | 29.5        | 0.4          |
| SCAQMD Significance Threshold | 550          | 55          | 150          | 55          | 150          |
| <b>Difference</b>             | <b>(647)</b> | <b>(66)</b> | <b>(161)</b> | <b>(25)</b> | <b>(150)</b> |
| <b>Significant?</b>           | <b>No</b>    | <b>No</b>   | <b>No</b>    | <b>No</b>   | <b>No</b>    |

**Electricity Usage**

| Land Use                                       | Electricity Usage Rate <sup>a</sup> |                | Total Electricity Usage |              | Emission Factors (lbs/MWh) <sup>b</sup> |             |             |              |             |
|--|-------------------------------------|----------------|-------------------------|--------------|---|-------------|-------------|--------------|-------------|
|  | 1,000 Sqft                          | (kWh/sq.ft/yr) | (KWh/year)              | (MWh/Day)    | CO<br>0.2                               | ROC<br>0.01 | NOx<br>1.15 | PM10<br>0.04 | SOx<br>0.12 |
| <b>Existing Uses</b>                           |                                     |                |                         |              |   |             |             |              |             |
| Office   | 6.7                                 | 12.95          | 86,765                  | 0.238        | 0.048                                   | 0.002       | 0.273       | 0.010        | 0.029       |
| Retail   | 9.2                                 | 13.55          | 123,983                 | 0.340        | 0.068                                   | 0.003       | 0.391       | 0.014        | 0.041       |
| Hotel/Motel                                    | 0.0                                 | 9.95           | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Restaurant                                     | 19.8                                | 47.45          | 937,327                 | 2.568        | 0.514                                   | 0.026       | 2.953       | 0.103        | 0.308       |
| Food Store                                     | 0.0                                 | 53.30          | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Warehouse                                      | 0.0                                 | 4.35           | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| College/University                             | 0.0                                 | 11.55          | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| High School                                    | 0.0                                 | 10.50          | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Elementary School                              | 0.0                                 | 5.90           | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Hospital                                       | 0.0                                 | 21.70          | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Miscellaneous                                  | 0.0                                 | 10.50          | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Residential (DU)                               | 0.0                                 | 5,627          | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| <b>Total Existing</b>                          |                                     |                | <b>1,148,075</b>        | <b>3.145</b> | <b>0.63</b>                             | <b>0.03</b> | <b>3.62</b> | <b>0.13</b>  | <b>0.38</b> |
| <b>Proposed Uses</b>                           |                                     |                |                         |              |   |             |             |              |             |
| Office   | 0.0                                 | 12.95          | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Retail   | 0.0                                 | 13.55          | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Hotel/Motel                                    | 0.0                                 | 9.95           | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Restaurant                                     | 0.0                                 | 47.45          | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Food Store                                     | 0.0                                 | 53.3           | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Warehouse                                      | 0.0                                 | 4.35           | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| College/University                             | 0.0                                 | 11.55          | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| High School                                    | 0.0                                 | 10.5           | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Elementary School                              | 0.0                                 | 5.9            | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Hospital                                       | 0.0                                 | 21.7           | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Miscellaneous                                  | 0.0                                 | 10.5           | 0                       | 0.000        | 0.000                                   | 0.000       | 0.000       | 0.000        | 0.000       |
| Residential (DU)                               | 483.0                               | 5,627          | 2,717,600               | 7.445        | 1.489                                   | 0.074       | 8.562       | 0.298        | 0.893       |
| <b>Total Project</b>                           |                                     |                | <b>2,717,600</b>        | <b>7.445</b> | <b>1.49</b>                             | <b>0.07</b> | <b>8.56</b> | <b>0.30</b>  | <b>0.89</b> |
| <b>Net Emissions due to Electricity Demand</b> |                                     |                |                         |              | <b>0.86</b>                             | <b>0.04</b> | <b>4.95</b> | <b>0.17</b>  | <b>0.52</b> |

<sup>a</sup> Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

<sup>b</sup> Emission Factors from Table A9-11-B, CEQA Air Quality Handbook, SCAQMD, 1993.

Existing (Operations) - Winter.txt

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URBEMIS 2002 For Windows 8.7.0

File Name: V:\AQNOISE DIVISION\Active Projects\Century City - Constellation Blvd\URBEMIS 8-5\Existing Uses.urb  
 Project Name: 10131 Constellation Boulevard - Existing Uses  
 Project Location: South Coast Air Basin (Los Angeles area)  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day - Winter)

| AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated) |      |      |      |      |      |
|---|------|------|------|------|------|
| Source  | ROG  | NOx  | CO   | SO2  | PM10 |
| Natural Gas   | 0.02 | 0.30 | 0.25 | 0    | 0.00 |
| Hearth  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Landscaping - No winter emissions                                   | -    | -    | -    | -    | -    |
| Consumer Prdcts   | 0.00 | -    | -    | -    | -    |
| Architectural Coatings  | 0.50 | -    | -    | -    | -    |
| TOTALS (lbs/day, unmitigated)                                       | 0.52 | 0.30 | 0.25 | 0.00 | 0.00 |

UNMITIGATED OPERATIONAL EMISSIONS

|                           | ROG   | NOx   | CO     | SO2  | PM10  |
|---------------------------|-------|-------|--------|------|-------|
| Quality restaurant        | 10.55 | 18.51 | 130.09 | 0.08 | 15.84 |
| Bank (with drive-through) | 10.30 | 17.97 | 126.54 | 0.08 | 15.30 |
| General office building   | 0.52  | 0.92  | 6.44   | 0.00 | 0.81  |
| TOTAL EMISSIONS (lbs/day) | 21.37 | 37.41 | 263.07 | 0.17 | 31.94 |

Does not include correction for passby trips.  
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

| Unit Type                 | Acreage | Trip Rate                    | No. Units | Total Trips |
|---------------------------|---------|------------------------------|-----------|-------------|
| Quality restaurant        |         | 89.97 trips/1000 sq. ft.     | 19.75     | 1,777.00    |
| Bank (with drive-through) |         | 197.16 trips/1000 sq. ft.    | 9.15      | 1,804.00    |
| General office building   |         | 11.04 trips/1000 sq. ft.     | 6.70      | 74.00       |
|                           |         | Sum of Total Trips           |           | 3,655.00    |
|                           |         | Total Vehicle Miles Traveled |           | 21,082.37   |

Vehicle Assumptions:

Fleet Mix:

| Vehicle Type              | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---------------------------|--------------|--------------|----------|--------|
| Light Auto                | 54.70        | 1.10         | 98.70    | 0.20   |
| Light Truck < 3,750 lbs   | 15.20        | 2.00         | 96.00    | 2.00   |
| Light Truck 3,751- 5,750  | 16.20        | 1.20         | 98.10    | 0.70   |
| Med Truck 5,751- 8,500    | 7.30         | 1.40         | 95.90    | 2.70   |
| Lite-Heavy 8,501-10,000   | 1.10         | 0.00         | 81.80    | 18.20  |
| Lite-Heavy 10,001-14,000  | 0.30         | 0.00         | 66.70    | 33.30  |
| Med-Heavy 14,001-33,000   | 1.00         | 0.00         | 20.00    | 80.00  |
| Heavy-Heavy 33,001-60,000 | 0.90         | 0.00         | 11.10    | 88.90  |
| Line Haul > 60,000 lbs    | 0.00         | 0.00         | 0.00     | 100.00 |
| Urban Bus                 | 0.20         | 0.00         | 50.00    | 50.00  |
| Motorcycle                | 1.60         | 68.80        | 31.20    | 0.00   |
| School Bus                | 0.10         | 0.00         | 0.00     | 100.00 |
| Motor Home                | 1.40         | 7.10         | 85.70    | 7.20   |

Travel Conditions

|                           | Residential |           |            | Commercial |          |          |
|---------------------------|-------------|-----------|------------|------------|----------|----------|
|                           | Home-Work   | Home-Shop | Home-Other | Commute    | Non-Work | Customer |
| Urban Trip Length (miles) | 11.5        | 4.9       | 6.0        | 10.3       | 5.5      | 5.5      |
| Rural Trip Length (miles) | 11.5        | 4.9       | 6.0        | 10.3       | 5.5      | 5.5      |
| Trip Speeds (mph)         | 35.0        | 40.0      | 40.0       | 40.0       | 40.0     | 40.0     |
| % of Trips - Residential  | 20.0        | 37.0      | 43.0       |            |          |          |

| % of Trips - Commercial (by land use) |  |      |      |
|---------------------------------------|--|------|------|
| Quality restaurant                    |  | 8.0  | 4.0  |
| Bank (with drive-through)             |  | 2.0  | 1.0  |
| General office building               |  | 35.0 | 17.5 |

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The landscape year changed from 2005 to 2010.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2010.

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URBEMIS 2002 For Windows 8.7.0

File Name: V:\AQNOISE DIVISION\Active Projects\Century City - Constellation Blvd\URBEMIS 8-5\Existing Uses.urb  
 Project Name: 10131 Constellation Boulevard - Existing Uses  
 Project Location: South Coast Air Basin (Los Angeles area)  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day - Summer)

| AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated) |      |      |      |      |      |
|---|------|------|------|------|------|
| Source  | ROG  | NOx  | CO   | SO2  | PM10 |
| Natural Gas   | 0.02 | 0.30 | 0.25 | 0    | 0.00 |
| Hearth - No summer emissions  |      |      |      |      |      |
| Landscaping   | 0.27 | 0.03 | 1.89 | 0.00 | 0.00 |
| Consumer Prdcts   | 0.00 | -    | -    | -    | -    |
| Architectural Coatings  | 0.50 | -    | -    | -    | -    |
| TOTALS (lbs/day, unmitigated)                                       | 0.79 | 0.32 | 2.14 | 0.00 | 0.00 |

UNMITIGATED OPERATIONAL EMISSIONS

|                           | ROG   | NOx   | CO     | SO2  | PM10  |
|---------------------------|-------|-------|--------|------|-------|
| Quality restaurant        | 9.54  | 12.83 | 134.47 | 0.10 | 15.84 |
| Bank (with drive-through) | 9.15  | 12.46 | 129.60 | 0.10 | 15.30 |
| General office building   | 0.55  | 0.64  | 6.88   | 0.01 | 0.81  |
| TOTAL EMISSIONS (lbs/day) | 19.24 | 25.93 | 270.95 | 0.21 | 31.94 |

Does not include correction for passby trips.  
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

| Unit Type                 | Acreage | Trip Rate                    | No. Units | Total Trips |
|---------------------------|---------|------------------------------|-----------|-------------|
| Quality restaurant        |         | 89.97 trips/1000 sq. ft.     | 19.75     | 1,777.00    |
| Bank (with drive-through) |         | 197.16 trips/1000 sq. ft.    | 9.15      | 1,804.00    |
| General office building   |         | 11.04 trips/1000 sq. ft.     | 6.70      | 74.00       |
|                           |         | Sum of Total Trips           |           | 3,655.00    |
|                           |         | Total Vehicle Miles Traveled |           | 21,082.37   |

Vehicle Assumptions:

Fleet Mix:

| Vehicle Type              | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---------------------------|--------------|--------------|----------|--------|
| Light Auto                | 54.70        | 1.10         | 98.70    | 0.20   |
| Light Truck < 3,750 lbs   | 15.20        | 2.00         | 96.00    | 2.00   |
| Light Truck 3,751- 5,750  | 16.20        | 1.20         | 98.10    | 0.70   |
| Med Truck 5,751- 8,500    | 7.30         | 1.40         | 95.90    | 2.70   |
| Lite-Heavy 8,501-10,000   | 1.10         | 0.00         | 81.80    | 18.20  |
| Lite-Heavy 10,001-14,000  | 0.30         | 0.00         | 66.70    | 33.30  |
| Med-Heavy 14,001-33,000   | 1.00         | 0.00         | 20.00    | 80.00  |
| Heavy-Heavy 33,001-60,000 | 0.90         | 0.00         | 11.10    | 88.90  |
| Line Haul > 60,000 lbs    | 0.00         | 0.00         | 0.00     | 100.00 |
| Urban Bus                 | 0.20         | 0.00         | 50.00    | 50.00  |
| Motorcycle                | 1.60         | 68.80        | 31.20    | 0.00   |
| School Bus                | 0.10         | 0.00         | 0.00     | 100.00 |
| Motor Home                | 1.40         | 7.10         | 85.70    | 7.20   |

Travel Conditions

|                           | Residential |           |            | Commercial |          |          |
|---------------------------|-------------|-----------|------------|------------|----------|----------|
|                           | Home-Work   | Home-Shop | Home-Other | Commute    | Non-Work | Customer |
| Urban Trip Length (miles) | 11.5        | 4.9       | 6.0        | 10.3       | 5.5      | 5.5      |
| Rural Trip Length (miles) | 11.5        | 4.9       | 6.0        | 10.3       | 5.5      | 5.5      |
| Trip Speeds (mph)         | 35.0        | 40.0      | 40.0       | 40.0       | 40.0     | 40.0     |
| % of Trips - Residential  | 20.0        | 37.0      | 43.0       |            |          |          |

| % of Trips - Commercial (by land use) |  |      |      |
|---------------------------------------|--|------|------|
| Quality restaurant                    |  | 8.0  | 4.0  |
| Bank (with drive-through)             |  | 2.0  | 1.0  |
| General office building               |  | 35.0 | 17.5 |

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The landscape year changed from 2005 to 2010.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2010.

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URBEMIS 2002 For Windows 8.7.0

File Name: V:\AQNOISE DIVISION\Active Projects\Century City - Constellation Blvd\URBEMIS 8-5\Interim Year.urb  
 Project Name: 10131 Constellation Blvd - Proposed Uses  
 Project Location: South Coast Air Basin (Los Angeles area)  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day - Winter)

| AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated) |       |      |      |      |      |
|---|-------|------|------|------|------|
| Source  | ROG   | NOX  | CO   | SO2  | PM10 |
| Natural Gas   | 0.28  | 3.65 | 1.55 | 0    | 0.01 |
| Hearth  | 0.09  | 1.60 | 0.68 | 0.01 | 0.13 |
| Landscaping - No winter emissions                                   |       |      |      |      |      |
| Consumer Prdcts   | 14.19 | -    | -    | -    | -    |
| Architectural Coatings  | 4.66  | -    | -    | -    | -    |
| TOTALS (lbs/day, unmitigated)                                       | 19.23 | 5.25 | 2.23 | 0.01 | 0.14 |

UNMITIGATED OPERATIONAL EMISSIONS

|                           | ROG   | NOX   | CO     | SO2  | PM10  |
|---------------------------|-------|-------|--------|------|-------|
| Condo/townhouse high rise | 12.73 | 21.30 | 151.96 | 0.08 | 15.49 |
| TOTAL EMISSIONS (lbs/day) | 12.73 | 21.30 | 151.96 | 0.08 | 15.49 |

Does not include correction for passby trips.  
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2008 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

| Unit Type                 | Acreage | Trip Rate                    | No. Units | Total Trips |
|---------------------------|---------|------------------------------|-----------|-------------|
| Condo/townhouse high rise | 4.53    | 5.26 trips/dwelling unit     | 290.00    | 1,525.40    |
|                           |         | Sum of Total Trips           |           | 1,525.40    |
|                           |         | Total Vehicle Miles Traveled |           | 10,205.69   |

Vehicle Assumptions:

Fleet Mix:

| Vehicle Type              | Percent | Type | Non-Catalyst | Catalyst | Diesel |
|---------------------------|---------|------|--------------|----------|--------|
| Light Auto                | 55.00   |      | 1.60         | 98.00    | 0.40   |
| Light Truck < 3,750 lbs   | 15.00   |      | 2.70         | 95.30    | 2.00   |
| Light Truck 3,751- 5,750  | 16.20   |      | 1.20         | 97.50    | 1.30   |
| Med Truck 5,751- 8,500    | 7.20    |      | 1.40         | 95.80    | 2.80   |
| Lite-Heavy 8,501-10,000   | 1.10    |      | 0.00         | 81.80    | 18.20  |
| Lite-Heavy 10,001-14,000  | 0.40    |      | 0.00         | 50.00    | 50.00  |
| Med-Heavy 14,001-33,000   | 1.00    |      | 0.00         | 20.00    | 80.00  |
| Heavy-Heavy 33,001-60,000 | 0.90    |      | 0.00         | 11.10    | 88.90  |
| Line Haul > 60,000 lbs    | 0.00    |      | 0.00         | 0.00     | 100.00 |
| Urban Bus                 | 0.20    |      | 0.00         | 50.00    | 50.00  |
| Motorcycle                | 1.70    |      | 76.50        | 23.50    | 0.00   |
| School Bus                | 0.10    |      | 0.00         | 0.00     | 100.00 |
| Motor Home                | 1.20    |      | 8.30         | 83.30    | 8.40   |

Travel Conditions

|                           | Residential |           |            | Commercial |          |          |
|---------------------------|-------------|-----------|------------|------------|----------|----------|
|                           | Home-Work   | Home-Shop | Home-Other | Commute    | Non-Work | Customer |
| Urban Trip Length (miles) | 11.5        | 4.9       | 6.0        | 10.3       | 5.5      | 5.5      |
| Rural Trip Length (miles) | 11.5        | 4.9       | 6.0        | 10.3       | 5.5      | 5.5      |
| Trip Speeds (mph)         | 35.0        | 40.0      | 40.0       | 40.0       | 40.0     | 40.0     |
| % of Trips - Residential  | 20.0        | 37.0      | 43.0       |            |          |          |

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths  
 Phase 3 mitigation measure Off-Road Diesel Exhaust: Keep engines tuned  
 has been changed from off to on.

Changes made to the default values for Area

The natural gas residential percentage changed from 60 to 100.  
 The wood stove percentage changed from 35 to 0.  
 The wood fireplace percentage changed from 10 to 0.  
 The natural gas fireplace percentage changed from 55 to 100.  
 The landscape year changed from 2005 to 2010.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2008.  
 The operational winter selection item changed from 3 to 2.  
 The operational summer selection item changed from 8 to 7.



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URBEMIS 2002 For Windows 8.7.0

File Name: V:\AQNOISE DIVISION\Active Projects\Century City - Constellation Blvd\URBEMIS 8-5\Interim Year.urb  
 Project Name: 10131 Constellation Blvd - Proposed Uses  
 Project Location: South Coast Air Basin (Los Angeles area)  
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT  
 (Pounds/Day - Summer)

| AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated) |       |      |      |      |      |
|---|-------|------|------|------|------|
| Source  | ROG   | NOx  | CO   | SO2  | PM10 |
| Natural Gas   | 0.28  | 3.65 | 1.55 | 0    | 0.01 |
| Hearth - No summer emissions  |       |      |      |      |      |
| Landscaping   | 0.09  | 0.01 | 0.63 | 0.00 | 0.00 |
| Consumer Prdcts   | 14.19 | -    | -    | -    | -    |
| Architectural Coatings  | 4.66  | -    | -    | -    | -    |
| TOTALS(lbs/day,unmitigated)   | 19.22 | 3.65 | 2.18 | 0.00 | 0.01 |

UNMITIGATED OPERATIONAL EMISSIONS

|                           | ROG   | NOx   | CO     | SO2  | PM10  |
|---------------------------|-------|-------|--------|------|-------|
| Condo/townhouse high rise | 15.75 | 14.72 | 160.75 | 0.10 | 15.49 |
| TOTAL EMISSIONS (lbs/day) | 15.75 | 14.72 | 160.75 | 0.10 | 15.49 |

Does not include correction for passby trips.  
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2008 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

| Unit Type                 | Acreage | Trip Rate                    | No. Units | Total Trips |
|---------------------------|---------|------------------------------|-----------|-------------|
| Condo/townhouse high rise | 4.53    | 5.26 trips/dwelling unit     | 290.00    | 1,525.40    |
|                           |         | Sum of Total Trips           |           | 1,525.40    |
|                           |         | Total Vehicle Miles Traveled |           | 10,205.69   |

Vehicle Assumptions:

Fleet Mix:

| Vehicle Type                  | Percent Type | Non-Catalyst | Catalyst | Diesel |
|-------------------------------|--------------|--------------|----------|--------|
| Light Auto                    | 55.00        | 1.60         | 98.00    | 0.40   |
| Light Truck < 3,750 lbs       | 15.00        | 2.70         | 95.30    | 2.00   |
| Light Truck 3,751- 5,750 lbs  | 16.20        | 1.20         | 97.50    | 1.30   |
| Med Truck 5,751- 8,500 lbs    | 7.20         | 1.40         | 95.80    | 2.80   |
| Lite-Heavy 8,501-10,000 lbs   | 1.10         | 0.00         | 81.80    | 18.20  |
| Lite-Heavy 10,001-14,000 lbs  | 0.40         | 0.00         | 50.00    | 50.00  |
| Med-Heavy 14,001-33,000 lbs   | 1.00         | 0.00         | 20.00    | 80.00  |
| Heavy-Heavy 33,001-60,000 lbs | 0.90         | 0.00         | 11.10    | 88.90  |
| Line Haul > 60,000 lbs        | 0.00         | 0.00         | 0.00     | 100.00 |
| Urban Bus                     | 0.20         | 0.00         | 50.00    | 50.00  |
| Motorcycle                    | 1.70         | 76.50        | 23.50    | 0.00   |
| School Bus                    | 0.10         | 0.00         | 0.00     | 100.00 |
| Motor Home                    | 1.20         | 8.30         | 83.30    | 8.40   |

Travel Conditions

|                           | Residential |           |            | Commercial |          |          |
|---------------------------|-------------|-----------|------------|------------|----------|----------|
|                           | Home-Work   | Home-Shop | Home-Other | Commute    | Non-Work | Customer |
| Urban Trip Length (miles) | 11.5        | 4.9       | 6.0        | 10.3       | 5.5      | 5.5      |
| Rural Trip Length (miles) | 11.5        | 4.9       | 6.0        | 10.3       | 5.5      | 5.5      |
| Trip Speeds (mph)         | 35.0        | 40.0      | 40.0       | 40.0       | 40.0     | 40.0     |
| % of Trips - Residential  | 20.0        | 37.0      | 43.0       |            |          |          |

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths  
 Phase 3 mitigation measure Off-Road Diesel Exhaust: Keep engines tuned  
 has been changed from off to on.

Changes made to the default values for Area

The natural gas residential percentage changed from 60 to 100.  
 The wood stove percentage changed from 35 to 0.  
 The wood fireplace percentage changed from 10 to 0.  
 The natural gas fireplace percentage changed from 55 to 100.  
 The landscape year changed from 2005 to 2010.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2008.  
 The operational winter selection item changed from 3 to 2.  
 The operational summer selection item changed from 8 to 7.

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Future (Operations) - Winter.txt

URBEMIS 2002 For Windows 8.7.0

File Name: V:\AQNOISE DIVISION\Active Projects\Century City - Constellation Blvd\URBEMIS 8-5\Construction and Proposed UsesRevised Final.urb
Project Name: 10131 Constellation Blvd - Proposed Uses
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

Table with 6 columns: Source, ROG, NOx, CO, SO2, PM10. Rows include Natural Gas, Hearth, Landscaping, Consumer Prdcts, Architectural Coatings, and TOTALS.

UNMITIGATED OPERATIONAL EMISSIONS

Table with 6 columns: Source, ROG, NOx, CO, SO2, PM10. Rows include Condo/townhouse high rise and TOTAL EMISSIONS.

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Table with 5 columns: Unit Type, Acreage, Trip Rate, No. Units, Total Trips. Rows include Condo/townhouse high rise and summary totals.

Vehicle Assumptions:

Fleet Mix:

Table with 5 columns: Vehicle Type, Percent Type, Non-Catalyst, Catalyst, Diesel. Lists various vehicle types and their percentages.

Travel Conditions

Table with 5 columns: Residential, Commercial, Home-Work, Home-Shop, Home-Other. Lists travel conditions and percentages.

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Condominium/townhouse high rise have changed from the defaults 5.26/7.55 to 4.180124223/5.5

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths
Site Grading Fugitive Dust Emission Rate changed from 10 to 38.2
Site Grading Truck Haul Capacity (yds3) changed from 20 to 14
Phase 1 mitigation measure Off-Road Diesel Exhaust: Keep engines tuned has been changed from off to on.

Changes made to the default values for Area

The natural gas residential percentage changed from 60 to 100.
The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 100.
The landscape year changed from 2005 to 2010.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2010.

08/01/2005 1:28 PM

Future (Operations) - Summer.txt

URBEMIS 2002 For Windows 8.7.0

File Name: V:\AQNOISE DIVISION\Active Projects\Century City - Constellation Blvd\URBEMIS 8-5\Construction and Proposed UsesRevised Final.urb
Project Name: 10131 Constellation Blvd - Proposed Uses
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

Table with 6 columns: Source, ROG, NOx, CO, SO2, PM10. Rows include Natural Gas, Hearth - No summer emissions, Landscaping, Consumer Prdcts, Architectural Coatings, and TOTALS (lbs/day, unmitigated).

UNMITIGATED OPERATIONAL EMISSIONS

Table with 6 columns: ROG, NOx, CO, SO2, PM10. Rows include Condo/townhouse high rise and TOTAL EMISSIONS (lbs/day).

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Table with 5 columns: Unit Type, Acreage, Trip Rate, No. Units, Total Trips. Rows include Condo/townhouse high rise and Sum of Total Trips.

Vehicle Assumptions:

Fleet Mix:

Table with 5 columns: Vehicle Type, Percent Type, Non-Catalyst, Catalyst, Diesel. Rows include Light Auto, Light Truck, Med Truck, Lite-Heavy, Heavy-Heavy, Line Haul, Urban Bus, Motorcycle, School Bus, and Motor Home.

Travel Conditions

Table with 6 columns: Residential (Home-Work, Home-Shop, Home-Other), Commercial (Commute, Non-Work, Customer). Rows include Urban Trip Length, Rural Trip Length, Trip Speeds, and % of Trips - Residential.

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Condominium/townhouse high rise have changed from the defaults 5.26/7.55 to 4.180124223/5.5

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths
Site Grading Fugitive Dust Emission Rate changed from 10 to 38.2
Site Grading Truck Haul Capacity (yds3) changed from 20 to 14
Phase 1 mitigation measure Off-Road Diesel Exhaust: Keep engines tuned has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Rule 403 + additional watering has been changed from off to on.
Phase 3 mitigation measure Off-Road Diesel Exhaust: Keep engines in tune has been changed from off to on.
Phase 3 mitigation measure Off-Road Diesel Exhaust: Keep engines in tune has been changed from off to on.

Changes made to the default values for Area

The natural gas residential percentage changed from 60 to 100.
The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 100.
The landscape year changed from 2005 to 2010.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2010.

## Century City - 10131 Constellation Boulevard Residential

CALINE4 Modeling Results and Estimated Local 1-Hour Carbon Monoxide Concentrations (ppm)

| Projected Background 1-Hour CO Concentrations (ppm) <sup>a</sup> |                           |
|--|---------------------------|
| Monitoring Station: West LA                                      |                           |
| <u>Year</u>  | <u>1-Hr Concentration</u> |
| 2010   | 4.4                       |

| Intersection and Receptor Locations                | Future Without Project               |   | Future With Project                  |   |   |
|--|--------------------------------------|---|--------------------------------------|---|---|
|  | Traffic CO Contribution <sup>b</sup> | Estimated Local CO Concentration <sup>c</sup> | Traffic CO Contribution <sup>b</sup> | Estimated Local CO Concentration <sup>c</sup> | Exceedance of Significance Threshold <sup>d</sup> |
| AVENUE OF THE STARS AND CONSTELLATION BOULEVARD AM |                                      |   |                                      |   |   |
| NE   | 2.4                                  | 6.8   | 2.4                                  | 6.8   | NO  |
| SE   | 2.9                                  | 7.3   | 2.9                                  | 7.3   | NO  |
| SW   | 3.1                                  | 7.5   | 3.1                                  | 7.5   | NO  |
| NW   | 1.8                                  | 6.2   | 1.8                                  | 6.2   | NO  |
| AVENUE OF THE STARS AND CONSTELLATION BOULEVARD PM |                                      |   |                                      |   |   |
| NE   | 2.0                                  | 6.4   | 2.0                                  | 6.4   | NO  |
| SE   | 2.1                                  | 6.5   | 2.0                                  | 6.4   | NO  |
| SW   | 1.7                                  | 6.1   | 1.8                                  | 6.2   | NO  |
| NW   | 2.1                                  | 6.5   | 2.1                                  | 6.5   | NO  |

a Based on guidance provided by the [AQMD Air Quality Analysis Guidance Handbook](#)

b The 1-hour traffic contribution (ppm) is determined by inputting total traffic volumes into the CALINE4 model.

c The estimated local concentration is the traffic contribution + the background concentration.

d The California Ambient Air Quality Standard for 1-hour CO concentrations is 20 ppm.

## Century City - 10131 Constellation Boulevard Residential

CALINE4 Modeling Results and Estimated Local 8-Hour Carbon Monoxide Concentrations (ppm)

|  |                           |                                   |
|--|---------------------------|-----------------------------------|
| Projected Background 8-Hour CO Concentrations (ppm) <sup>a</sup> |                           | Average Persistence Factor = 0.70 |
| Monitoring Station: West LA                                      |                           |                                   |
| Year<br>2010   | 8-Hr Concentration<br>2.8 |                                   |

| Intersection and Receptor Locations                       | Future Without Project               |   | Future With Project                  |   |   |
|---|--------------------------------------|---|--------------------------------------|---|---|
|   | Traffic CO Contribution <sup>b</sup> | Estimated Local CO Concentration <sup>c</sup> | Traffic CO Contribution <sup>b</sup> | Estimated Local CO Concentration <sup>c</sup> | Exceedance of Significance Threshold <sup>d</sup> |
| <b>AVENUE OF THE STARS AND CONSTELLATION BOULEVARD AM</b> |                                      |   |                                      |   |   |
| NE  | 1.5                                  | 4.3   | 1.5                                  | 4.3   | NO  |
| SE  | 1.5                                  | 4.3   | 1.5                                  | 4.3   | NO  |
| SW  | 1.5                                  | 4.3   | 1.5                                  | 4.3   | NO  |
| NW  | 1.1                                  | 3.9   | 1.1                                  | 3.9   | NO  |
| <b>AVENUE OF THE STARS AND CONSTELLATION BOULEVARD PM</b> |                                      |   |                                      |   |   |
| NE  | 1.1                                  | 3.9   | 1.1                                  | 3.9   | NO  |
| SE  | 1.1                                  | 3.9   | 1.1                                  | 3.9   | NO  |
| SW  | 1.2                                  | 4.0   | 1.2                                  | 4.0   | NO  |
| NW  | 1.2                                  | 4.0   | 1.1                                  | 3.9   | NO  |

a Based on guidance provided by the AQMD Air Quality Analysis Guidance Handbook.

b The persistence factor is calculated as recommended in Table B.15 in the [Transportation Project-Level Carbon Monoxide Protocol](#) (Institute of Transportation Studies, UC Davis, Revised 1997). This is a generalized persistence factor likely to provide a conservative estimate in most situations.

c The estimated local concentration is the traffic contribution + the background concentration.

d The California Ambient Air Quality Standard for 8-hour CO concentrations is 9 ppm.

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: AVENUE OF THE STARS AND CONSTELLATION  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (M)  
 BRG= WORST CASE              VD= .0 CM/S  
 CLAS= 7 (G)                    VS= .0 CM/S  
 MIXH= 1000. M                 AMB= .0 PPM  
 SIGTH= 5. DEGREES            TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | * X1 | * Y1 | * X2 | * Y2 | * TYPE | VPH  | EF (G/MI) | H (M) | W (M) |
|------------------|------|------|------|------|--------|------|-----------|-------|-------|
| A. NF            | 11   | -450 | 11   | -150 | AG     | 2370 | 3.5       | .0    | 15.0  |
| B. NA            | 11   | -150 | 11   | 0    | AG     | 1982 | 5.3       | .0    | 18.0  |
| C. ND            | 11   | 0    | 11   | 150  | AG     | 1370 | 3.9       | .0    | 9.9   |
| D. NE            | 11   | 150  | 11   | 450  | AG     | 1370 | 3.5       | .0    | 15.0  |
| E. SF            | -9   | 450  | -9   | 150  | AG     | 1682 | 3.5       | .0    | 19.5  |
| F. SA            | -9   | 150  | -9   | 0    | AG     | 1045 | 5.0       | .0    | 22.5  |
| G. SD            | -9   | 0    | -9   | -150 | AG     | 875  | 3.8       | .0    | 13.5  |
| H. SE            | -9   | -150 | -9   | -450 | AG     | 875  | 3.5       | .0    | 19.5  |
| I. WF            | 450  | 7    | 150  | 7    | AG     | 328  | 3.5       | .0    | 19.5  |
| J. WA            | 150  | 7    | 0    | 7    | AG     | 245  | 7.7       | .0    | 18.0  |
| K. WD            | 0    | 7    | -150 | 7    | AG     | 810  | 6.3       | .0    | 13.5  |
| L. WE            | -150 | 7    | -450 | 7    | AG     | 810  | 3.5       | .0    | 19.5  |
| M. EF            | -450 | -9   | -150 | -9   | AG     | 718  | 3.5       | .0    | 15.0  |
| N. EA            | -150 | -9   | 0    | -9   | AG     | 613  | 7.7       | .0    | 13.5  |
| O. ED            | 0    | -9   | 150  | -9   | AG     | 2043 | 8.6       | .0    | 9.9   |
| P. EE            | 150  | -9   | 450  | -9   | AG     | 2043 | 3.5       | .0    | 15.0  |
| Q. NL            | 0    | 0    | 9    | -150 | AG     | 388  | 5.0       | .0    | 9.9   |
| R. SL            | 0    | 0    | -5   | 150  | AG     | 637  | 5.2       | .0    | 9.9   |
| S. WL            | 0    | 0    | 150  | 2    | AG     | 83   | 7.7       | .0    | 9.9   |
| T. EL            | 0    | 0    | -150 | -7   | AG     | 105  | 7.7       | .0    | 9.9   |

III. RECEPTOR LOCATIONS

| RECEPTOR | * X | * Y | * Z |
|----------|-----|-----|-----|
| 1. NE3   | 19  | 17  | 1.8 |
| 2. SE3   | 19  | -17 | 1.8 |
| 3. SW3   | -19 | -17 | 1.8 |
| 4. NW3   | -19 | 17  | 1.8 |
| 5. NE7   | 23  | 20  | 1.8 |
| 6. SE7   | 23  | -20 | 1.8 |
| 7. SW7   | -23 | -20 | 1.8 |
| 8. NW7   | -23 | 20  | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | * BRG (DEG) | * PRED CONC (PPM) | * A | * B | * C | * D | * E | * F | * G | * H |
|----------|-------------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. NE3   | 184.        | 2.4               | .3  | 1.3 | .0  | .0  | .0  | .0  | .0  | .1  |
| 2. SE3   | 352.        | 2.9               | .0  | .5  | .7  | .0  | .2  | .1  | .0  | .0  |
| 3. SW3   | 84.         | 3.1               | .0  | .3  | .0  | .0  | .0  | .0  | .2  | .0  |
| 4. NW3   | 128.        | 1.8               | .0  | .3  | .0  | .0  | .0  | .3  | .0  | .0  |
| 5. NE7   | 186.        | 2.1               | .2  | 1.0 | .0  | .0  | .0  | .0  | .0  | .2  |
| 6. SE7   | 346.        | 2.2               | .0  | .3  | .4  | .0  | .0  | .2  | .0  | .0  |
| 7. SW7   | 81.         | 2.2               | .0  | .3  | .0  | .0  | .0  | .0  | .2  | .0  |
| 8. NW7   | 131.        | 1.6               | .0  | .3  | .0  | .0  | .0  | .3  | .0  | .0  |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | * I | * J | * K | * L | * M | * N | * O | * P | * Q | * R | * S | * T |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. NE3   | .0  | .1  | .0  | .0  | .0  | .0  | .5  | .0  | .1  | .0  | .0  | .0  |
| 2. SE3   | .0  | .0  | .0  | .0  | .0  | .0  | 1.0 | .0  | .0  | .1  | .0  | .0  |
| 3. SW3   | .0  | .0  | .0  | .0  | .0  | .2  | 2.0 | .1  | .0  | .0  | .0  | .0  |
| 4. NW3   | .0  | .0  | .3  | .0  | .0  | .0  | .6  | .0  | .0  | .1  | .0  | .0  |
| 5. NE7   | .0  | .0  | .0  | .0  | .0  | .0  | .5  | .0  | .0  | .0  | .0  | .0  |
| 6. SE7   | .0  | .0  | .0  | .0  | .0  | .0  | .8  | .0  | .0  | .2  | .0  | .0  |
| 7. SW7   | .0  | .0  | .0  | .0  | .0  | .0  | 1.4 | .0  | .0  | .0  | .0  | .0  |
| 8. NW7   | .0  | .0  | .3  | .0  | .0  | .0  | .6  | .0  | .0  | .0  | .0  | .0  |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: AVENUE OF THE STARS AND CONSTELLATION  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (M)  
 BRG= WORST CASE              VD= .0 CM/S  
 CLAS= 7 (G)                      VS= .0 CM/S  
 MIXH= 1000. M                  AMB= .0 PPM  
 SIGTH= 5. DEGREES              TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | * X1 | Y1   | X2   | Y2   | * TYPE | VPH  | EF (G/MI) | H (M) | W (M) |
|------------------|------|------|------|------|--------|------|-----------|-------|-------|
| A. NF            | 11   | -450 | 11   | -150 | * AG   | 2344 | 3.5       | .0    | 15.0  |
| B. NA            | 11   | -150 | 11   | 0    | * AG   | 1956 | 5.3       | .0    | 18.0  |
| C. ND            | 11   | 0    | 11   | 150  | * AG   | 1331 | 3.9       | .0    | 9.9   |
| D. NE            | 11   | 150  | 11   | 450  | * AG   | 1331 | 3.5       | .0    | 15.0  |
| E. SF            | -9   | 450  | -9   | 150  | * AG   | 1682 | 3.5       | .0    | 19.5  |
| F. SA            | -9   | 150  | -9   | 0    | * AG   | 1045 | 5.0       | .0    | 22.5  |
| G. SD            | -9   | 0    | -9   | -150 | * AG   | 916  | 3.8       | .0    | 13.5  |
| H. SE            | -9   | -150 | -9   | -450 | * AG   | 916  | 3.5       | .0    | 19.5  |
| I. WF            | 450  | 7    | 150  | 7    | * AG   | 375  | 3.5       | .0    | 19.5  |
| J. WA            | 150  | 7    | 0    | 7    | * AG   | 251  | 7.7       | .0    | 18.0  |
| K. WD            | 0    | 7    | -150 | 7    | * AG   | 819  | 6.3       | .0    | 13.5  |
| L. WE            | -150 | 7    | -450 | 7    | * AG   | 819  | 3.5       | .0    | 19.5  |
| M. EF            | -450 | -9   | -150 | -9   | * AG   | 714  | 3.5       | .0    | 15.0  |
| N. EA            | -150 | -9   | 0    | -9   | * AG   | 617  | 7.7       | .0    | 13.5  |
| O. ED            | 0    | -9   | 150  | -9   | * AG   | 2049 | 8.6       | .0    | 9.9   |
| P. EE            | 150  | -9   | 450  | -9   | * AG   | 2049 | 3.5       | .0    | 15.0  |
| Q. NL            | 0    | 0    | 9    | -150 | * AG   | 388  | 5.0       | .0    | 9.9   |
| R. SL            | 0    | 0    | -5   | 150  | * AG   | 637  | 5.2       | .0    | 9.9   |
| S. WL            | 0    | 0    | 150  | 2    | * AG   | 124  | 7.7       | .0    | 9.9   |
| T. EL            | 0    | 0    | -150 | -7   | * AG   | 97   | 7.7       | .0    | 9.9   |

III. RECEPTOR LOCATIONS

| RECEPTOR | * X | Y   | Z   |
|----------|-----|-----|-----|
| 1. NE3   | 19  | 17  | 1.8 |
| 2. SE3   | 19  | -17 | 1.8 |
| 3. SW3   | -19 | -17 | 1.8 |
| 4. NW3   | -19 | 17  | 1.8 |
| 5. NE7   | 23  | 20  | 1.8 |
| 6. SE7   | 23  | -20 | 1.8 |
| 7. SW7   | -23 | -20 | 1.8 |
| 8. NW7   | -23 | 20  | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | * BRG (DEG) | * PRED CONC (PPM) | A  | B   | C  | D  | E  | F  | G  | H  |
|----------|-------------|-------------------|----|-----|----|----|----|----|----|----|
| 1. NE3   | 184.        | 2.4               | .3 | 1.3 | .0 | .0 | .0 | .0 | .0 | .1 |
| 2. SE3   | 352.        | 2.9               | .0 | .5  | .7 | .0 | .2 | .1 | .0 | .0 |
| 3. SW3   | 84.         | 3.1               | .0 | .3  | .0 | .0 | .0 | .0 | .2 | .0 |
| 4. NW3   | 127.        | 1.8               | .0 | .3  | .0 | .0 | .0 | .3 | .0 | .0 |
| 5. NE7   | 186.        | 2.1               | .2 | 1.0 | .0 | .0 | .0 | .0 | .0 | .2 |
| 6. SE7   | 346.        | 2.2               | .0 | .3  | .4 | .0 | .0 | .2 | .0 | .0 |
| 7. SW7   | 81.         | 2.2               | .0 | .3  | .0 | .0 | .0 | .0 | .2 | .0 |
| 8. NW7   | 130.        | 1.6               | .0 | .3  | .0 | .0 | .0 | .3 | .0 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | * I | J  | K  | L  | M  | N  | O   | P  | Q  | R  | S  | T  |
|----------|-----|----|----|----|----|----|-----|----|----|----|----|----|
| 1. NE3   | .0  | .1 | .0 | .0 | .0 | .0 | .5  | .0 | .1 | .0 | .0 | .0 |
| 2. SE3   | .0  | .0 | .0 | .0 | .0 | .0 | 1.0 | .0 | .0 | .1 | .0 | .0 |
| 3. SW3   | .0  | .0 | .0 | .0 | .0 | .2 | 2.0 | .1 | .0 | .0 | .0 | .0 |
| 4. NW3   | .0  | .0 | .3 | .0 | .0 | .0 | .6  | .0 | .0 | .1 | .0 | .0 |
| 5. NE7   | .0  | .0 | .0 | .0 | .0 | .0 | .5  | .0 | .0 | .0 | .0 | .0 |
| 6. SE7   | .0  | .0 | .0 | .0 | .0 | .0 | .8  | .0 | .0 | .2 | .0 | .0 |
| 7. SW7   | .0  | .0 | .0 | .0 | .0 | .0 | 1.4 | .0 | .0 | .0 | .0 | .0 |
| 8. NW7   | .0  | .0 | .3 | .0 | .0 | .0 | .6  | .0 | .0 | .0 | .0 | .0 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: AVENUE OF THE STARS AND CONSTELLATION  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (M)  
 BRG= WORST CASE              VD= .0 CM/S  
 CLAS= 7 (G)                    VS= .0 CM/S  
 MIXH= 1000. M                AMB= .0 PPM  
 SIGTH= 5. DEGREES            TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | * X1 | * Y1 | * X2 | * Y2 | * TYPE | VPH  | EF (G/MI) | H (M) | W (M) |
|------------------|------|------|------|------|--------|------|-----------|-------|-------|
| A. NF            | 11   | -450 | 11   | -150 | AG     | 1321 | 3.5       | .0    | 15.0  |
| B. NA            | 11   | -150 | 11   | 0    | AG     | 974  | 5.7       | .0    | 18.0  |
| C. ND            | 11   | 0    | 11   | 150  | AG     | 1555 | 4.6       | .0    | 9.9   |
| D. NE            | 11   | 150  | 11   | 450  | AG     | 1555 | 3.5       | .0    | 15.0  |
| E. SF            | -9   | 450  | -9   | 150  | AG     | 1613 | 3.5       | .0    | 19.5  |
| F. SA            | -9   | 150  | -9   | 0    | AG     | 1464 | 5.9       | .0    | 22.5  |
| G. SD            | -9   | 0    | -9   | -150 | AG     | 1872 | 4.1       | .0    | 13.5  |
| H. SE            | -9   | -150 | -9   | -450 | AG     | 1872 | 3.5       | .0    | 19.5  |
| I. WF            | 450  | 7    | 150  | 7    | AG     | 1274 | 3.5       | .0    | 19.5  |
| J. WA            | 150  | 7    | 0    | 7    | AG     | 1026 | 6.5       | .0    | 18.0  |
| K. WD            | 0    | 7    | -150 | 7    | AG     | 1246 | 4.2       | .0    | 13.5  |
| L. WE            | -150 | 7    | -450 | 7    | AG     | 1246 | 3.5       | .0    | 19.5  |
| M. EF            | -450 | -9   | -150 | -9   | AG     | 944  | 3.5       | .0    | 15.0  |
| N. EA            | -150 | -9   | 0    | -9   | AG     | 664  | 6.5       | .0    | 13.5  |
| O. ED            | 0    | -9   | 150  | -9   | AG     | 479  | 4.1       | .0    | 9.9   |
| P. EE            | 150  | -9   | 450  | -9   | AG     | 479  | 3.5       | .0    | 15.0  |
| Q. NL            | 0    | 0    | 9    | -150 | AG     | 347  | 5.7       | .0    | 9.9   |
| R. SL            | 0    | 0    | -5   | 150  | AG     | 149  | 5.7       | .0    | 9.9   |
| S. WL            | 0    | 0    | 150  | 2    | AG     | 248  | 6.5       | .0    | 9.9   |
| T. EL            | 0    | 0    | -150 | -7   | AG     | 280  | 6.5       | .0    | 9.9   |

III. RECEPTOR LOCATIONS

| RECEPTOR | * X | * Y | * Z |
|----------|-----|-----|-----|
| 1. NE3   | 19  | 17  | 1.8 |
| 2. SE3   | 19  | -17 | 1.8 |
| 3. SW3   | -19 | -17 | 1.8 |
| 4. NW3   | -19 | 17  | 1.8 |
| 5. NE7   | 23  | 20  | 1.8 |
| 6. SE7   | 23  | -20 | 1.8 |
| 7. SW7   | -23 | -20 | 1.8 |
| 8. NW7   | -23 | 20  | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

| RECEPTOR | * BRG (DEG) | * PRED CONC (PPM) | * A | * B | * C | * D | * E | * F | * G | * H |
|----------|-------------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. NE3   | 261.        | 2.0               | .0  | .0  | .4  | .0  | .0  | .3  | .0  | .0  |
| 2. SE3   | 353.        | 2.1               | .0  | .3  | .9  | .0  | .3  | .2  | .0  | .0  |
| 3. SW3   | 80.         | 1.7               | .0  | .2  | .0  | .0  | .0  | .0  | .4  | .0  |
| 4. NW3   | 173.        | 2.1               | .2  | .0  | .0  | .0  | .0  | .3  | .9  | .0  |
| 5. NE7   | 255.        | 1.5               | .0  | .0  | .3  | .0  | .0  | .3  | .0  | .0  |
| 6. SE7   | 346.        | 1.6               | .0  | .2  | .6  | .0  | .0  | .4  | .0  | .0  |
| 7. SW7   | 7.          | 1.7               | .0  | .0  | .0  | .3  | .1  | .8  | .0  | .0  |
| 8. NW7   | 165.        | 1.7               | .0  | .2  | .0  | .0  | .0  | .2  | .6  | .0  |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | * I | * J | * K | * L | * M | * N | * O | * P | * Q | * R | * S | * T |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. NE3   | .0  | .3  | .6  | .0  | .1  | .2  | .0  | .0  | .0  | .0  | .0  | .1  |
| 2. SE3   | .0  | .2  | .0  | .0  | .0  | .0  | .1  | .0  | .0  | .0  | .0  | .0  |
| 3. SW3   | .0  | .4  | .0  | .0  | .0  | .2  | .2  | .0  | .0  | .0  | .0  | .1  |
| 4. NW3   | .0  | .0  | .3  | .0  | .0  | .2  | .0  | .0  | .0  | .0  | .0  | .1  |
| 5. NE7   | .0  | .0  | .4  | .0  | .0  | .0  | .1  | .0  | .0  | .0  | .0  | .0  |
| 6. SE7   | .0  | .2  | .0  | .0  | .0  | .0  | .1  | .0  | .0  | .0  | .0  | .0  |
| 7. SW7   | .0  | .0  | .2  | .0  | .0  | .2  | .0  | .0  | .0  | .0  | .0  | .0  |
| 8. NW7   | .0  | .0  | .2  | .0  | .0  | .1  | .0  | .0  | .1  | .0  | .0  | .0  |



CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: AVENUE OF THE STARS AND CONSTELLATION  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S                      Z0= 100. CM                      ALT= 0. (M)  
 BRG= WORST CASE              VD= .0 CM/S  
 CLAS= 7 (G)                      VS= .0 CM/S  
 MIXH= 1000. M                      AMB= .0 PPM  
 SIGTH= 5. DEGREES              TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

| LINK DESCRIPTION | * X1 | * Y1 | * X2 | * Y2 | * TYPE | VPH  | EF (G/MI) | H (M) | W (M) |
|------------------|------|------|------|------|--------|------|-----------|-------|-------|
| A. NF            | 11   | -450 | 11   | -150 | * AG   | 1257 | 3.5       | .0    | 15.0  |
| B. NA            | 11   | -150 | 11   | 0    | * AG   | 910  | 5.7       | .0    | 18.0  |
| C. ND            | 11   | 0    | 11   | 150  | * AG   | 1432 | 4.3       | .0    | 9.9   |
| D. NE            | 11   | 150  | 11   | 450  | * AG   | 1432 | 3.5       | .0    | 15.0  |
| E. SF            | -9   | 450  | -9   | 150  | * AG   | 1618 | 3.5       | .0    | 19.5  |
| F. SA            | -9   | 150  | -9   | 0    | * AG   | 1464 | 5.9       | .0    | 22.5  |
| G. SD            | -9   | 0    | -9   | -150 | * AG   | 1894 | 4.1       | .0    | 13.5  |
| H. SE            | -9   | -150 | -9   | -450 | * AG   | 1894 | 3.5       | .0    | 19.5  |
| I. WF            | 450  | 7    | 150  | 7    | * AG   | 1270 | 3.5       | .0    | 19.5  |
| J. WA            | 150  | 7    | 0    | 7    | * AG   | 1000 | 6.5       | .0    | 18.0  |
| K. WD            | 0    | 7    | -150 | 7    | * AG   | 1251 | 4.2       | .0    | 13.5  |
| L. WE            | -150 | 7    | -450 | 7    | * AG   | 1251 | 3.5       | .0    | 19.5  |
| M. EF            | -450 | -9   | -150 | -9   | * AG   | 932  | 3.5       | .0    | 15.0  |
| N. EA            | -150 | -9   | 0    | -9   | * AG   | 669  | 6.5       | .0    | 13.5  |
| O. ED            | 0    | -9   | 150  | -9   | * AG   | 500  | 4.1       | .0    | 9.9   |
| P. EE            | 150  | -9   | 450  | -9   | * AG   | 500  | 3.5       | .0    | 15.0  |
| Q. NL            | 0    | 0    | 9    | -150 | * AG   | 347  | 5.7       | .0    | 9.9   |
| R. SL            | 0    | 0    | -5   | 150  | * AG   | 154  | 5.7       | .0    | 9.9   |
| S. WL            | 0    | 0    | 150  | 2    | * AG   | 270  | 6.5       | .0    | 9.9   |
| T. EL            | 0    | 0    | -150 | -7   | * AG   | 263  | 6.5       | .0    | 9.9   |

III. RECEPTOR LOCATIONS

| RECEPTOR | * X | * Y | * Z |
|----------|-----|-----|-----|
| 1. NE3   | 19  | 17  | 1.8 |
| 2. SE3   | 19  | -17 | 1.8 |
| 3. SW3   | -19 | -17 | 1.8 |
| 4. NW3   | -19 | 17  | 1.8 |
| 5. NE7   | 23  | 20  | 1.8 |
| 6. SE7   | 23  | -20 | 1.8 |
| 7. SW7   | -23 | -20 | 1.8 |
| 8. NW7   | -23 | 20  | 1.8 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

| RECEPTOR | * BRG (DEG) | * PRED CONC (PPM) | * A | * B | * C | CONC/LINK (PPM) |    |    |    |    |
|----------|-------------|-------------------|-----|-----|-----|-----------------|----|----|----|----|
|          |             |                   |     |     |     | D               | E  | F  | G  | H  |
| 1. NE3   | 261.        | 2.0               | .0  | .0  | .4  | .0              | .0 | .3 | .0 | .0 |
| 2. SE3   | 353.        | 2.0               | .0  | .2  | .8  | .0              | .3 | .2 | .0 | .0 |
| 3. SW3   | 80.         | 1.8               | .0  | .2  | .0  | .0              | .0 | .0 | .4 | .0 |
| 4. NW3   | 173.        | 2.1               | .2  | .0  | .0  | .0              | .0 | .3 | .9 | .0 |
| 5. NE7   | 187.        | 1.6               | .0  | .6  | .0  | .0              | .0 | .0 | .0 | .3 |
| 6. SE7   | 346.        | 1.5               | .0  | .2  | .5  | .0              | .0 | .4 | .0 | .0 |
| 7. SW7   | 7.          | 1.7               | .0  | .0  | .0  | .2              | .1 | .8 | .0 | .0 |
| 8. NW7   | 165.        | 1.6               | .0  | .2  | .0  | .0              | .0 | .2 | .6 | .0 |

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

| RECEPTOR | * I | * J | * K | * L | * M | * N | * O | * P | * Q | * R | * S | * T |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. NE3   | .0  | .3  | .6  | .0  | .1  | .2  | .0  | .0  | .0  | .0  | .0  | .1  |
| 2. SE3   | .0  | .2  | .0  | .0  | .0  | .0  | .1  | .0  | .0  | .0  | .0  | .0  |
| 3. SW3   | .0  | .3  | .0  | .0  | .0  | .2  | .3  | .0  | .0  | .0  | .2  | .0  |
| 4. NW3   | .0  | .0  | .3  | .0  | .0  | .2  | .0  | .0  | .0  | .0  | .0  | .0  |
| 5. NE7   | .0  | .3  | .0  | .0  | .0  | .0  | .0  | .0  | .1  | .0  | .0  | .0  |
| 6. SE7   | .0  | .2  | .0  | .0  | .0  | .0  | .1  | .0  | .0  | .0  | .0  | .0  |
| 7. SW7   | .0  | .0  | .2  | .0  | .0  | .2  | .0  | .0  | .0  | .0  | .0  | .0  |
| 8. NW7   | .0  | .0  | .3  | .0  | .0  | .1  | .0  | .0  | .1  | .0  | .0  | .0  |

Title : Los Angeles County Avg 2010 Winter Default Title  
 Version : Emfac2002 V2.2 Apr 23 2003  
 Run Date : 12/17/04 08:16:01  
 Scen Year: 2010 -- Model Years: 1965 to 2010  
 Season : Winter  
 Area : Los Angeles County

\*\*\*\*\*  
 Year:2010 -- Model Years 1965 to 2010 Inclusive -- Winter  
 Emfac2002 Emission Factors: V2.2 Apr 23 2003

County Average

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Carbon Monoxide Temperature: 60F Relative Humidity: 50%

| Speed<br>MPH | LDA   | LDT    | MDT    | HDT    | UBUS   | MCY    | ALL   |
|--------------|-------|--------|--------|--------|--------|--------|-------|
| 3            | 6.120 | 10.488 | 10.547 | 18.462 | 45.705 | 34.955 | 8.557 |
| 4            | 5.904 | 10.042 | 10.133 | 18.462 | 45.705 | 34.955 | 8.274 |
| 5            | 5.702 | 9.629  | 9.750  | 18.462 | 45.705 | 34.955 | 8.012 |
| 6            | 5.513 | 9.245  | 9.306  | 16.990 | 41.846 | 33.538 | 7.664 |
| 7            | 5.336 | 8.889  | 8.897  | 15.668 | 38.399 | 32.241 | 7.343 |
| 8            | 5.169 | 8.558  | 8.520  | 14.478 | 35.316 | 31.054 | 7.046 |
| 9            | 5.013 | 8.249  | 8.172  | 13.407 | 32.554 | 29.969 | 6.772 |
| 10           | 4.865 | 7.961  | 7.850  | 12.441 | 30.076 | 28.976 | 6.518 |
| 11           | 4.726 | 7.693  | 7.552  | 11.568 | 27.849 | 28.070 | 6.282 |
| 12           | 4.595 | 7.441  | 7.275  | 10.779 | 25.846 | 27.244 | 6.063 |
| 13           | 4.471 | 7.206  | 7.018  | 10.064 | 24.040 | 26.492 | 5.858 |
| 14           | 4.354 | 6.986  | 6.778  | 9.416  | 22.411 | 25.809 | 5.668 |
| 15           | 4.243 | 6.779  | 6.555  | 8.829  | 20.940 | 25.191 | 5.490 |
| 16           | 4.138 | 6.585  | 6.347  | 8.295  | 19.609 | 24.633 | 5.323 |
| 17           | 4.038 | 6.402  | 6.153  | 7.809  | 18.405 | 24.133 | 5.167 |
| 18           | 3.943 | 6.230  | 5.972  | 7.367  | 17.313 | 23.687 | 5.021 |
| 19           | 3.852 | 6.068  | 5.802  | 6.964  | 16.322 | 23.293 | 4.884 |
| 20           | 3.766 | 5.916  | 5.643  | 6.597  | 15.423 | 22.947 | 4.756 |
| 21           | 3.685 | 5.772  | 5.494  | 6.263  | 14.606 | 22.649 | 4.635 |
| 22           | 3.607 | 5.637  | 5.354  | 5.957  | 13.864 | 22.397 | 4.521 |
| 23           | 3.532 | 5.509  | 5.223  | 5.678  | 13.189 | 22.189 | 4.414 |
| 24           | 3.462 | 5.389  | 5.101  | 5.423  | 12.575 | 22.023 | 4.313 |
| 25           | 3.394 | 5.275  | 4.985  | 5.191  | 12.016 | 21.900 | 4.219 |
| 26           | 3.330 | 5.167  | 4.877  | 4.978  | 11.508 | 21.819 | 4.129 |
| 27           | 3.268 | 5.066  | 4.776  | 4.784  | 11.046 | 21.779 | 4.045 |
| 28           | 3.210 | 4.970  | 4.681  | 4.607  | 10.627 | 21.780 | 3.966 |
| 29           | 3.154 | 4.880  | 4.592  | 4.446  | 10.246 | 21.822 | 3.892 |
| 30           | 3.100 | 4.796  | 4.508  | 4.300  | 9.902  | 21.907 | 3.822 |
| 31           | 3.049 | 4.716  | 4.430  | 4.166  | 9.590  | 22.034 | 3.756 |
| 32           | 3.001 | 4.641  | 4.357  | 4.045  | 9.309  | 22.205 | 3.694 |
| 33           | 2.954 | 4.570  | 4.289  | 3.936  | 9.056  | 22.420 | 3.636 |
| 34           | 2.910 | 4.505  | 4.226  | 3.838  | 8.830  | 22.682 | 3.582 |
| 35           | 2.869 | 4.443  | 4.167  | 3.750  | 8.629  | 22.993 | 3.531 |
| 36           | 2.829 | 4.386  | 4.113  | 3.671  | 8.451  | 23.353 | 3.484 |
| 37           | 2.791 | 4.333  | 4.064  | 3.602  | 8.296  | 23.767 | 3.440 |
| 38           | 2.756 | 4.284  | 4.018  | 3.541  | 8.162  | 24.237 | 3.400 |
| 39           | 2.722 | 4.238  | 3.977  | 3.488  | 8.047  | 24.765 | 3.362 |
| 40           | 2.690 | 4.197  | 3.940  | 3.443  | 7.953  | 25.357 | 3.328 |



APPENDIX E  
NOISE CALCULATION WORKSHEETS

# **10131 Constellation Boulevard**

## **Draft Environmental Impact Report**

Noise Assessment Files

Provided by PCR Services Corporation

October 2005

- E-1 Noise Monitoring Data
- E-2 TENS Analysis (Roadway Noise)



# Appendix E-1

- Noise Monitoring Data



Noise Measurement Data

**Project:** Century City - 10131 Constellation Blvd Location: Project Site (East)

|                                      |  | Start Date and Time |           |           |             |
|--------------------------------------|--|---------------------|-----------|-----------|-------------|
|                                      |  | 6/13/2005           | 6/14/2005 | 6/15/2005 | 6/16/2005   |
| 12:00:00 AM                          |  |                     | 60.20     | 55.33     | 57.08       |
| 1:00:00 AM                           |  |                     | 62.92     | 55.30     | 57.23       |
| 2:00:00 AM                           |  |                     | 61.50     | 55.79     | 58.91       |
| 3:00:00 AM                           |  |                     | 65.48     | 56.32     | 60.02       |
| 4:00:00 AM                           |  |                     | 61.60     | 56.21     | 61.60       |
| 5:00:00 AM                           |  |                     | 64.26     | 58.50     | 64.26       |
| 6:00:00 AM                           |  |                     | 64.76     | 59.95     | 64.76       |
| 7:00:00 AM                           |  |                     | 65.60     | 60.59     | 65.60       |
| 8:00:00 AM                           |  | 60.36               | 66.34     | 61.46     | 66.34       |
| 9:00:00 AM                           |  | 58.58               | 62.30     | 61.69     | 62.30       |
| 10:00:00 AM                          |  | 60.67               | 61.72     | 61.00     | 61.72       |
| 11:00:00 AM                          |  | 59.07               | 64.76     | 59.80     | 62.27       |
| 12:00:00 PM                          |  | 57.11               | 57.91     | 59.09     | 58.5        |
| 1:00:00 PM                           |  | 57.09               | 58.27     | 59.27     | 65.6        |
| 2:00:00 PM                           |  | 56.41               | 59.55     | 58.23     | 48.9        |
| 3:00:00 PM                           |  | 54.18               | 56.66     | 57.60     | 60.5        |
| 4:00:00 PM                           |  | 54.23               | 58.13     | 57.34     | 66.3        |
| 5:00:00 PM                           |  | 54.78               | 54.98     | 56.76     | 48.9        |
| 6:00:00 PM                           |  | 53.25               | 55.93     | 56.76     | 60.3        |
| 7:00:00 PM                           |  | 51.79               | 55.76     | 57.73     | 66.3        |
| 8:00:00 PM                           |  | 48.92               | 55.34     | 58.37     | 53.3        |
| 9:00:00 PM                           |  | 57.19               | 54.41     | 62.93     | 60.8        |
| 10:00:00 PM                          |  | 56.55               | 54.48     | 60.37     | 65.5        |
| 11:00:00 PM                          |  | 61.53               | 54.99     | 57.76     | 48.9        |
| <b>CNEL</b>                          |  |                     |           |           | <b>68.8</b> |
| L <sub>dn</sub>                      |  |                     |           |           | 68.7        |
| 24-hr Max.                           |  |                     |           |           | 65.6        |
| 24-hr Min.                           |  |                     |           |           | 48.9        |
| 24-hr Nighttime Average <sup>a</sup> |  |                     |           |           | 62.7        |
| 24-hr Nighttime Max                  |  |                     |           |           | 65.5        |
| 24-hr Nighttime Min                  |  |                     |           |           | 56.6        |
| 24-hr Daytime Average <sup>a</sup>   |  |                     |           |           | 58.5        |
| 24-hr Daytime Max                    |  |                     |           |           | 65.6        |
| 24-hr Daytime Min                    |  |                     |           |           | 48.9        |
| Total Period Average                 |  |                     |           |           | 60.5        |
| Total Period Max                     |  |                     |           |           | 66.3        |
| Total Period Min                     |  |                     |           |           | 48.9        |
| Total Period Daytime Average         |  |                     |           |           | 60.3        |
| Total Period Daytime Max             |  |                     |           |           | 66.3        |
| Total Period Daytime Min             |  |                     |           |           | 53.3        |
| Total Period Nighttime Average       |  |                     |           |           | 60.8        |
| Total Period Nighttime Max           |  |                     |           |           | 65.5        |
| Total Period Nighttime Min           |  |                     |           |           | 48.9        |

<sup>a</sup> Daytime hours are from 7:00 a.m. to 10:00 p.m., and nighttime hours are from 10:00 p.m. to 7:00 a.m.

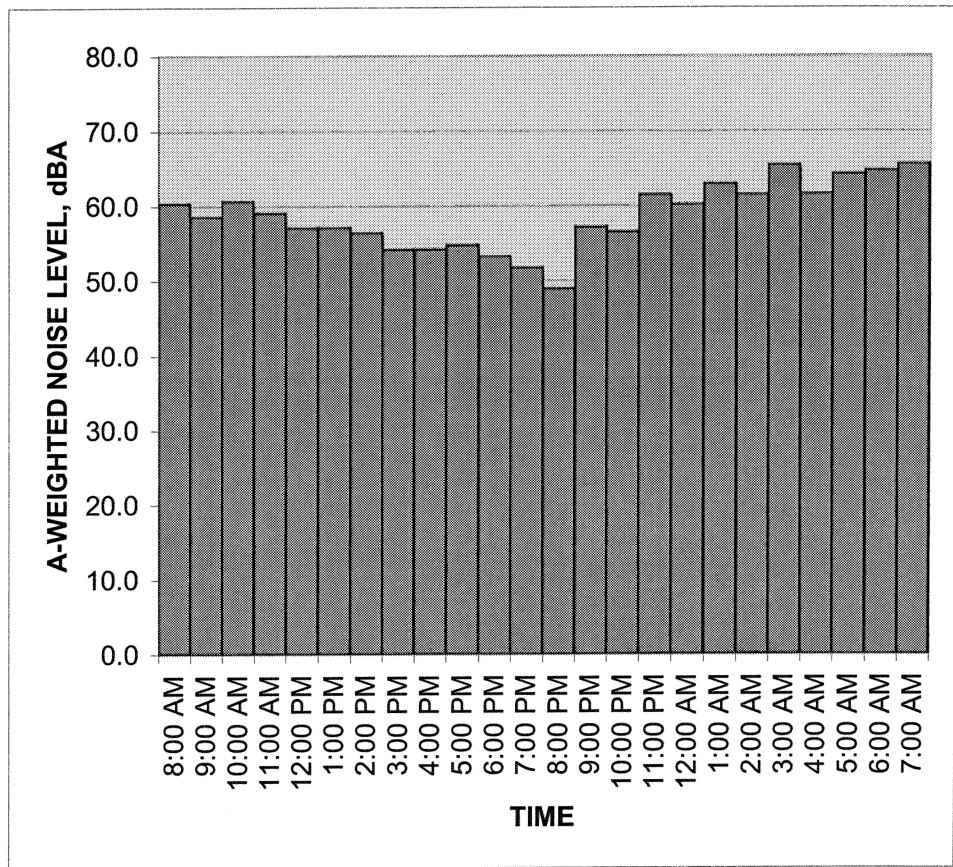


# Community Noise Equivalent Level, CNEL.

Project: Century City - 10131 Constellation Blvd  
 Location: Project Site (East)  
 Sources: Traffic Volumes

Date: June 13-14, 2005

| TIME                | HNL,<br>dB(A) |
|---------------------|---------------|
| 8:00 AM             | 60.4          |
| 9:00 AM             | 58.6          |
| 10:00 AM            | 60.7          |
| 11:00 AM            | 59.1          |
| 12:00 PM            | 57.1          |
| 1:00 PM             | 57.1          |
| 2:00 PM             | 56.4          |
| 3:00 PM             | 54.2          |
| 4:00 PM             | 54.2          |
| 5:00 PM             | 54.8          |
| 6:00 PM             | 53.3          |
| 7:00 PM             | 51.8          |
| 8:00 PM             | 48.9          |
| 9:00 PM             | 57.2          |
| 10:00 PM            | 56.6          |
| 11:00 PM            | 61.5          |
| 12:00 AM            | 60.2          |
| 1:00 AM             | 62.9          |
| 2:00 AM             | 61.5          |
| 3:00 AM             | 65.5          |
| 4:00 AM             | 61.6          |
| 5:00 AM             | 64.3          |
| 6:00 AM             | 64.8          |
| 7:00 AM             | 65.6          |
| <b>CNEL, dB(A):</b> | <b>68.8</b>   |



NOTES:

Noise Measurement Data

**Project:** Century City - 10131 Constellation Blvd **Location:** Project Site (East)

|                                      |  | Start Date and Time |           |           |             |
|--------------------------------------|--|---------------------|-----------|-----------|-------------|
|                                      |  | 6/13/2005           | 6/14/2005 | 6/15/2005 | 6/16/2005   |
| 12:00:00 AM                          |  |                     | 60.20     | 55.33     | 57.08       |
| 1:00:00 AM                           |  |                     | 62.92     | 55.30     | 57.23       |
| 2:00:00 AM                           |  |                     | 61.50     | 55.79     | 58.91       |
| 3:00:00 AM                           |  |                     | 65.48     | 56.32     | 60.02       |
| 4:00:00 AM                           |  |                     | 61.60     | 56.21     | 61.60       |
| 5:00:00 AM                           |  |                     | 64.26     | 58.50     | 64.26       |
| 6:00:00 AM                           |  |                     | 64.76     | 59.95     | 64.76       |
| 7:00:00 AM                           |  |                     | 65.60     | 60.59     | 65.60       |
| 8:00:00 AM                           |  | 60.36               | 66.34     | 61.46     | 66.34       |
| 9:00:00 AM                           |  | 58.58               | 62.30     | 61.69     | 62.30       |
| 10:00:00 AM                          |  | 60.67               | 61.72     | 61.00     | 61.72       |
| 11:00:00 AM                          |  | 59.07               | 64.76     | 59.80     | 62.27       |
| 12:00:00 PM                          |  | 57.11               | 57.91     | 59.09     |             |
| 1:00:00 PM                           |  | 57.09               | 58.27     | 59.27     |             |
| 2:00:00 PM                           |  | 56.41               | 59.55     | 58.23     |             |
| 3:00:00 PM                           |  | 54.18               | 56.66     | 57.60     |             |
| 4:00:00 PM                           |  | 54.23               | 58.13     | 57.34     |             |
| 5:00:00 PM                           |  | 54.78               | 54.98     | 56.76     |             |
| 6:00:00 PM                           |  | 53.25               | 55.93     | 56.76     |             |
| 7:00:00 PM                           |  | 51.79               | 55.76     | 57.73     |             |
| 8:00:00 PM                           |  | 48.92               | 55.34     | 58.37     |             |
| 9:00:00 PM                           |  | 57.19               | 54.41     | 62.93     |             |
| 10:00:00 PM                          |  | 56.55               | 54.48     | 60.37     |             |
| 11:00:00 PM                          |  | 61.53               | 54.99     | 57.76     |             |
| <b>CNEL</b>                          |  |                     |           |           | <b>63.8</b> |
| L <sub>dn</sub>                      |  |                     |           |           | 63.6        |
| 24-hr Max.                           |  |                     |           |           | 64.8        |
| 24-hr Min.                           |  |                     |           |           | 54.4        |
| 24-hr Nighttime Average <sup>a</sup> |  |                     |           |           | 56.7        |
| 24-hr Nighttime Max                  |  |                     |           |           | 60.0        |
| 24-hr Nighttime Min                  |  |                     |           |           | 54.5        |
| 24-hr Daytime Average <sup>a</sup>   |  |                     |           |           | 59.5        |
| 24-hr Daytime Max                    |  |                     |           |           | 64.8        |
| 24-hr Daytime Min                    |  |                     |           |           | 54.4        |
| Total Period Average                 |  |                     |           |           | 60.5        |
| Total Period Max                     |  |                     |           |           | 66.3        |
| Total Period Min                     |  |                     |           |           | 48.9        |
| Total Period Daytime Average         |  |                     |           |           | 60.3        |
| Total Period Daytime Max             |  |                     |           |           | 66.3        |
| Total Period Daytime Min             |  |                     |           |           | 53.3        |
| Total Period Nighttime Average       |  |                     |           |           | 60.8        |
| Total Period Nighttime Max           |  |                     |           |           | 65.5        |
| Total Period Nighttime Min           |  |                     |           |           | 48.9        |

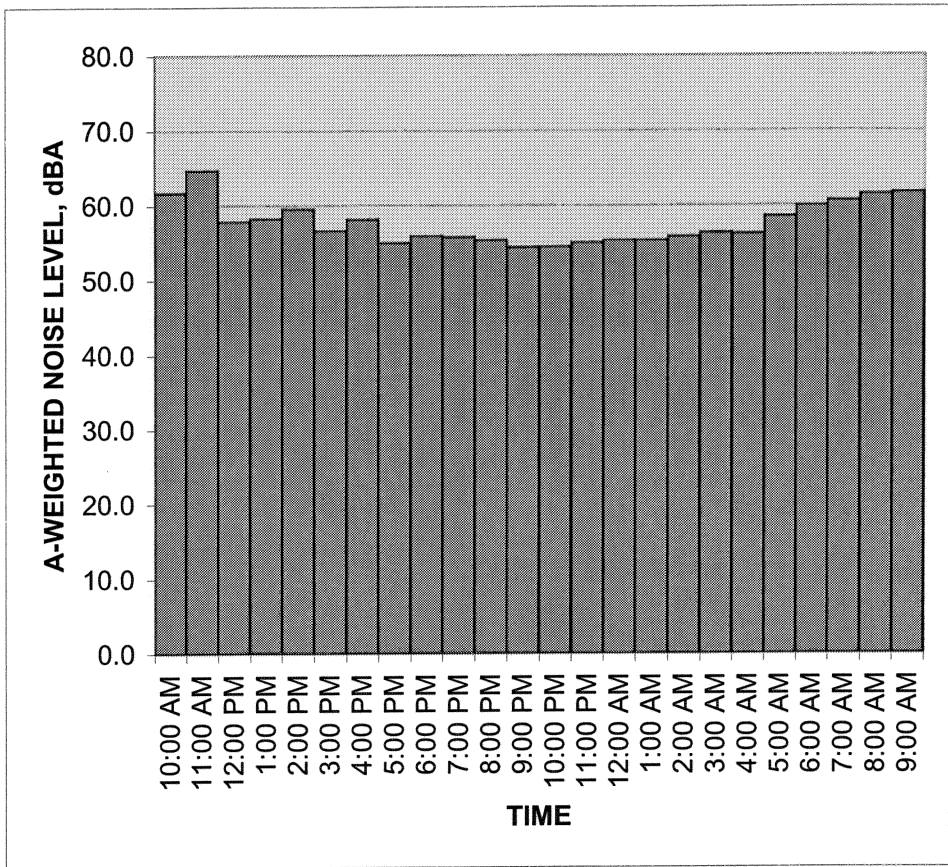
<sup>a</sup> Daytime hours are from 7:00 a.m. to 10:00 p.m., and nighttime hours are from 10:00 p.m. to 7:00 a.m.

# Community Noise Equivalent Level, CNEL.

Project: Century City - 10131 Constellation Blvd  
 Location: Project Site (East)  
 Sources: Traffic Volumes

Date: June 14-15, 2005

| <i>TIME</i>         | <i>HNL,<br/>dB(A)</i> |
|---------------------|-----------------------|
| 10:00 AM            | 61.7                  |
| 11:00 AM            | 64.8                  |
| 12:00 PM            | 57.9                  |
| 1:00 PM             | 58.3                  |
| 2:00 PM             | 59.6                  |
| 3:00 PM             | 56.7                  |
| 4:00 PM             | 58.1                  |
| 5:00 PM             | 55.0                  |
| 6:00 PM             | 55.9                  |
| 7:00 PM             | 55.8                  |
| 8:00 PM             | 55.3                  |
| 9:00 PM             | 54.4                  |
| 10:00 PM            | 54.5                  |
| 11:00 PM            | 55.0                  |
| 12:00 AM            | 55.3                  |
| 1:00 AM             | 55.3                  |
| 2:00 AM             | 55.8                  |
| 3:00 AM             | 56.3                  |
| 4:00 AM             | 56.2                  |
| 5:00 AM             | 58.5                  |
| 6:00 AM             | 60.0                  |
| 7:00 AM             | 60.6                  |
| 8:00 AM             | 61.5                  |
| 9:00 AM             | 61.7                  |
| <b>CNEL, dB(A):</b> | <b>63.8</b>           |



NOTES:

Noise Measurement Data

**Project:** Century City - 10131 Constellation Blvd Location: Project Site (East)

|                                      |  | Start Date and Time |           |           |             |
|--------------------------------------|--|---------------------|-----------|-----------|-------------|
|                                      |  | 6/13/2005           | 6/14/2005 | 6/15/2005 | 6/16/2005   |
| 12:00:00 AM                          |  |                     |           | 55.33     | 57.08       |
| 1:00:00 AM                           |  |                     |           | 55.30     | 57.23       |
| 2:00:00 AM                           |  |                     |           | 55.79     | 58.91       |
| 3:00:00 AM                           |  |                     |           | 56.32     | 60.02       |
| 4:00:00 AM                           |  |                     |           | 56.21     | 61.60       |
| 5:00:00 AM                           |  |                     |           | 58.50     | 64.26       |
| 6:00:00 AM                           |  |                     |           | 59.95     | 64.76       |
| 7:00:00 AM                           |  |                     |           | 60.59     | 65.60       |
| 8:00:00 AM                           |  | 60.36               |           | 61.46     | 66.34       |
| 9:00:00 AM                           |  | 58.58               |           | 61.69     | 62.30       |
| 10:00:00 AM                          |  | 60.67               |           | 61.00     | 61.72       |
| 11:00:00 AM                          |  | 59.07               |           | 59.80     | 62.27       |
| 12:00:00 PM                          |  | 57.11               |           | 59.09     |             |
| 1:00:00 PM                           |  | 57.09               |           | 59.27     |             |
| 2:00:00 PM                           |  | 56.41               |           | 58.23     |             |
| 3:00:00 PM                           |  | 54.18               |           | 57.60     |             |
| 4:00:00 PM                           |  | 54.23               |           | 57.34     |             |
| 5:00:00 PM                           |  | 54.78               |           | 56.76     |             |
| 6:00:00 PM                           |  | 53.25               |           | 56.76     |             |
| 7:00:00 PM                           |  | 51.79               |           | 57.73     |             |
| 8:00:00 PM                           |  | 48.92               |           | 58.37     |             |
| 9:00:00 PM                           |  | 57.19               |           | 62.93     |             |
| 10:00:00 PM                          |  | 56.55               |           | 60.37     |             |
| 11:00:00 PM                          |  | 61.53               |           | 57.76     |             |
| <b>CNEL</b>                          |  |                     |           |           | <b>67.6</b> |
| L <sub>dn</sub>                      |  |                     |           |           | 67.5        |
| 24-hr Max.                           |  |                     |           |           | 66.3        |
| 24-hr Min.                           |  |                     |           |           | 56.8        |
| 24-hr Nighttime Average <sup>a</sup> |  |                     |           |           | 61.1        |
| 24-hr Nighttime Max                  |  |                     |           |           | 64.8        |
| 24-hr Nighttime Min                  |  |                     |           |           | 57.1        |
| 24-hr Daytime Average <sup>a</sup>   |  |                     |           |           | 61.2        |
| 24-hr Daytime Max                    |  |                     |           |           | 66.3        |
| 24-hr Daytime Min                    |  |                     |           |           | 56.8        |
| Total Period Average                 |  |                     |           |           | 60.5        |
| Total Period Max                     |  |                     |           |           | 66.3        |
| Total Period Min                     |  |                     |           |           | 48.9        |
| Total Period Daytime Average         |  |                     |           |           | 60.3        |
| Total Period Daytime Max             |  |                     |           |           | 66.3        |
| Total Period Daytime Min             |  |                     |           |           | 53.3        |
| Total Period Nighttime Average       |  |                     |           |           | 60.8        |
| Total Period Nighttime Max           |  |                     |           |           | 65.5        |
| Total Period Nighttime Min           |  |                     |           |           | 48.9        |

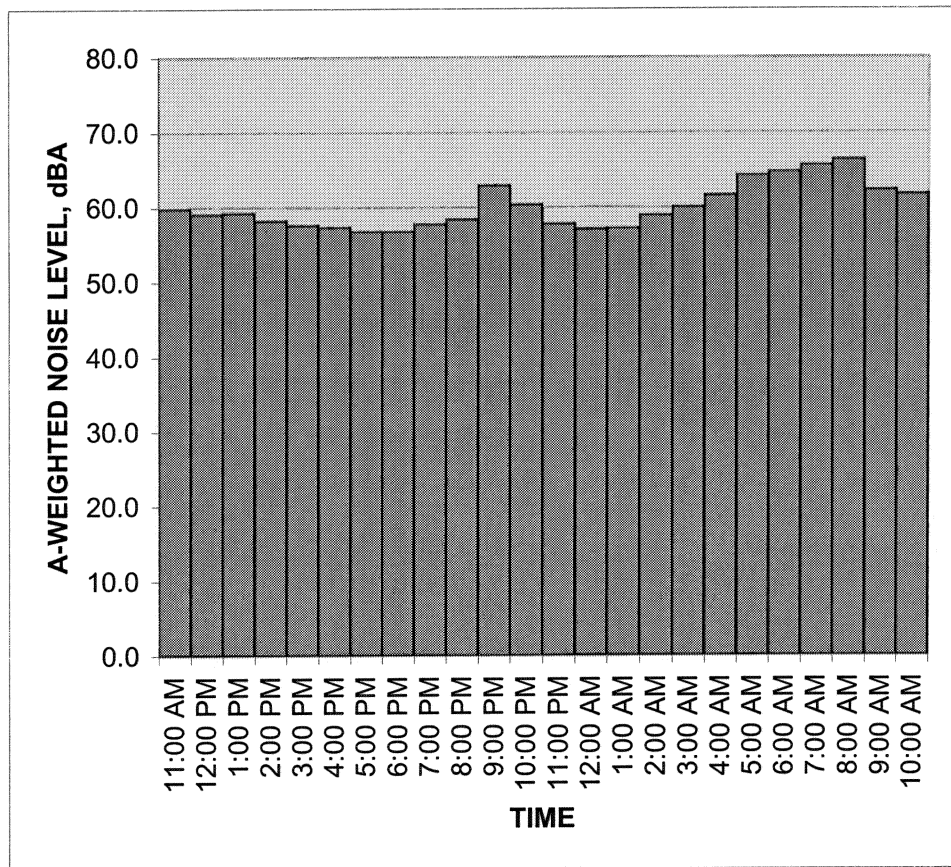
<sup>a</sup> Daytime hours are from 7:00 a.m. to 10:00 p.m., and nighttime hours are from 10:00 p.m. to 7:00 a.m.

# Community Noise Equivalent Level, CNEL.

Project: Century City - 10131 Constellation Blvd  
 Location: Project Site (East)  
 Sources: Traffic Volumes

Date: June 15-16, 2005

| <b>TIME</b>         | <b>HNL,<br/>dB(A)</b> |
|---------------------|-----------------------|
| 11:00 AM            | 59.8                  |
| 12:00 PM            | 59.1                  |
| 1:00 PM             | 59.3                  |
| 2:00 PM             | 58.2                  |
| 3:00 PM             | 57.6                  |
| 4:00 PM             | 57.3                  |
| 5:00 PM             | 56.8                  |
| 6:00 PM             | 56.8                  |
| 7:00 PM             | 57.7                  |
| 8:00 PM             | 58.4                  |
| 9:00 PM             | 62.9                  |
| 10:00 PM            | 60.4                  |
| 11:00 PM            | 57.8                  |
| 12:00 AM            | 57.1                  |
| 1:00 AM             | 57.2                  |
| 2:00 AM             | 58.9                  |
| 3:00 AM             | 60.0                  |
| 4:00 AM             | 61.6                  |
| 5:00 AM             | 64.3                  |
| 6:00 AM             | 64.8                  |
| 7:00 AM             | 65.6                  |
| 8:00 AM             | 66.3                  |
| 9:00 AM             | 62.3                  |
| 10:00 AM            | 61.7                  |
| <b>CNEL, dB(A):</b> | <b>67.6</b>           |



NOTES:

Noise Measurement Data

**Project:** Century City - 10131 Constellation Blvd **Location:** Project Site (West)

|                                      |       | Start Date and Time |          |          |             |
|--------------------------------------|-------|---------------------|----------|----------|-------------|
|                                      |       | 06/13/05            | 06/14/05 | 06/15/05 | 06/16/05    |
| 12:00:00 AM                          |       |                     | 45.11    | 46.76    |             |
| 1:00:00 AM                           |       |                     | 44.70    | 46.92    |             |
| 2:00:00 AM                           |       |                     | 45.81    | 49.58    |             |
| 3:00:00 AM                           |       |                     | 46.83    | 48.94    |             |
| 4:00:00 AM                           |       |                     | 48.81    | 50.24    |             |
| 5:00:00 AM                           |       |                     | 50.13    | 54.10    |             |
| 6:00:00 AM                           |       |                     | 52.22    | 56.27    |             |
| 7:00:00 AM                           | 59.36 |                     | 54.92    | 56.37    |             |
| 8:00:00 AM                           | 57.64 |                     | 53.08    | 56.74    |             |
| 9:00:00 AM                           | 58.91 |                     | 55.76    | 58.50    |             |
| 10:00:00 AM                          | 58.53 |                     | 54.53    |          |             |
| 11:00:00 AM                          | 55.63 |                     | 54.41    |          |             |
| 12:00:00 PM                          | 58.20 |                     | 57.91    |          |             |
| 1:00:00 PM                           | 56.10 |                     | 60.96    |          |             |
| 2:00:00 PM                           | 54.64 |                     | 58.50    |          |             |
| 3:00:00 PM                           | 54.03 |                     | 58.25    |          |             |
| 4:00:00 PM                           | 52.34 |                     | 56.79    |          |             |
| 5:00:00 PM                           | 52.08 |                     | 53.27    |          |             |
| 6:00:00 PM                           | 50.15 |                     | 50.20    |          |             |
| 7:00:00 PM                           | 48.84 |                     | 48.37    |          |             |
| 8:00:00 PM                           | 48.95 |                     | 47.88    |          |             |
| 9:00:00 PM                           | 48.63 |                     | 48.41    |          |             |
| 10:00:00 PM                          | 50.72 |                     | 46.72    |          |             |
| 11:00:00 PM                          | 52.78 |                     | 46.51    |          |             |
| <b>CNEL</b>                          |       |                     |          |          |             |
| L <sub>dn</sub>                      |       |                     |          |          | <b>57.7</b> |
| 24-hr Max.                           |       |                     |          |          | 57.5        |
| 24-hr Min.                           |       |                     |          |          | 59.4        |
| 24-hr Nighttime Average <sup>a</sup> |       |                     |          |          | 44.7        |
| 24-hr Nighttime Max                  |       |                     |          |          | 49.5        |
| 24-hr Nighttime Min                  |       |                     |          |          | 52.8        |
| 24-hr Daytime Average <sup>a</sup>   |       |                     |          |          | 44.7        |
| 24-hr Daytime Max                    |       |                     |          |          | 55.7        |
| 24-hr Daytime Min                    |       |                     |          |          | 59.4        |
| Total Period Average                 |       |                     |          |          | 48.6        |
| Total Period Max                     |       |                     |          |          | 54.6        |
| Total Period Min                     |       |                     |          |          | 61.0        |
| Total Period Daytime Average         |       |                     |          |          | 44.7        |
| Total Period Daytime Max             |       |                     |          |          | 55.9        |
| Total Period Daytime Min             |       |                     |          |          | 61.0        |
| Total Period Nighttime Average       |       |                     |          |          | 50.2        |
| Total Period Nighttime Max           |       |                     |          |          | 50.3        |
| Total Period Nighttime Min           |       |                     |          |          | 56.3        |
|                                      |       |                     |          |          | 44.7        |

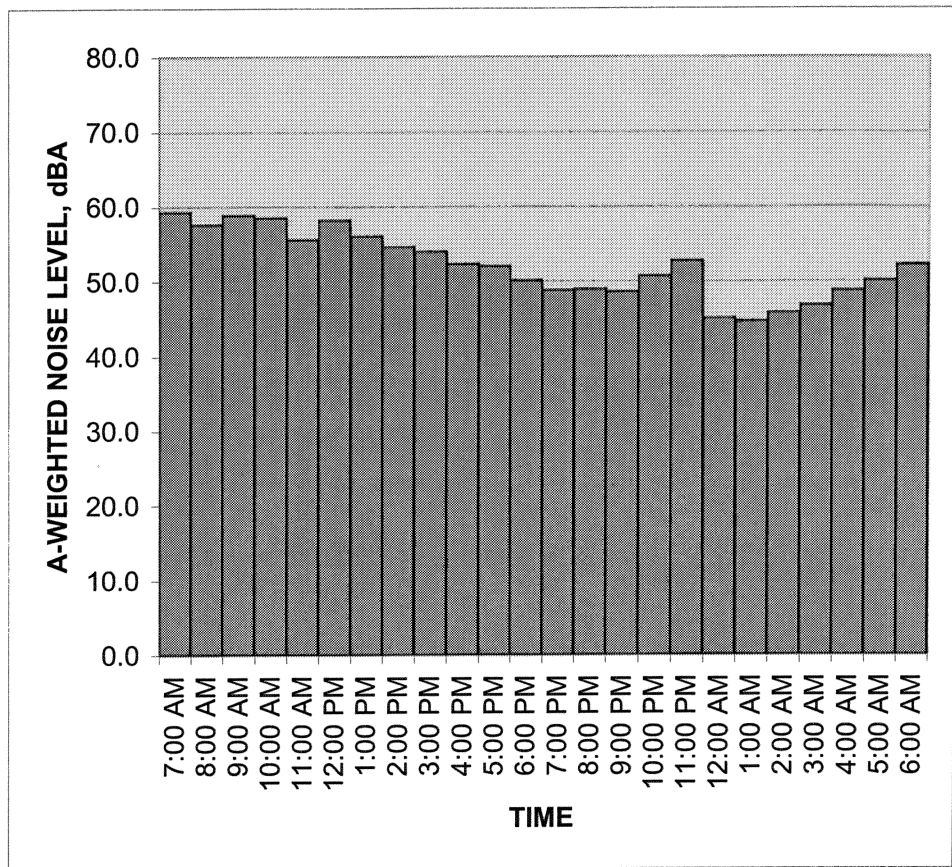
<sup>a</sup> Daytime hours are from 7:00 a.m. to 10:00 p.m., and nighttime hours are from 10:00 p.m. to 7:00 a.m.

# Community Noise Equivalent Level, CNEL.

Project: Century City - 10131 Constellation Blvd  
 Location: Project Site (West)  
 Sources: Traffic Volumes

Date: June 13-14, 2005

| TIME                | HNL,<br>dB(A) |
|---------------------|---------------|
| 7:00 AM             | 59.4          |
| 8:00 AM             | 57.6          |
| 9:00 AM             | 58.9          |
| 10:00 AM            | 58.5          |
| 11:00 AM            | 55.6          |
| 12:00 PM            | 58.2          |
| 1:00 PM             | 56.1          |
| 2:00 PM             | 54.6          |
| 3:00 PM             | 54.0          |
| 4:00 PM             | 52.3          |
| 5:00 PM             | 52.1          |
| 6:00 PM             | 50.2          |
| 7:00 PM             | 48.8          |
| 8:00 PM             | 49.0          |
| 9:00 PM             | 48.6          |
| 10:00 PM            | 50.7          |
| 11:00 PM            | 52.8          |
| 12:00 AM            | 45.1          |
| 1:00 AM             | 44.7          |
| 2:00 AM             | 45.8          |
| 3:00 AM             | 46.8          |
| 4:00 AM             | 48.8          |
| 5:00 AM             | 50.1          |
| 6:00 AM             | 52.2          |
| <b>CNEL, dB(A):</b> | <b>57.7</b>   |



NOTES:

Noise Measurement Data

**Project:** Century City - 10131 Constellation Blvd **Location:** Project Site (West)

|                                      |       | Start Date and Time |          |          |             |
|--------------------------------------|-------|---------------------|----------|----------|-------------|
|                                      |       | 06/13/05            | 06/14/05 | 06/15/05 | 06/16/05    |
| 12:00:00 AM                          |       |                     | 45.11    | 46.76    |             |
| 1:00:00 AM                           |       |                     | 44.70    | 46.92    |             |
| 2:00:00 AM                           |       |                     | 45.81    | 49.58    |             |
| 3:00:00 AM                           |       |                     | 46.83    | 48.94    |             |
| 4:00:00 AM                           |       |                     | 48.81    | 50.24    |             |
| 5:00:00 AM                           |       |                     | 50.13    | 54.10    |             |
| 6:00:00 AM                           |       |                     | 52.22    | 56.27    |             |
| 7:00:00 AM                           | 59.36 | 54.92               | 56.37    |          |             |
| 8:00:00 AM                           | 57.64 | 53.08               | 56.74    |          |             |
| 9:00:00 AM                           | 58.91 | 55.76               | 58.50    |          |             |
| 10:00:00 AM                          | 58.53 | 54.53               |          |          |             |
| 11:00:00 AM                          | 55.63 | 54.41               |          |          |             |
| 12:00:00 PM                          | 58.20 | 57.91               |          |          |             |
| 1:00:00 PM                           | 56.10 | 60.96               |          |          |             |
| 2:00:00 PM                           | 54.64 | 58.50               |          |          |             |
| 3:00:00 PM                           | 54.03 | 58.25               |          |          |             |
| 4:00:00 PM                           | 52.34 | 56.79               |          |          |             |
| 5:00:00 PM                           | 52.08 | 53.27               |          |          |             |
| 6:00:00 PM                           | 50.15 | 50.20               |          |          |             |
| 7:00:00 PM                           | 48.84 | 48.37               |          |          |             |
| 8:00:00 PM                           | 48.95 | 47.88               |          |          |             |
| 9:00:00 PM                           | 48.63 | 48.41               |          |          |             |
| 10:00:00 PM                          | 50.72 | 46.72               |          |          |             |
| 11:00:00 PM                          | 52.78 | 46.51               |          |          |             |
| <b>CNEL</b>                          |       |                     |          |          |             |
| L <sub>dn</sub>                      |       |                     |          |          | <b>58.6</b> |
| 24-hr Max.                           |       |                     |          |          | 58.5        |
| 24-hr Min.                           |       |                     |          |          | 61.0        |
| 24-hr Nighttime Average <sup>a</sup> |       |                     |          |          | 46.5        |
| 24-hr Nighttime Max                  |       |                     |          |          | 51.0        |
| 24-hr Nighttime Min                  |       |                     |          |          | 56.3        |
| 24-hr Daytime Average <sup>a</sup>   |       |                     |          |          | 46.5        |
| 24-hr Daytime Max                    |       |                     |          |          | 55.7        |
| 24-hr Daytime Min                    |       |                     |          |          | 61.0        |
| Total Period Average                 |       |                     |          |          | 47.9        |
| Total Period Max                     |       |                     |          |          | 54.6        |
| Total Period Min                     |       |                     |          |          | 61.0        |
| Total Period Daytime Average         |       |                     |          |          | 44.7        |
| Total Period Daytime Max             |       |                     |          |          | 55.9        |
| Total Period Daytime Min             |       |                     |          |          | 61.0        |
| Total Period Nighttime Average       |       |                     |          |          | 50.2        |
| Total Period Nighttime Max           |       |                     |          |          | 50.3        |
| Total Period Nighttime Min           |       |                     |          |          | 56.3        |

<sup>a</sup> Daytime hours are from 7:00 a.m. to 10:00 p.m., and nighttime hours are from 10:00 p.m. to 7:00 a.m.

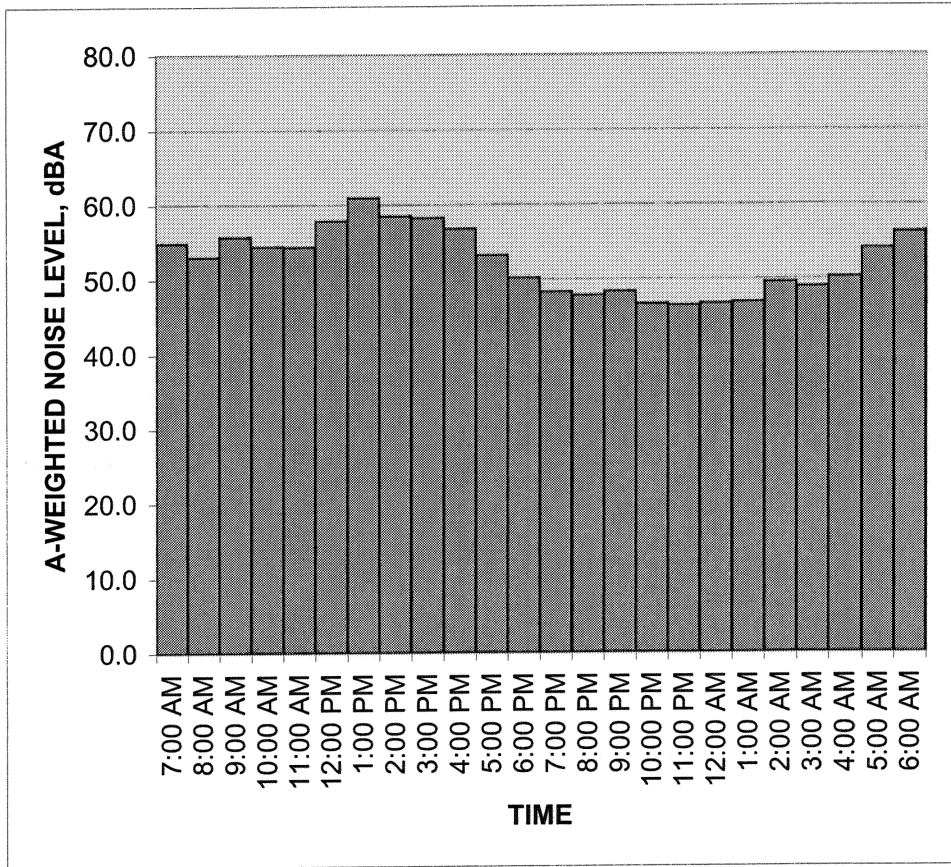


# Community Noise Equivalent Level, CNEL.

Project: Century City - 10131 Constellation Blvd  
 Location: Project Site (West)  
 Sources: Traffic Volumes

Date: June 14-15, 2005

| TIME                | HNL,<br>dB(A) |
|---------------------|---------------|
| 7:00 AM             | 54.9          |
| 8:00 AM             | 53.1          |
| 9:00 AM             | 55.8          |
| 10:00 AM            | 54.5          |
| 11:00 AM            | 54.4          |
| 12:00 PM            | 57.9          |
| 1:00 PM             | 61.0          |
| 2:00 PM             | 58.5          |
| 3:00 PM             | 58.3          |
| 4:00 PM             | 56.8          |
| 5:00 PM             | 53.3          |
| 6:00 PM             | 50.2          |
| 7:00 PM             | 48.4          |
| 8:00 PM             | 47.9          |
| 9:00 PM             | 48.4          |
| 10:00 PM            | 46.7          |
| 11:00 PM            | 46.5          |
| 12:00 AM            | 46.8          |
| 1:00 AM             | 46.9          |
| 2:00 AM             | 49.6          |
| 3:00 AM             | 48.9          |
| 4:00 AM             | 50.2          |
| 5:00 AM             | 54.1          |
| 6:00 AM             | 56.3          |
| <b>CNEL, dB(A):</b> | <b>58.6</b>   |



**NOTES:**

Noise Measurement Data

Project: Century City - 10131 Constellation Blvd Location: Project Site (West)

|                                      |          | Start Date and Time  |                  |
|--------------------------------------|----------|----------------------|------------------|
|                                      |          | Start                | End              |
| 06/15/05                             | 06/16/05 | 6/15/2005 6:00:00 AM | 6/15/05 11:00 AM |
| 12:00:00 AM                          | 55.45    | 6/16/2005 7:00:00 AM |                  |
| 1:00:00 AM                           | 51.92    | 6/17/2005 8:00:00 AM |                  |
| 2:00:00 AM                           | 53.31    | 6/18/2005 9:00:00 AM |                  |
| 3:00:00 AM                           | 50.99    | 10:00:00 AM          | 6/16/05 11:00 AM |
| 4:00:00 AM                           | 56.5     | 11:00:00 AM          |                  |
| 5:00:00 AM                           | 61.2     | 12:00:00 PM          |                  |
| 6:00:00 AM                           | 63.45    |                      |                  |
| 7:00:00 AM                           | 66.97    |                      |                  |
| 8:00:00 AM                           | 65.19    |                      |                  |
| 9:00:00 AM                           | 67.16    |                      |                  |
| 10:00:00 AM                          | 69.11    |                      |                  |
| 11:00:00 AM                          | 67.6     |                      |                  |
| 12:00:00 PM                          | 68.36    |                      |                  |
| 1:00:00 PM                           | 66.38    |                      |                  |
| 2:00:00 PM                           | 67.15    |                      |                  |
| 3:00:00 PM                           | 66.27    |                      |                  |
| 4:00:00 PM                           | 65.81    |                      |                  |
| 5:00:00 PM                           | 65.02    |                      |                  |
| 6:00:00 PM                           | 64.9     |                      |                  |
| 7:00:00 PM                           | 62.39    |                      |                  |
| 8:00:00 PM                           | 63.01    |                      |                  |
| 9:00:00 PM                           | 61.62    |                      |                  |
| 10:00:00 PM                          | 60.49    |                      |                  |
| 11:00:00 PM                          | 56.69    |                      |                  |
| <b>CNEL</b>                          |          |                      | <b>67.6</b>      |
| L <sub>dn</sub>                      |          |                      | 67.2             |
| 24-hr Max.                           |          |                      | 69.1             |
| 24-hr Min.                           |          |                      | 51.0             |
| 24-hr Nighttime Average <sup>a</sup> |          |                      | 58.5             |
| 24-hr Nighttime Max                  |          |                      | 63.5             |
| 24-hr Nighttime Min                  |          |                      | 51.0             |
| 24-hr Daytime Average <sup>a</sup>   |          |                      | 66.3             |
| 24-hr Daytime Max                    |          |                      | 69.1             |
| 24-hr Daytime Min                    |          |                      | 61.6             |
| Total Period Average                 |          |                      | 64.6             |
| Total Period Max                     |          |                      | 69.1             |
| Total Period Min                     |          |                      | 51.0             |
| Total Period Daytime Average         |          |                      | 66.3             |
| Total Period Daytime Max             |          |                      | 69.1             |
| Total Period Daytime Min             |          |                      | 64.9             |
| Total Period Nighttime Average       |          |                      | 58.5             |
| Total Period Nighttime Max           |          |                      | 63.5             |
| Total Period Nighttime Min           |          |                      | 51.0             |

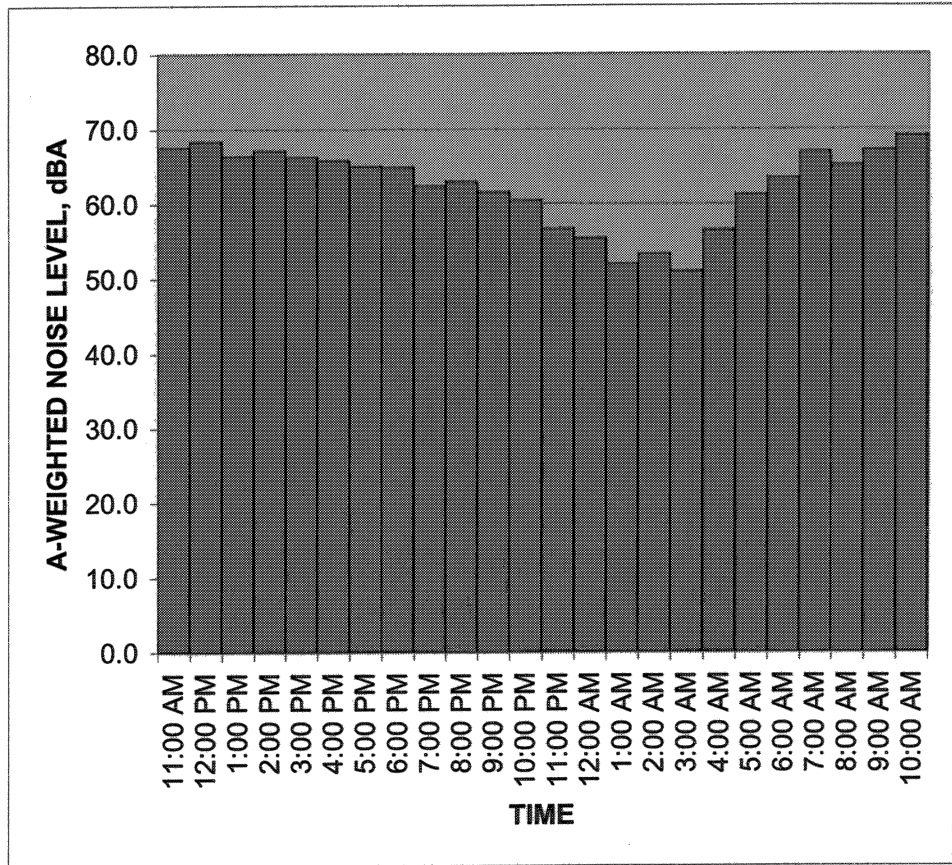
<sup>a</sup> Daytime hours are from 7:00 a.m. to 10:00 p.m., and nighttime hours are from 10:00 p.m. to 7:00 a.m.

# Community Noise Equivalent Level, CNEL.

Project: Century City - 10131 Constellation Blvd  
 Location: Project Site (West)  
 Sources: Traffic Volumes

Date: June 15-16, 2005

| TIME                | HNL,<br>dB(A) |
|---------------------|---------------|
| 11:00 AM            | 67.6          |
| 12:00 PM            | 68.4          |
| 1:00 PM             | 66.4          |
| 2:00 PM             | 67.2          |
| 3:00 PM             | 66.3          |
| 4:00 PM             | 65.8          |
| 5:00 PM             | 65.0          |
| 6:00 PM             | 64.9          |
| 7:00 PM             | 62.4          |
| 8:00 PM             | 63.0          |
| 9:00 PM             | 61.6          |
| 10:00 PM            | 60.5          |
| 11:00 PM            | 56.7          |
| 12:00 AM            | 55.5          |
| 1:00 AM             | 51.9          |
| 2:00 AM             | 53.3          |
| 3:00 AM             | 51.0          |
| 4:00 AM             | 56.5          |
| 5:00 AM             | 61.2          |
| 6:00 AM             | 63.5          |
| 7:00 AM             | 67.0          |
| 8:00 AM             | 65.2          |
| 9:00 AM             | 67.2          |
| 10:00 AM            | 69.1          |
| <b>CNEL, dB(A):</b> | <b>67.6</b>   |



NOTES:

# Appendix E-2

- TENS Analysis (Roadway Noise)



Century City Residential  
TENS Analysis

| Roadway/Segment   | Traffic Volumes |      |     |      | Leq     |          |      | CNEL    |          |  |
|---|-----------------|------|-----|------|---------|----------|------|---------|----------|--|
|   | AM              | PM   | ADT | ROW  | 50 Feet | 100 Feet | ROW  | 50 Feet | 100 Feet |  |
| Beverly Glen Boulevard, North of Wilshire Boulevard     | 1655            | 1953 | 0   | 68.5 | 64.7    | 62.6     | 69.8 | 65.9    | 63.9     |  |
| Beverly Glen Boulevard, South of Wilshire Boulevard     | 1937            | 2236 | 0   | 69.1 | 65.3    | 63.2     | 70.4 | 66.5    | 64.5     |  |
| Beverly Glen Boulevard, North of Santa Monica Boulevard | 2457            | 2652 | 0   | 69.9 | 66.0    | 64.0     | 71.1 | 67.2    | 65.2     |  |
| Beverly Glen Boulevard, South of Santa Monica Boulevard | 1928            | 2228 | 0   | 69.1 | 65.2    | 63.2     | 70.3 | 66.5    | 64.4     |  |
| Beverly Glen Boulevard, North of Olympic Boulevard      | 1610            | 1813 | 0   | 68.2 | 64.3    | 62.3     | 69.4 | 65.6    | 63.5     |  |
| Future No Project                                       |                 |      |     |      |         |          |      |         |          |  |
| Roadway/Segment   | AM              | PM   | ADT | ROW  | 50 Feet | 100 Feet | ROW  | 50 Feet | 100 Feet |  |
| Beverly Glen Boulevard, North of Wilshire Boulevard     | 2139            | 2597 | 0   | 69.8 | 65.9    | 63.9     | 71.0 | 67.1    | 65.1     |  |
| Beverly Glen Boulevard, South of Wilshire Boulevard     | 2426            | 2830 | 0   | 70.2 | 66.3    | 64.3     | 71.4 | 67.5    | 65.5     |  |
| Beverly Glen Boulevard, North of Santa Monica Boulevard | 3122            | 3315 | 0   | 70.8 | 67.0    | 64.9     | 72.1 | 68.2    | 66.2     |  |
| Beverly Glen Boulevard, South of Santa Monica Boulevard | 2063            | 2266 | 0   | 69.2 | 65.3    | 63.3     | 70.4 | 66.5    | 64.5     |  |
| Beverly Glen Boulevard, North of Olympic Boulevard      | 1776            | 2003 | 0   | 68.7 | 64.8    | 62.8     | 69.9 | 66.0    | 64.0     |  |
| Future With Project                                     |                 |      |     |      |         |          |      |         |          |  |
| Roadway/Segment   | AM              | PM   | ADT | ROW  | 50 Feet | 100 Feet | ROW  | 50 Feet | 100 Feet |  |
| Beverly Glen Boulevard, North of Wilshire Boulevard     | 2141            | 2593 | 0   | 69.8 | 65.9    | 63.9     | 71.0 | 67.1    | 65.1     |  |
| Beverly Glen Boulevard, South of Wilshire Boulevard     | 2428            | 2826 | 0   | 70.2 | 66.3    | 64.3     | 71.4 | 67.5    | 65.5     |  |
| Beverly Glen Boulevard, North of Santa Monica Boulevard | 3124            | 3311 | 0   | 70.8 | 67.0    | 64.9     | 72.1 | 68.2    | 66.2     |  |
| Beverly Glen Boulevard, South of Santa Monica Boulevard | 2063            | 2266 | 0   | 69.2 | 65.3    | 63.3     | 70.4 | 66.5    | 64.5     |  |
| Beverly Glen Boulevard, North of Olympic Boulevard      | 1776            | 2003 | 0   | 68.7 | 64.8    | 62.8     | 69.9 | 66.0    | 64.0     |  |

| Roadway/Segment   | 50 ft. from ROW   |                      |                   | At ROW               |                   |                      |
|---|-------------------|----------------------|-------------------|----------------------|-------------------|----------------------|
|   | Project Increment | Cumulative Increment | Project Increment | Cumulative Increment | Project Increment | Cumulative Increment |
| Beverly Glen Boulevard, North of Wilshire Boulevard     | 0.0               | 1.2                  | 0.0               | 0.0                  | 1.2               | 0.0                  |
| Beverly Glen Boulevard, South of Wilshire Boulevard     | 0.0               | 1.0                  | 0.0               | 0.0                  | 1.0               | 0.0                  |
| Beverly Glen Boulevard, North of Santa Monica Boulevard | 0.0               | 1.0                  | 0.0               | 0.0                  | 1.0               | 0.0                  |
| Beverly Glen Boulevard, South of Santa Monica Boulevard | 0.0               | 0.0                  | 0.0               | 0.0                  | 0.1               | 0.1                  |
| Beverly Glen Boulevard, North of Olympic Boulevard      | 0.0               | 0.4                  | 0.0               | 0.0                  | 0.5               | 0.5                  |

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| Roadway/Segment                                   | Traffic Volumes |      |     | Leq     |          | CNEL |          |
|---|-----------------|------|-----|---------|----------|------|----------|
|   | AM              | PM   | ADT | 50 Feet | 100 Feet | ROW  | 100 Feet |
| Overland Avenue, South of Santa Monica Boulevard  | -               | -    | 0   | -       | -        | -    | -        |
| Overland Avenue, North of Olympic Boulevard       | 1051            | 1268 | 0   | 62.8    | 60.8     | 67.9 | 62.0     |
| Overland Avenue, South of Olympic Boulevard       | 1686            | 1981 | 0   | 64.7    | 62.7     | 69.8 | 63.9     |
| Olympic Boulevard, East of Overland Avenue        | 6123            | 6140 | 0   | 69.2    | 67.3     | 73.7 | 68.5     |
| Olympic Boulevard, West of Beverly Glen Boulevard | 5818            | 6057 | 0   | 69.1    | 67.3     | 73.6 | 68.5     |
| <b>Future No. Project</b>                         |                 |      |     |         |          |      |          |
|   | AM              | PM   | ADT | Leq     | 100 Feet | ROW  | 100 Feet |
| Overland Avenue, South of Santa Monica Boulevard  | 1149            | 1397 | 0   | 67.1    | 61.2     | 68.3 | 62.4     |
| Overland Avenue, North of Olympic Boulevard       | 1267            | 1623 | 0   | 63.2    | 61.8     | 69.0 | 63.1     |
| Overland Avenue, South of Olympic Boulevard       | 1966            | 2411 | 0   | 63.9    | 63.6     | 70.7 | 64.8     |
| Olympic Boulevard, East of Overland Avenue        | 6833            | 6741 | 0   | 65.6    | 67.8     | 74.1 | 69.0     |
| Olympic Boulevard, West of Beverly Glen Boulevard | 6532            | 6652 | 0   | 69.6    | 67.7     | 74.0 | 68.9     |
| <b>Future With Project</b>                        |                 |      |     |         |          |      |          |
|   | AM              | PM   | ADT | Leq     | 100 Feet | ROW  | 100 Feet |
| Overland Avenue, South of Santa Monica Boulevard  | 1149            | 1397 | 0   | 67.1    | 61.2     | 68.3 | 62.4     |
| Overland Avenue, North of Olympic Boulevard       | 1267            | 1623 | 0   | 63.2    | 61.8     | 69.0 | 63.1     |
| Overland Avenue, South of Olympic Boulevard       | 1969            | 2402 | 0   | 63.9    | 63.5     | 70.7 | 64.8     |
| Olympic Boulevard, East of Overland Avenue        | 6842            | 6715 | 0   | 65.6    | 67.8     | 74.1 | 69.0     |
| Olympic Boulevard, West of Beverly Glen Boulevard | 6540            | 6626 | 0   | 69.6    | 67.7     | 74.0 | 68.9     |

| Roadway/Segment                                   | 50 ft. from ROW   |                      | At ROW            |                      |
|---|-------------------|----------------------|-------------------|----------------------|
|   | Project Increment | Cumulative Increment | Project Increment | Cumulative Increment |
| Overland Avenue, South of Santa Monica Boulevard  | 0.0               | -                    | 0.0               | -                    |
| Overland Avenue, North of Olympic Boulevard       | 0.0               | 1.1                  | 0.0               | 1.1                  |
| Overland Avenue, South of Olympic Boulevard       | 0.0               | 0.9                  | 0.0               | 0.9                  |
| Olympic Boulevard, East of Overland Avenue        | 0.0               | 0.5                  | 0.0               | 0.4                  |
| Olympic Boulevard, West of Beverly Glen Boulevard | 0.0               | 0.4                  | 0.0               | 0.4                  |

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| Existing<br>Roadway/Segment                        | Traffic Volumes |      |     |      |         |          | Leq  |         |          | CNEL |         |          |
|--|-----------------|------|-----|------|---------|----------|------|---------|----------|------|---------|----------|
|  | AM              |      | PM  |      | ADT     |          | ROW  | 50 Feet | 100 Feet | ROW  | 50 Feet | 100 Feet |
|  | AM              | PM   | ADT | ROW  | 50 Feet | 100 Feet | ROW  | 50 Feet | 100 Feet | ROW  | 50 Feet | 100 Feet |
| Olympic Boulevard, East of Beverly Glen Boulevard  | 5722            | 5967 | 0   | 72.3 | 68.1    | 67.2     | 73.6 | 70.3    | 68.4     | 73.6 | 70.3    | 68.4     |
| Beverly Glen Boulevard, South of Olympic Boulevard | 1332            | 1379 | 0   | 67.0 | 63.2    | 61.1     | 68.3 | 64.4    | 62.4     | 68.3 | 64.4    | 62.4     |
| Beverly Glen Boulevard, North of Pico Boulevard    | 1156            | 1245 | 0   | 66.6 | 62.7    | 60.7     | 67.8 | 63.9    | 61.9     | 67.8 | 63.9    | 61.9     |
| Olympic Boulevard, West of Century Park West       | 6333            | 7147 | 0   | 73.1 | 69.8    | 68.0     | 74.3 | 71.0    | 69.2     | 74.3 | 71.0    | 69.2     |
| Century Park West, North of Olympic Boulevard      | 1251            | 1716 | 0   | 66.7 | 63.5    | 61.7     | 67.9 | 64.7    | 62.9     | 67.9 | 64.7    | 62.9     |
| Future No. Project                                 |                 |      |     |      |         |          |      |         |          |      |         |          |
| Future With Project<br>Roadway/Segment             | Traffic Volumes |      |     |      |         |          | Leq  |         |          | CNEL |         |          |
|  | AM              |      | PM  |      | ADT     |          | ROW  | 50 Feet | 100 Feet | ROW  | 50 Feet | 100 Feet |
|  | AM              | PM   | ADT | ROW  | 50 Feet | 100 Feet | ROW  | 50 Feet | 100 Feet | ROW  | 50 Feet | 100 Feet |
| Olympic Boulevard, East of Beverly Glen Boulevard  | 6495            | 6657 | 0   | 72.8 | 69.5    | 67.7     | 74.0 | 70.7    | 68.9     | 74.0 | 70.7    | 68.9     |
| Beverly Glen Boulevard, South of Olympic Boulevard | 1551            | 1572 | 0   | 67.6 | 63.7    | 61.7     | 68.8 | 64.9    | 62.9     | 68.8 | 64.9    | 62.9     |
| Beverly Glen Boulevard, North of Pico Boulevard    | 1343            | 1393 | 0   | 67.1 | 63.2    | 61.2     | 68.3 | 64.4    | 62.4     | 68.3 | 64.4    | 62.4     |
| Olympic Boulevard, West of Century Park West       | 7151            | 7924 | 0   | 73.6 | 70.3    | 68.4     | 74.8 | 71.5    | 69.6     | 74.8 | 71.5    | 69.6     |
| Century Park West, North of Olympic Boulevard      | 1712            | 2162 | 0   | 67.7 | 64.5    | 62.7     | 68.9 | 65.7    | 63.9     | 68.9 | 65.7    | 63.9     |
| Future With Project                                |                 |      |     |      |         |          |      |         |          |      |         |          |
| Future With Project<br>Roadway/Segment             | Traffic Volumes |      |     |      |         |          | Leq  |         |          | CNEL |         |          |
|  | AM              |      | PM  |      | ADT     |          | ROW  | 50 Feet | 100 Feet | ROW  | 50 Feet | 100 Feet |
|  | AM              | PM   | ADT | ROW  | 50 Feet | 100 Feet | ROW  | 50 Feet | 100 Feet | ROW  | 50 Feet | 100 Feet |
| Olympic Boulevard, East of Beverly Glen Boulevard  | 6499            | 6615 | 0   | 72.8 | 69.5    | 67.6     | 74.0 | 70.7    | 68.9     | 74.0 | 70.7    | 68.9     |
| Beverly Glen Boulevard, South of Olympic Boulevard | 1547            | 1556 | 0   | 67.6 | 63.7    | 61.7     | 68.8 | 64.9    | 62.9     | 68.8 | 64.9    | 62.9     |
| Beverly Glen Boulevard, North of Pico Boulevard    | 1339            | 1377 | 0   | 67.0 | 63.1    | 61.1     | 68.2 | 64.4    | 62.3     | 68.2 | 64.4    | 62.3     |
| Olympic Boulevard, West of Century Park West       | 7148            | 7884 | 0   | 73.5 | 70.3    | 68.4     | 74.8 | 71.5    | 69.6     | 74.8 | 71.5    | 69.6     |
| Century Park West, North of Olympic Boulevard      | 1709            | 2122 | 0   | 67.6 | 64.4    | 62.6     | 68.8 | 65.6    | 63.8     | 68.8 | 65.6    | 63.8     |
| Future With Project                                |                 |      |     |      |         |          |      |         |          |      |         |          |

| Summary<br>Roadway/Segment                         | 50 ft. from ROW   |                      | At ROW            |                      |
|--|-------------------|----------------------|-------------------|----------------------|
|  | Project Increment | Cumulative Increment | Project Increment | Cumulative Increment |
|  | Increment         | Increment            | Increment         | Increment            |
| Olympic Boulevard, East of Beverly Glen Boulevard  | 0.0               | 0.4                  | 0.0               | 0.4                  |
| Beverly Glen Boulevard, South of Olympic Boulevard | 0.0               | 0.5                  | 0.0               | 0.5                  |
| Beverly Glen Boulevard, North of Pico Boulevard    | 0.0               | 0.5                  | -0.1              | 0.4                  |
| Olympic Boulevard, West of Century Park West       | 0.0               | 0.5                  | 0.0               | 0.5                  |
| Century Park West, North of Olympic Boulevard      | -0.1              | 0.9                  | -0.1              | 0.9                  |



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| Roadway/Segment                                     | Existing        |      |     |      |      | Future No. Project |          |      |         |      |
|---|-----------------|------|-----|------|------|--------------------|----------|------|---------|------|
|   | Traffic Volumes |      | Leq |      | CNEL | Traffic Volumes    |          | Leq  |         | CNEL |
|   | AM              | PM   | ADT | ROW  |      | 50 Feet            | 100 Feet | ROW  | 50 Feet |      |
| Century Park West, South of Constellation Boulevard | 1123            | 1481 | 0   | 66.0 | 62.9 | 61.1               | 67.2     | 64.1 | 62.3    |      |
| Century Park West, North of Constellation Boulevard | 847             | 1056 | 0   | 65.9 | 62.0 | 60.0               | 67.1     | 63.2 | 61.2    |      |
| Century Park West, South of Santa Monica Boulevard  | 813             | 1123 | 0   | 66.1 | 62.3 | 60.2               | 67.4     | 63.5 | 61.5    |      |
| Motor Avenue, South of Pico Boulevard               | 1955            | 2337 | 0   | 68.3 | 65.4 | 63.4               | 70.5     | 66.7 | 64.6    |      |
| Patricia Avenue, North of Pico Boulevard            | 323             | 407  | 0   | 62.9 | 58.3 | 56.1               | 64.1     | 59.5 | 57.3    |      |
| <b>Future With Project</b>                          |                 |      |     |      |      |                    |          |      |         |      |
| Century Park West, South of Constellation Boulevard | 1464            | 1716 | 0   | 66.7 | 63.5 | 61.7               | 67.9     | 64.7 | 62.9    |      |
| Century Park West, North of Constellation Boulevard | 990             | 1197 | 0   | 66.4 | 62.5 | 60.5               | 67.6     | 63.8 | 61.7    |      |
| Century Park West, South of Santa Monica Boulevard  | 1060            | 1363 | 0   | 67.0 | 63.1 | 61.1               | 68.2     | 64.3 | 62.3    |      |
| Motor Avenue, South of Pico Boulevard               | 2244            | 2574 | 0   | 69.7 | 65.9 | 63.8               | 71.0     | 67.1 | 65.1    |      |
| Patricia Avenue, North of Pico Boulevard            | 341             | 428  | 0   | 63.1 | 58.5 | 56.3               | 64.4     | 59.7 | 57.5    |      |
| <b>Future With Project</b>                          |                 |      |     |      |      |                    |          |      |         |      |
| Century Park West, South of Constellation Boulevard | 1462            | 1679 | 0   | 66.6 | 63.4 | 61.6               | 67.8     | 64.6 | 62.8    |      |
| Century Park West, North of Constellation Boulevard | 971             | 1136 | 0   | 66.2 | 62.3 | 60.3               | 67.4     | 63.5 | 61.5    |      |
| Century Park West, South of Santa Monica Boulevard  | 1041            | 1302 | 0   | 66.8 | 62.9 | 60.9               | 68.0     | 64.1 | 62.1    |      |
| Motor Avenue, South of Pico Boulevard               | 2247            | 2565 | 0   | 69.7 | 65.9 | 63.8               | 70.9     | 67.1 | 65.0    |      |
| Patricia Avenue, North of Pico Boulevard            | 341             | 428  | 0   | 63.1 | 58.5 | 56.3               | 64.4     | 59.7 | 57.5    |      |

| Roadway/Segment                                     | 50 ft. from ROW   |            |                      |            | At ROW            |            |                      |            |
|---|-------------------|------------|----------------------|------------|-------------------|------------|----------------------|------------|
|   | Project Increment |            | Cumulative Increment |            | Project Increment |            | Cumulative Increment |            |
|   | Increment         | Cumulative | Increment            | Cumulative | Increment         | Cumulative | Increment            | Cumulative |
| Century Park West, South of Constellation Boulevard | -0.1              | 0.5        | -0.1                 | 0.6        | -0.1              | 0.6        | -0.1                 | 0.6        |
| Century Park West, North of Constellation Boulevard | -0.3              | 0.3        | -0.2                 | 0.3        | -0.2              | 0.3        | -0.2                 | 0.3        |
| Century Park West, South of Santa Monica Boulevard  | -0.2              | -          | -0.2                 | -          | -0.2              | -          | -0.2                 | -          |
| Motor Avenue, South of Pico Boulevard               | 0.0               | 0.4        | -0.1                 | 0.4        | -0.1              | 0.4        | -0.1                 | 0.4        |
| Patricia Avenue, North of Pico Boulevard            | 0.0               | 0.2        | 0.0                  | 0.2        | 0.0               | 0.2        | 0.0                  | 0.2        |

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| Roadway/Segment                          | Traffic Volumes |           |            |            | Leq            |                 |            | CNEL           |                 |  |
|--|-----------------|-----------|------------|------------|----------------|-----------------|------------|----------------|-----------------|--|
|  | AM              | PM        | ADT        | ROW        | 50 Feet        | 100 Feet        | ROW        | 50 Feet        | 100 Feet        |  |
| Existing                                 |                 |           |            |            |                |                 |            |                |                 |  |
| <b>Roadway/Segment</b>                   | <b>AM</b>       | <b>PM</b> | <b>ADT</b> | <b>ROW</b> | <b>50 Feet</b> | <b>100 Feet</b> | <b>ROW</b> | <b>50 Feet</b> | <b>100 Feet</b> |  |
| Patricia Avenue, South of Pico Boulevard | 564             | 668       | 0          | 65.1       | 60.5           | 58.3            | 66.3       | 61.7           | 59.5            |  |
| Manning Avenue, West of Motor Avenue     | 886             | 880       | 0          | 66.4       | 61.7           | 59.5            | 67.6       | 62.9           | 60.8            |  |
| Motor Avenue, North of Manning Avenue    | 1430            | 1727      | 0          | 68.0       | 64.1           | 62.1            | 69.2       | 65.3           | 63.3            |  |
| Manning Avenue, East of Motor Avenue     | 1050            | 1160      | 0          | 66.3       | 62.4           | 60.4            | 67.5       | 63.6           | 61.6            |  |
| Motor Avenue, South of Manning Avenue    | 1578            | 1725      | 0          | 68.0       | 64.1           | 62.1            | 69.2       | 65.3           | 63.3            |  |
| Future No. Project                       |                 |           |            |            |                |                 |            |                |                 |  |
| <b>Roadway/Segment</b>                   | <b>AM</b>       | <b>PM</b> | <b>ADT</b> | <b>ROW</b> | <b>50 Feet</b> | <b>100 Feet</b> | <b>ROW</b> | <b>50 Feet</b> | <b>100 Feet</b> |  |
| Patricia Avenue, South of Pico Boulevard | 606             | 714       | 0          | 65.4       | 60.7           | 58.6            | 66.6       | 62.0           | 59.8            |  |
| Manning Avenue, West of Motor Avenue     | 983             | 959       | 0          | 66.8       | 62.1           | 59.9            | 68.0       | 63.3           | 61.2            |  |
| Motor Avenue, North of Manning Avenue    | 1648            | 1917      | 0          | 68.5       | 64.6           | 62.6            | 69.7       | 65.8           | 63.8            |  |
| Manning Avenue, East of Motor Avenue     | 1217            | 1289      | 0          | 66.7       | 62.9           | 60.8            | 68.0       | 64.1           | 62.1            |  |
| Motor Avenue, South of Manning Avenue    | 1666            | 1877      | 0          | 68.4       | 64.5           | 62.5            | 69.6       | 65.7           | 63.7            |  |
| Future With Project                      |                 |           |            |            |                |                 |            |                |                 |  |
| <b>Roadway/Segment</b>                   | <b>AM</b>       | <b>PM</b> | <b>ADT</b> | <b>ROW</b> | <b>50 Feet</b> | <b>100 Feet</b> | <b>ROW</b> | <b>50 Feet</b> | <b>100 Feet</b> |  |
| Patricia Avenue, South of Pico Boulevard | 606             | 714       | 0          | 65.4       | 60.7           | 58.6            | 66.6       | 62.0           | 59.8            |  |
| Manning Avenue, West of Motor Avenue     | 983             | 959       | 0          | 66.8       | 62.1           | 59.9            | 68.0       | 63.3           | 61.2            |  |
| Motor Avenue, North of Manning Avenue    | 1651            | 1908      | 0          | 68.4       | 64.6           | 62.5            | 69.7       | 65.8           | 63.8            |  |
| Manning Avenue, East of Motor Avenue     | 1217            | 1289      | 0          | 66.7       | 62.9           | 60.8            | 68.0       | 64.1           | 62.1            |  |
| Motor Avenue, South of Manning Avenue    | 1669            | 1868      | 0          | 68.4       | 64.5           | 62.5            | 69.6       | 65.7           | 63.7            |  |

| Roadway/Segment                          | 50 ft. from ROW   |                      | At ROW            |                      |
|--|-------------------|----------------------|-------------------|----------------------|
|  | Project Increment | Cumulative Increment | Project Increment | Cumulative Increment |
| Patricia Avenue, South of Pico Boulevard | 0.0               | 0.3                  | 0.0               | 0.3                  |
| Manning Avenue, West of Motor Avenue     | 0.0               | 0.4                  | 0.0               | 0.4                  |
| Motor Avenue, North of Manning Avenue    | 0.0               | 0.5                  | 0.0               | 0.5                  |
| Manning Avenue, East of Motor Avenue     | 0.0               | 0.5                  | 0.0               | 0.5                  |
| Motor Avenue, South of Manning Avenue    | 0.0               | 0.4                  | 0.0               | 0.4                  |

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| Roadway/Segment                                  | Existing        |           |            |            |                |                 | Future With Project |                |                 |            |                |                 |
|--|-----------------|-----------|------------|------------|----------------|-----------------|---------------------|----------------|-----------------|------------|----------------|-----------------|
|  | Traffic Volumes |           |            | Leq        |                |                 | Traffic Volumes     |                |                 | Leq        |                |                 |
|  | AM              | PM        | ADT        | ROW        | 50 Feet        | 100 Feet        | ROW                 | 50 Feet        | 100 Feet        | ROW        | 50 Feet        | 100 Feet        |
| Spalding Drive, North of Olympic Boulevard       | 901             | 913       | 0          | 66.4       | 61.8           | 59.6            | 67.6                | 63.0           | 60.8            | 68.5       | 63.8           | 61.7            |
| Olympic Boulevard, East of Spalding Drive        | 5089            | 5235      | 0          | 71.8       | 68.5           | 66.6            | 73.0                | 69.7           | 67.8            | 77.5       | 70.2           | 68.3            |
| Club View Drive, North of Santa Monica Boulevard | -               | -         | 0          | -          | -              | -               | -                   | -              | -               | -          | -              | -               |
| Galaxy Way, East of Avenue of the Stars          | 670             | 482       | 0          | 65.1       | 60.5           | 58.3            | 66.3                | 61.7           | 59.5            | 73.7       | 69.0           | 66.9            |
| Empyrean Way, West of Avenue of the Stars        | 79              | 76        | 0          | 55.8       | 51.2           | 49.0            | 57.0                | 52.4           | 50.2            | 67.7       | 63.0           | 60.9            |
| <b>Roadway/Segment</b>                           | <b>AM</b>       | <b>PM</b> | <b>ADT</b> | <b>ROW</b> | <b>50 Feet</b> | <b>100 Feet</b> | <b>ROW</b>          | <b>50 Feet</b> | <b>100 Feet</b> | <b>ROW</b> | <b>50 Feet</b> | <b>100 Feet</b> |
| Spalding Drive, North of Olympic Boulevard       | 1073            | 1102      | 0          | 67.3       | 62.6           | 60.4            | 68.5                | 63.8           | 61.7            | 77.5       | 70.2           | 68.3            |
| Olympic Boulevard, East of Spalding Drive        | 5757            | 5881      | 0          | 72.3       | 69.0           | 67.1            | 73.5                | 69.7           | 67.8            | 83.7       | 79.0           | 76.9            |
| Club View Drive, North of Santa Monica Boulevard | 221             | 364       | 0          | 62.4       | 57.8           | 55.6            | 63.7                | 59.0           | 56.8            | 77.7       | 73.0           | 70.9            |
| Galaxy Way, East of Avenue of the Stars          | 916             | 674       | 0          | 66.4       | 61.8           | 59.6            | 67.7                | 63.0           | 60.9            | 78.7       | 74.0           | 71.9            |
| Empyrean Way, West of Avenue of the Stars        | 116             | 99        | 0          | 57.5       | 52.9           | 50.7            | 58.7                | 54.1           | 51.9            | 73.7       | 69.0           | 66.9            |
| <b>Roadway/Segment</b>                           | <b>AM</b>       | <b>PM</b> | <b>ADT</b> | <b>ROW</b> | <b>50 Feet</b> | <b>100 Feet</b> | <b>ROW</b>          | <b>50 Feet</b> | <b>100 Feet</b> | <b>ROW</b> | <b>50 Feet</b> | <b>100 Feet</b> |
| Spalding Drive, North of Olympic Boulevard       | 1073            | 1102      | 0          | 67.3       | 62.6           | 60.4            | 68.5                | 63.8           | 61.7            | 77.5       | 70.2           | 68.3            |
| Olympic Boulevard, East of Spalding Drive        | 5760            | 5852      | 0          | 72.3       | 69.0           | 67.1            | 73.5                | 69.7           | 67.8            | 83.7       | 79.0           | 76.9            |
| Club View Drive, North of Santa Monica Boulevard | 221             | 364       | 0          | 62.4       | 57.8           | 55.6            | 63.7                | 59.0           | 56.8            | 77.7       | 73.0           | 70.9            |
| Galaxy Way, East of Avenue of the Stars          | 916             | 674       | 0          | 66.4       | 61.8           | 59.6            | 67.7                | 63.0           | 60.9            | 78.7       | 74.0           | 71.9            |
| Empyrean Way, West of Avenue of the Stars        | 116             | 99        | 0          | 57.5       | 52.9           | 50.7            | 58.7                | 54.1           | 51.9            | 73.7       | 69.0           | 66.9            |

| Roadway/Segment                                  | 50 ft. from ROW                            |                      |                   | At ROW               |                   |                      |
|--|--|----------------------|-------------------|----------------------|-------------------|----------------------|
|  | Project Increment                          | Cumulative Increment | Project Increment | Cumulative Increment | Project Increment | Cumulative Increment |
|  | Spalding Drive, North of Olympic Boulevard | 0.0                  | 0.8               | 0.0                  | 0.9               | 0.0                  |
| Olympic Boulevard, East of Spalding Drive        | 0.0  | 0.5                  | 0.0               | 0.5                  | 0.0               | 0.5                  |
| Club View Drive, North of Santa Monica Boulevard | 0.0  | -                    | 0.0               | -                    | 0.0               | -                    |
| Galaxy Way, East of Avenue of the Stars          | 0.0  | 1.3                  | 0.0               | 1.4                  | 0.0               | 1.4                  |
| Empyrean Way, West of Avenue of the Stars        | 0.0  | 1.7                  | 0.0               | 1.7                  | 0.0               | 1.7                  |

Century City Residential  
TENS Analysis

| Existing | Roadway/Segment   | Traffic Volumes |           |            |            | Leq        |                 |            | CNEL           |                 |            |                 |          |
|----------|---|-----------------|-----------|------------|------------|------------|-----------------|------------|----------------|-----------------|------------|-----------------|----------|
|          |   | AM              |           | PM         |            | ADT        |                 | ROW        | 50 Feet        | 100 Feet        | ROW        | 50 Feet         | 100 Feet |
|          |   | AM              | PM        | ADT        | ADT        | ROW        | 50 Feet         | 100 Feet   | ROW            | 50 Feet         | 100 Feet   |                 |          |
|          | Constellation Boulevard, between Century Park West and Avenue of the Stars    | 1332            | 1805      | 0          | 68.9       | 64.6       | 62.5            | 70.1       | 65.8           | 63.7            |            |                 |          |
|          | Constellation Boulevard, between Avenue of the Stars and Century Park East    | 1298            | 1587      | 0          | 68.4       | 64.0       | 61.9            | 69.6       | 65.3           | 63.1            |            |                 |          |
|          | Avenue of the Stars, between Santa Monica Boulevard (south) and Constellation | 2688            | 2841      | 0          | 70.9       | 66.6       | 64.4            | 72.1       | 67.8           | 65.7            |            |                 |          |
|          | Avenue of the Stars, between Constellation Boulevard and Olympic Boulevard    | 2723            | 2907      | 0          | 71.0       | 66.7       | 64.5            | 72.2       | 67.9           | 65.8            |            |                 |          |
|          | Future No. Project  |                 |           |            |            |            |                 |            |                |                 |            |                 |          |
|          | <b>Roadway/Segment</b>  | <b>AM</b>       | <b>PM</b> | <b>ADT</b> | <b>ROW</b> | <b>Leq</b> | <b>100 Feet</b> | <b>ROW</b> | <b>50 Feet</b> | <b>100 Feet</b> | <b>ROW</b> | <b>100 Feet</b> |          |
|          | Constellation Boulevard, between Century Park West and Avenue of the Stars    | 1362            | 1816      | 0          | 68.9       | 64.6       | 62.5            | 70.2       | 65.8           | 63.7            |            |                 |          |
|          | Constellation Boulevard, between Avenue of the Stars and Century Park East    | 1778            | 1720      | 0          | 68.8       | 64.5       | 62.4            | 70.1       | 65.7           | 63.6            |            |                 |          |
|          | Avenue of the Stars, between Santa Monica Boulevard (south) and Constellation | 3052            | 3168      | 0          | 71.4       | 67.0       | 64.9            | 72.6       | 68.3           | 66.1            |            |                 |          |
|          | Avenue of the Stars, between Constellation Boulevard and Olympic Boulevard    | 3245            | 3247      | 0          | 71.5       | 67.2       | 65.0            | 72.7       | 68.4           | 66.2            |            |                 |          |
|          | Future With Project   |                 |           |            |            |            |                 |            |                |                 |            |                 |          |
|          | <b>Roadway/Segment</b>  | <b>AM</b>       | <b>PM</b> | <b>ADT</b> | <b>ROW</b> | <b>Leq</b> | <b>100 Feet</b> | <b>ROW</b> | <b>50 Feet</b> | <b>100 Feet</b> | <b>ROW</b> | <b>100 Feet</b> |          |
|          | Constellation Boulevard, between Century Park West and Avenue of the Stars    | 1364            | 1808      | 0          | 68.9       | 64.6       | 62.5            | 70.1       | 65.8           | 63.7            |            |                 |          |
|          | Constellation Boulevard, between Avenue of the Stars and Century Park East    | 1818            | 1750      | 0          | 68.9       | 64.6       | 62.5            | 70.2       | 65.8           | 63.7            |            |                 |          |
|          | Avenue of the Stars, between Santa Monica Boulevard (south) and Constellation | 3013            | 3050      | 0          | 71.2       | 66.9       | 64.8            | 72.4       | 68.1           | 66.0            |            |                 |          |
|          | Avenue of the Stars, between Constellation Boulevard and Olympic Boulevard    | 3259            | 3206      | 0          | 71.5       | 67.2       | 65.0            | 72.7       | 68.4           | 66.3            |            |                 |          |

| Summary | 50 ft. from ROW |           |            |           | At ROW    |           |            |  |
|---------|-----------------|-----------|------------|-----------|-----------|-----------|------------|--|
|         | Project         |           | Cumulative |           | Project   |           | Cumulative |  |
|         | Increment       | Increment | Increment  | Increment | Increment | Increment | Increment  |  |
|         | 0.0             | 0.0       | 0.0        | -0.1      | 0.0       | 0.0       | 0.0        |  |
|         | 0.1             | 0.5       | 0.1        | 0.1       | 0.6       | 0.6       | 0.6        |  |
|         | -0.2            | 0.3       | -0.2       | -0.2      | 0.3       | 0.3       | 0.3        |  |
|         | 0.0             | 0.5       | 0.0        | 0.0       | 0.5       | 0.5       | 0.5        |  |



APPENDIX F  
HAZARDOUS SITE RECORDS SEARCH



APPENDIX F-1  
PHASE I ENVIRONMENTAL SITE ASSESSMENT  
RECORDS REVIEW

# GeoKinetics

Geotechnical &  
Environmental Engineers

15510 Rockfield Blvd., Suite C3  
Irvine, CA 92618

Tel 949.580.1818, Fax 949.580.1819  
E-Mail: geokinetics@appliedgeokinetics.com

April 8, 2005

Maria Hoyer  
Latham & Watkins  
633 West Fifth Street, Suite 4000  
Los Angeles, California 90071

**SUBJECT: PHASE I ENVIRONMENTAL SITE ASSESSMENT RECORDS REVIEW  
FOR 10131 CONSTELLATION BOULEVARD AND SURROUNDING  
PROPERTIES, CENTURY CITY, CALIFORNIA**

Dear Ms. Hoyer:

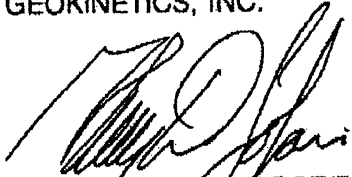
As requested, we have obtained a summary of the readily available environmental records for the above referenced site and the surrounding properties within a ¼ to ½-mile search radius. This summary was prepared by Environmental Data Resources Inc. (EDR) in accordance with ASTM E1527-00 guidelines for environmental site assessments. A copy of the EDR records summary is attached for your reference.

The subject property was not listed in any of the 52 data bases that were researched. Eleven of the surrounding properties or facilities were listed as "Small Quantity Generators" in the RCRA database. However there was no indication of any spills, releases or contamination on the adjacent properties that could impact the subject site. A Chevron service station located at 9975 Santa Monica Boulevard was identified as a Leaking Underground Storage Tank (LUST) site in a State database. That facility is located a considerable distance from the subject property (several hundred feet to the northeast). Accordingly, the reported release is not likely to have any impact on the subject property. Furthermore, the database summary indicates the Chevron release was investigated and the case was subsequently closed on December 22, 1992. Four additional LUST sites were identified in the databases that were researched. However, each of these facilities is reported to be downgradient of, and at a considerable distance from, the subject property.

Based upon our review of the EDR environmental data base summary, there do not appear to be any identified environmental conditions that have a potential to impact the subject property.

We hope this information is helpful to you. Please do not hesitate to contact the undersigned if you have any questions or comments.

Sincerely,  
GEOKINETICS, INC.



Glenn D. Tofani, GE/RCE/REA  
Principal Engineer



attachment



APPENDIX F-2  
PHASE I ENVIRONMENTAL SITE ASSESSMENT  
RECORDS SEARCH





**EDR™** Environmental  
Data Resources Inc

## **The EDR Radius Map with GeoCheck®**

**Urban Development  
10131 Constellation Boulevard  
Century City, CA 90067**

**Inquiry Number: 01380800.1r**

**March 16, 2005**

## **The Standard in Environmental Risk Management Information**

440 Wheelers Farms Road  
Milford, Connecticut 06460

### **Nationwide Customer Service**

Telephone: 1-800-352-0050  
Fax: 1-800-231-6802  
Internet: [www.edrnet.com](http://www.edrnet.com)



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*Thank you for your business.*  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

### TARGET PROPERTY INFORMATION

#### ADDRESS

10131 CONSTELLATION BOULEVARD  
CENTURY CITY, CA 90067

#### COORDINATES

Latitude (North): 34.059300 - 34° 3' 33.5"  
Longitude (West): 118.415800 - 118° 24' 56.9"  
Universal Transverse Mercator: Zone 11  
UTM X (Meters): 369336.9  
UTM Y (Meters): 3769440.8  
Elevation: 282 ft. above sea level

### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: 34118-A4 BEVERLY HILLS, CA  
Source: USGS 7.5 min quad index

### TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

### DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ( "reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

### FEDERAL ASTM STANDARD

**NPL**..... National Priority List  
**Proposed NPL**..... Proposed National Priority List Sites  
**CERCLIS**..... Comprehensive Environmental Response, Compensation, and Liability Information System  
**CERC-NFRAP**..... CERCLIS No Further Remedial Action Planned  
**CORRACTS**..... Corrective Action Report  
**RCRA-TSDF**..... Resource Conservation and Recovery Act Information  
**ERNS**..... Emergency Response Notification System

### STATE ASTM STANDARD

**AWP**..... Annual Workplan Sites

## EXECUTIVE SUMMARY

|                                |  |
|--------------------------------|--|
| <b>Cal-Sites</b> .....         | Calsites Database                                    |
| <b>CHMIRS</b> .....            | California Hazardous Material Incident Report System |
| <b>Notify 65</b> .....         | Proposition 65 Records                               |
| <b>Toxic Pits</b> .....        | Toxic Pits Cleanup Act Sites                         |
| <b>SWFILF</b> .....            | Solid Waste Information System                       |
| <b>WMUDS/SWAT</b> .....        | Waste Management Unit Database                       |
| <b>CA BOND EXP. PLAN</b> ..... | Bond Expenditure Plan                                |
| <b>VCP</b> .....               | Voluntary Cleanup Program Properties                 |
| <b>INDIAN UST</b> .....        | Underground Storage Tanks on Indian Land             |
| <b>INDIAN LUST</b> .....       | Leaking Underground Storage Tanks on Indian Land     |

### FEDERAL ASTM SUPPLEMENTAL

|                            |   |
|----------------------------|---|
| <b>CONSENT</b> .....       | Superfund (CERCLA) Consent Decrees  |
| <b>ROD</b> .....           | Records Of Decision   |
| <b>Delisted NPL</b> .....  | National Priority List Deletions  |
| <b>FINDS</b> .....         | Facility Index System/Facility Identification Initiative Program Summary Report   |
| <b>HMIRS</b> .....         | Hazardous Materials Information Reporting System  |
| <b>MLTS</b> .....          | Material Licensing Tracking System  |
| <b>MINES</b> .....         | Mines Master Index File   |
| <b>NPL Liens</b> .....     | Federal Superfund Liens   |
| <b>PADS</b> .....          | PCB Activity Database System  |
| <b>UMTRA</b> .....         | Uranium Mill Tailings Sites   |
| <b>ODI</b> .....           | Open Dump Inventory   |
| <b>FUDS</b> .....          | Formerly Used Defense Sites   |
| <b>DOD</b> .....           | Department of Defense Sites   |
| <b>INDIAN RESERV</b> ..... | Indian Reservations   |
| <b>RAATS</b> .....         | RCRA Administrative Action Tracking System  |
| <b>TRIS</b> .....          | Toxic Chemical Release Inventory System   |
| <b>TSCA</b> .....          | Toxic Substances Control Act  |
| <b>SSTS</b> .....          | Section 7 Tracking Systems  |
| <b>FTTS INSP</b> .....     | FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) |

### STATE OR LOCAL ASTM SUPPLEMENTAL

|                                     |   |
|-------------------------------------|---|
| <b>AST</b> .....                    | Aboveground Petroleum Storage Tank Facilities     |
| <b>CLEANERS</b> .....               | Cleaner Facilities                                |
| <b>CA WDS</b> .....                 | Waste Discharge System                            |
| <b>DEED</b> .....                   | Deed Restriction Listing                          |
| <b>NFE</b> .....                    | Properties Needing Further Evaluation             |
| <b>SCH</b> .....                    | School Property Evaluation Program                |
| <b>EMI</b> .....                    | Emissions Inventory Data                          |
| <b>REF</b> .....                    | Unconfirmed Properties Referred to Another Agency |
| <b>NFA</b> .....                    | No Further Action Determination                   |
| <b>HAZNET</b> .....                 | Facility and Manifest Data                        |
| <b>LOS ANGELES CO. HMS</b> .....    | HMS: Street Number List                           |
| <b>LA Co. Site Mitigation</b> ..... | Site Mitigation List                              |
| <b>AOCONCERN</b> .....              | San Gabriel Valley Areas of Concern               |

### EDR PROPRIETARY HISTORICAL DATABASES

|                       |  |
|-----------------------|--|
| <b>Coal Gas</b> ..... | Former Manufactured Gas (Coal Gas) Sites |
|-----------------------|--|

### BROWNFIELDS DATABASES

|                             |                                |
|-----------------------------|--------------------------------|
| <b>US BROWNFIELDS</b> ..... | A Listing of Brownfields Sites |
|-----------------------------|--------------------------------|



# EXECUTIVE SUMMARY

VCP..... Voluntary Cleanup Program Properties

## SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

## FEDERAL ASTM STANDARD

**RCRAInfo:** RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act ( RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-LQG list, as provided by EDR, and dated 11/23/2004 has revealed that there is 1 RCRA-LQG site within approximately 0.25 miles of the target property.

| <u>Equal/Higher Elevation</u>                | <u>Address</u>                        | <u>Dist / Dir</u>           | <u>Map ID</u>     | <u>Page</u>      |
|--|---------------------------------------|-----------------------------|-------------------|------------------|
| <b><i>CENTURY CITY NORTH OFFICE BLDG</i></b> | <b><i>10100 SANTA MONICA BLVD</i></b> | <b><i>1/8 - 1/4 NNW</i></b> | <b><i>G29</i></b> | <b><i>40</i></b> |

**RCRAInfo:** RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act ( RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-SQG list, as provided by EDR, and dated 11/23/2004 has revealed that there are

## EXECUTIVE SUMMARY

11 RCRA-SQG sites within approximately 0.25 miles of the target property.

| <u>Equal/Higher Elevation</u>         | <u>Address</u>                 | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
|---------------------------------------|--------------------------------|----------------------|---------------|-------------|
| <b>1900/1901 AVE OF THE STARS #67</b> | <b>1901 AVE OF THE STARS</b>   | <b>0 - 1/8 S</b>     | <b>A1</b>     | <b>6</b>    |
| <b>CENTURY PLAZA HOTEL AND TOWER</b>  | <b>2025 AVE OF THE STARS</b>   | <b>1/8 - 1/4 SSE</b> | <b>7</b>      | <b>11</b>   |
| <b>CENTURY PARK PLAZA</b>             | <b>1801 CENTURY E #820</b>     | <b>1/8 - 1/4 NE</b>  | <b>8</b>      | <b>11</b>   |
| <b>TARR EBER AND SILVERBERG MDS</b>   | <b>2080 CENTURY PARK E UN</b>  | <b>1/8 - 1/4 ENE</b> | <b>9</b>      | <b>13</b>   |
| <b>NORTHROP CORP</b>                  | <b>1840 CENTURY CITY PK EA</b> | <b>1/8 - 1/4 N</b>   | <b>20</b>     | <b>30</b>   |
| <b>CENTURY CITY CAR CARE</b>          | <b>1800 AVE OF THE STARS L</b> | <b>1/8 - 1/4 NW</b>  | <b>E23</b>    | <b>32</b>   |
| <u>Lower Elevation</u>                | <u>Address</u>                 | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
| <b>KIPER LASCU LTD</b>                | <b>1925 CENTURY PARK EAST</b>  | <b>1/8 - 1/4 ENE</b> | <b>B10</b>    | <b>14</b>   |
| <b>PACIFIC BELL</b>                   | <b>2010 CENTURY PARK EAST</b>  | <b>1/8 - 1/4 E</b>   | <b>B12</b>    | <b>15</b>   |
| <b>M R INSTITUTE OF CENTURY CITY</b>  | <b>2070 CENTURY PARK EAST</b>  | <b>1/8 - 1/4 E</b>   | <b>D18</b>    | <b>27</b>   |
| <b>CENTRAL PLANTS INCORPORATED</b>    | <b>2052 CENTURY PARK EAST</b>  | <b>1/8 - 1/4 ESE</b> | <b>F25</b>    | <b>35</b>   |
| <b>AGFA GEVAERT INC</b>               | <b>1801 CENTURY PARK EAST</b>  | <b>1/8 - 1/4 N</b>   | <b>31</b>     | <b>41</b>   |

### STATE ASTM STANDARD

**CORTESE:** This database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration. The source is the California Environmental Protection Agency/Office of Emergency Information.

A review of the Cortese list, as provided by EDR, has revealed that there are 3 Cortese sites within approximately 0.5 miles of the target property.

| <u>Equal/Higher Elevation</u>    | <u>Address</u>                | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
|----------------------------------|-------------------------------|----------------------|---------------|-------------|
| <b>CHEVRON</b>                   | <b>9975 SANTA MONICA BLVD</b> | <b>1/4 - 1/2 NNE</b> | <b>34</b>     | <b>48</b>   |
| <u>Lower Elevation</u>           | <u>Address</u>                | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
| <b>CENTRAL PLANTS, INC.</b>      | <b>2052 CENTURY PARK</b>      | <b>1/8 - 1/4 ESE</b> | <b>F26</b>    | <b>36</b>   |
| <b>76 PRODUCTS STATION #1715</b> | <b>10389 SANTA MONICA</b>     | <b>1/4 - 1/2 WSW</b> | <b>H36</b>    | <b>52</b>   |

**LUST:** The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 01/10/2005 has revealed that there are 5 LUST sites within approximately 0.5 miles of the target property.

| <u>Equal/Higher Elevation</u>   | <u>Address</u>                 | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
|---------------------------------|--------------------------------|----------------------|---------------|-------------|
| <b>CHEVRON</b>                  | <b>9975 SANTA MONICA BLVD</b>  | <b>1/4 - 1/2 NNE</b> | <b>34</b>     | <b>48</b>   |
| <u>Lower Elevation</u>          | <u>Address</u>                 | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
| <b>CENTRAL PLANTS, INC.</b>     | <b>2052 CENTURY PARK E</b>     | <b>1/8 - 1/4 ESE</b> | <b>F27</b>    | <b>37</b>   |
| <b>BEVERLY HILLS U S D</b>      | <b>241 MORENO DR</b>           | <b>1/4 - 1/2 NE</b>  | <b>33</b>     | <b>44</b>   |
| <b>TOSCO - 76 STATION #1715</b> | <b>10389 SANTA MONICA BLVD</b> | <b>1/4 - 1/2 WSW</b> | <b>H35</b>    | <b>50</b>   |
| <b>WEISS DEVELOPMENT</b>        | <b>10400 SANTA MONICA BLVD</b> | <b>1/4 - 1/2 WSW</b> | <b>H37</b>    | <b>53</b>   |

## EXECUTIVE SUMMARY

**UST:** The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 01/10/2005 has revealed that there are 9 UST sites within approximately 0.25 miles of the target property.

| <u>Equal/Higher Elevation</u>        | <u>Address</u>               | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
|--------------------------------------|------------------------------|----------------------|---------------|-------------|
| SHUWA INVESTMENTS                    | 1900 AVENUE OF THE STAR      | 0 - 1/8 S            | A3            | 7           |
| RESIDENCE                            | 642 RICKDALE DR              | 0 - 1/8 S            | A4            | 7           |
| JMB/CONSTELLATION INC ET AL          | 1999 AVENUE OF THE STAR      | 0 - 1/8 S            | A6            | 11          |
| <b>CENTURY PLAZA HOTEL AND TOWER</b> | <b>2025 AVE OF THE STARS</b> | <b>1/8 - 1/4 SSE</b> | <b>7</b>      | <b>11</b>   |
| <b>RESIDENCE</b>                     | <b>375 RHODE ISLAND ST</b>   | <b>1/8 - 1/4 NNE</b> | <b>C13</b>    | <b>16</b>   |
| RESIDENCE                            | 43 PRESIDIO AV               | 1/8 - 1/4 NW         | E16           | 23          |
| RESIDENCE                            | 745 43RD AV                  | 1/8 - 1/4 W          | 19            | 27          |
| <u>Lower Elevation</u>               | <u>Address</u>               | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
| RESIDENCE                            | 2760 SACRAMENTO ST           | 1/8 - 1/4 ENE        | 14            | 20          |
| CENTRAL PLANTS, INC                  | 2052 CENTURY PARK E          | 1/8 - 1/4 E          | D17           | 26          |

**CA FID:** The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, has revealed that there are 9 CA FID UST sites within approximately 0.25 miles of the target property.

| <u>Equal/Higher Elevation</u> | <u>Address</u>                 | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
|-------------------------------|--------------------------------|----------------------|---------------|-------------|
| SHUWA INVESTMENTS             | 1900 AVENUE OF THE STAR        | 0 - 1/8 S            | A2            | 7           |
| SHUWA INVESTMENTS             | 1901 AVENUE OF THE STAR        | 0 - 1/8 S            | A5            | 10          |
| <b>RESIDENCE</b>              | <b>375 RHODE ISLAND ST</b>     | <b>1/8 - 1/4 NNE</b> | <b>C13</b>    | <b>16</b>   |
| <b>NORTHROP CORP</b>          | <b>1840 CENTURY CITY PK EA</b> | <b>1/8 - 1/4 N</b>   | <b>20</b>     | <b>30</b>   |
| GATEWAY LANDOWNERS            | 1801 AVENUE OF THE STAR        | 1/8 - 1/4 NW         | E21           | 31          |
| YOSEL GOLDFINGER              | 1800 AVENUE OF THE STAR        | 1/8 - 1/4 NW         | E22           | 31          |
| AP PROPERTIES LTD/C           | 1999 AVENUE OF THE STAR        | 1/8 - 1/4 SSE        | 28            | 39          |
| MB PROPERTIES                 | 10100 SANTA MONICA BLVD        | 1/8 - 1/4 NNW        | G30           | 40          |
| <u>Lower Elevation</u>        | <u>Address</u>                 | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
| <b>CENTURY PLAZA TOWERS</b>   | <b>2049 CENTURY PARK EAST</b>  | <b>1/8 - 1/4 ESE</b> | <b>F24</b>    | <b>33</b>   |

**HIST UST:** Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 6 HIST UST sites within approximately 0.25 miles of the target property.

| <u>Equal/Higher Elevation</u> | <u>Address</u>                 | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
|-------------------------------|--------------------------------|----------------------|---------------|-------------|
| RANCHO VALLECITO              | 1888 CENTURY PARK E            | 1/8 - 1/4 NNE        | C11           | 14          |
| <b>RESIDENCE</b>              | <b>375 RHODE ISLAND ST</b>     | <b>1/8 - 1/4 NNE</b> | <b>C13</b>    | <b>16</b>   |
| <b>NORTHROP CORP</b>          | <b>1840 CENTURY CITY PK EA</b> | <b>1/8 - 1/4 N</b>   | <b>20</b>     | <b>30</b>   |
| <u>Lower Elevation</u>        | <u>Address</u>                 | <u>Dist / Dir</u>    | <u>Map ID</u> | <u>Page</u> |
| <b>PACIFIC BELL</b>           | <b>2010 CENTURY PARK EAST</b>  | <b>1/8 - 1/4 E</b>   | <b>B12</b>    | <b>15</b>   |
| CENTURY PLAZA TOWERS          | 2029/2049 CENTURY PARK         | 1/8 - 1/4 E          | D15           | 23          |

## EXECUTIVE SUMMARY

| <u>Lower Elevation</u>             | <u>Address</u>                | <u>Dist / Dir</u>   | <u>Map ID</u> | <u>Page</u> |
|------------------------------------|-------------------------------|---------------------|---------------|-------------|
| <i>CENTRAL PLANTS INCORPORATED</i> | <i>2052 CENTURY PARK EAST</i> | <i>1/8 - 1/4ESE</i> | <i>F25</i>    | <i>35</i>   |

### STATE OR LOCAL ASTM SUPPLEMENTAL

**CA SLIC:** SLIC Region comes from the California Regional Water Quality Control Board.

A review of the CA SLIC list, as provided by EDR, has revealed that there is 1 CA SLIC site within approximately 0.5 miles of the target property.

| <u>Equal/Higher Elevation</u> | <u>Address</u>                 | <u>Dist / Dir</u> | <u>Map ID</u> | <u>Page</u> |
|-------------------------------|--------------------------------|-------------------|---------------|-------------|
| <i>BEVERLY CREST CLEANERS</i> | <i>10301 SANTA MONICA BLVD</i> | <i>1/4 - 1/2W</i> | <i>32</i>     | <i>41</i>   |

## EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name

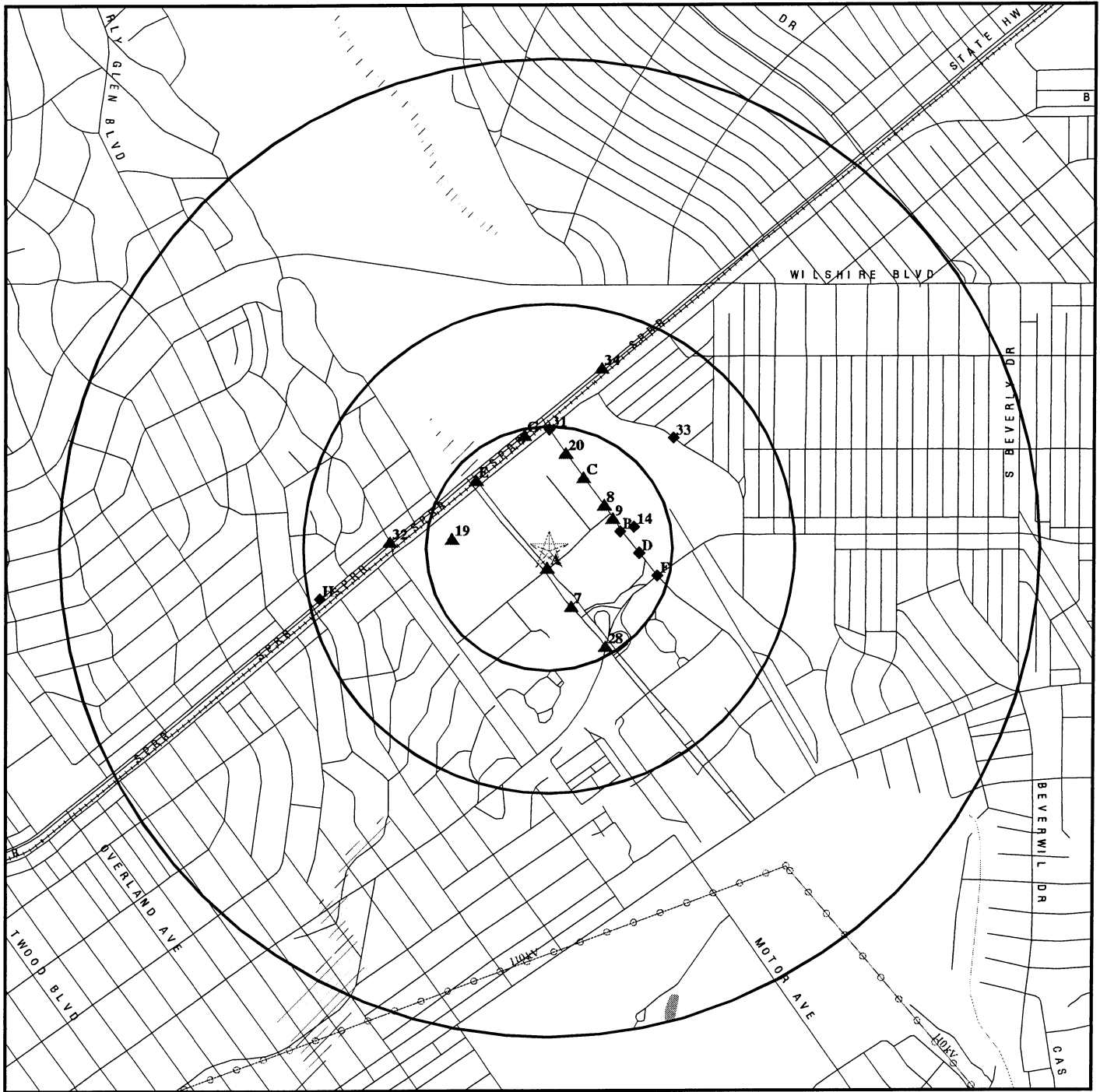
THOUSAND OAKS COUNTY 1962

Database(s)

SWF/LF



# OVERVIEW MAP - 01380800.1r - Geokinetics



★ Target Property

▲ Sites at elevations higher than or equal to the target property

◆ Sites at elevations lower than the target property

▲ Coal Gasification Sites

▨ National Priority List Sites

▨ Landfill Sites

▨ Dept. Defense Sites

▨ Indian Reservations BIA

— Power transmission lines

— Oil & Gas pipelines

▨ 100-year flood zone

▨ 500-year flood zone

▨ Federal Wetlands

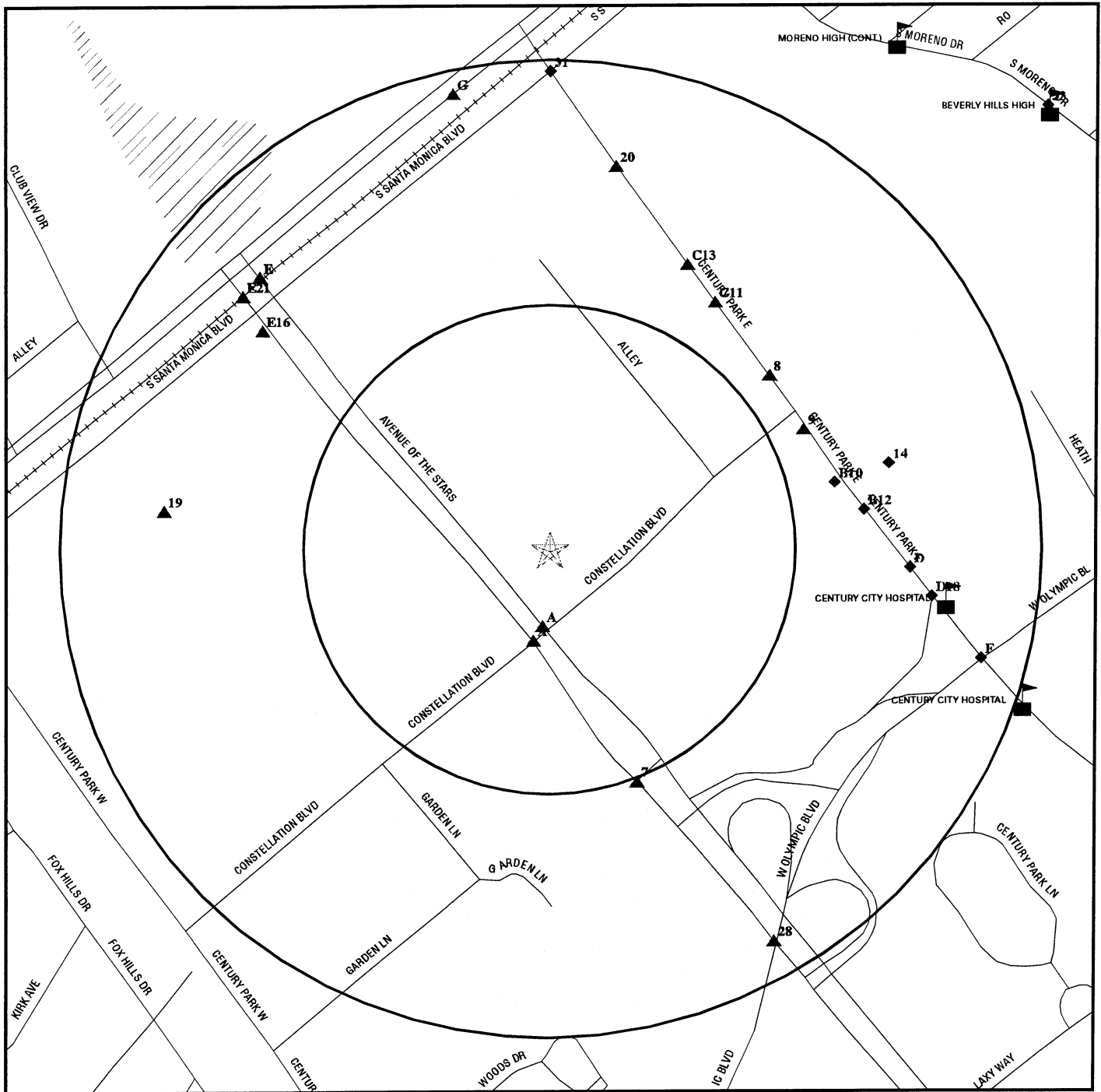
▨ Areas of Concern



TARGET PROPERTY: Urban Development  
 ADDRESS: 10131 Constellation Boulevard  
 CITY/STATE/ZIP: Century City CA 90067  
 LAT/LONG: 34.0593 / 118.4158

CUSTOMER: Geokinetics  
 CONTACT: JoLynn Tofani  
 INQUIRY #: 01380800.1r  
 DATE: March 16, 2005 7:59 pm

# DETAIL MAP - 01380800.1r - Geokinetics



|   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>☆ Target Property</li> <li>▲ Sites at elevations higher than or equal to the target property</li> <li>◆ Sites at elevations lower than the target property</li> <li>▲ Coal Gasification Sites</li> <li>■ Sensitive Receptors</li> <li>■ National Priority List Sites</li> <li>■ Landfill Sites</li> <li>■ Dept. Defense Sites</li> </ul> | <ul style="list-style-type: none"> <li>■ Indian Reservations BIA</li> <li>— Oil &amp; Gas pipelines</li> <li>▨ 100-year flood zone</li> <li>▨ 500-year flood zone</li> </ul> | <ul style="list-style-type: none"> <li>■ Areas of Concern</li> </ul> |
|---|--|--|

0      1/16      1/8      1/4 Miles

|   |   |
|---|---|
| <b>TARGET PROPERTY:</b> Urban Development<br><b>ADDRESS:</b> 10131 Constellation Boulevard<br><b>CITY/STATE/ZIP:</b> Century City CA 90067<br><b>LAT/LONG:</b> 34.0593 / 118.4158 | <b>CUSTOMER:</b> Geokinetics<br><b>CONTACT:</b> JoLynn Tofani<br><b>INQUIRY #:</b> 01380800.1r<br><b>DATE:</b> March 16, 2005 7:59 pm |
|---|---|



## MAP FINDINGS SUMMARY

| Database                                | Target Property | Search Distance (Miles) | < 1/8 | 1/8 - 1/4 | 1/4 - 1/2 | 1/2 - 1 | > 1 | Total Plotted |
|---|-----------------|-------------------------|-------|-----------|-----------|---------|-----|---------------|
| <b><u>FEDERAL ASTM STANDARD</u></b>     |                 |                         |       |           |           |         |     |               |
| NPL                                     |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| Proposed NPL                            |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| CERCLIS                                 |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| CERC-NFRAP                              |                 | 0.250                   | 0     | 0         | NR        | NR      | NR  | 0             |
| CORRACTS                                |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| RCRA TSD                                |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| RCRA Lg. Quan. Gen.                     |                 | 0.250                   | 0     | 1         | NR        | NR      | NR  | 1             |
| RCRA Sm. Quan. Gen.                     |                 | 0.250                   | 1     | 10        | NR        | NR      | NR  | 11            |
| ERNS                                    |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| <b><u>STATE ASTM STANDARD</u></b>       |                 |                         |       |           |           |         |     |               |
| AWP                                     |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| Cal-Sites                               |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| CHMIRS                                  |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| Cortese                                 |                 | 0.500                   | 0     | 1         | 2         | NR      | NR  | 3             |
| Notify 65                               |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| Toxic Pits                              |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| State Landfill                          |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| WMUDS/SWAT                              |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| LUST                                    |                 | 0.500                   | 0     | 1         | 4         | NR      | NR  | 5             |
| CA Bond Exp. Plan                       |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| UST                                     |                 | 0.250                   | 3     | 6         | NR        | NR      | NR  | 9             |
| VCP                                     |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| INDIAN UST                              |                 | 0.250                   | 0     | 0         | NR        | NR      | NR  | 0             |
| INDIAN LUJST                            |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| CA FID UST                              |                 | 0.250                   | 2     | 7         | NR        | NR      | NR  | 9             |
| HIST UST                                |                 | 0.250                   | 0     | 6         | NR        | NR      | NR  | 6             |
| <b><u>FEDERAL ASTM SUPPLEMENTAL</u></b> |                 |                         |       |           |           |         |     |               |
| CONSENT                                 |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| ROD                                     |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| Delisted NPL                            |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| FINDS                                   |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| HMIRS                                   |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| MLTS                                    |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| MINES                                   |                 | 0.250                   | 0     | 0         | NR        | NR      | NR  | 0             |
| NPL Liens                               |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| PADS                                    |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| UMTRA                                   |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| ODI                                     |                 | 0.500                   | 0     | 0         | 0         | NR      | NR  | 0             |
| FUDS                                    |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| DOD                                     |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| INDIAN RESERV                           |                 | 1.000                   | 0     | 0         | 0         | 0       | NR  | 0             |
| RAATS                                   |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |
| TRIS                                    |                 | TP                      | NR    | NR        | NR        | NR      | NR  | 0             |

## MAP FINDINGS SUMMARY

| <u>Database</u>                                    | <u>Target Property</u> | <u>Search Distance (Miles)</u> | <u>&lt; 1/8</u> | <u>1/8 - 1/4</u> | <u>1/4 - 1/2</u> | <u>1/2 - 1</u> | <u>&gt; 1</u> | <u>Total Plotted</u> |
|--|------------------------|--------------------------------|-----------------|------------------|------------------|----------------|---------------|----------------------|
| TSCA   |                        | TP                             | NR              | NR               | NR               | NR             | NR            | 0                    |
| SSTS   |                        | TP                             | NR              | NR               | NR               | NR             | NR            | 0                    |
| FTTS   |                        | TP                             | NR              | NR               | NR               | NR             | NR            | 0                    |
| <b><u>STATE OR LOCAL ASTM SUPPLEMENTAL</u></b>     |                        |                                |                 |                  |                  |                |               |                      |
| AST  |                        | TP                             | NR              | NR               | NR               | NR             | NR            | 0                    |
| CLEANERS   |                        | 0.250                          | 0               | 0                | NR               | NR             | NR            | 0                    |
| CA WDS   |                        | TP                             | NR              | NR               | NR               | NR             | NR            | 0                    |
| DEED   |                        | TP                             | NR              | NR               | NR               | NR             | NR            | 0                    |
| NFE  |                        | 0.250                          | 0               | 0                | NR               | NR             | NR            | 0                    |
| SCH  |                        | 0.250                          | 0               | 0                | NR               | NR             | NR            | 0                    |
| EMI  |                        | TP                             | NR              | NR               | NR               | NR             | NR            | 0                    |
| REF  |                        | 0.250                          | 0               | 0                | NR               | NR             | NR            | 0                    |
| NFA  |                        | 0.250                          | 0               | 0                | NR               | NR             | NR            | 0                    |
| SLIC   |                        | 0.500                          | 0               | 0                | 1                | NR             | NR            | 1                    |
| HAZNET   |                        | TP                             | NR              | NR               | NR               | NR             | NR            | 0                    |
| Los Angeles Co. HMS                                |                        | TP                             | NR              | NR               | NR               | NR             | NR            | 0                    |
| LA Co. Site Mitigation                             |                        | TP                             | NR              | NR               | NR               | NR             | NR            | 0                    |
| AOCONCERN  |                        | 1.000                          | 0               | 0                | 0                | 0              | NR            | 0                    |
| <b><u>EDR PROPRIETARY HISTORICAL DATABASES</u></b> |                        |                                |                 |                  |                  |                |               |                      |
| Coal Gas   |                        | 1.000                          | 0               | 0                | 0                | 0              | NR            | 0                    |
| <b><u>BROWNFIELDS DATABASES</u></b>                |                        |                                |                 |                  |                  |                |               |                      |
| US BROWNFIELDS                                     |                        | 0.500                          | 0               | 0                | 0                | NR             | NR            | 0                    |
| VCP  |                        | 0.500                          | 0               | 0                | 0                | NR             | NR            | 0                    |

**NOTES:**

AQUIFLOW - see EDR Physical Setting Source Addendum

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s)  
EPA ID Number  
EDR ID Number

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

A1  
South  
< 1/8  
208 ft.

1900/1901 AVE OF THE STARS #675  
1901 AVE OF THE STARS  
LOS ANGELES, CA 90067

RCRA-SQG 1000141353  
FINDS CAD981421472  
CA WDS

Site 1 of 6 in cluster A

Relative:  
Higher

Actual:  
290 ft.

RCRAInfo:  
Owner: NOT REQUIRED  
(415) 555-1212  
EPA ID: CAD981421472  
Contact: Not reported  
Classification: Small Quantity Generator  
TSDF Activities: Not reported  
Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:  
Resource Conservation and Recovery Act Information system

WDS:

Facility ID: 4 19I017296  
Facility Contact: GEORGE FLORES  
SIC Code: 0  
Agency Name: 1900 AVE OF THE STARS  
Agency Address: 1900 Avenue Of The Stars Ste 9  
Los Angeles 90067 - 4310  
Agency Contact: GEORGE FLORES  
Design Flow: 0 Million Gal/Day  
Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.  
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.  
Agency Type: Private  
Waste Type: Not reported  
Threat to Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.  
Complexity: Category C - Facilities having no waste treatment systems, such as cooling water dischargers or those who must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.  
Reclamation: Not reported  
POTW: Not reported  
NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board  
Subregion: 4

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

Site Database(s) EDR ID Number  
 EPA ID Number

**A2** **SHUWA INVESTMENTS** **CA FID UST** **S101583666**  
**South** **1900 AVENUE OF THE STARS** **N/A**  
**< 1/8** **LOS ANGELES, CA 90067**

**220 ft.**  
**Relative:**  
**Higher**

**Actual:** **291 ft.**  
**Site 2 of 6 in cluster A**  
**FID:**  
 Facility ID: 19005367 Regulate ID: Not reported  
 Reg By: Active Underground Storage Tank Location  
 Cortese Code: Not reported SIC Code: Not reported  
 Status: Active Facility Tel: (213) 000-0000  
 Mail To: Not reported  
 UNK  
 LOS ANGELES, CA 90067  
 Contact: Not reported Contact Tel: Not reported  
 DUNs No: Not reported NPDES No: Not reported  
 Creation: 10/22/93 Modified: 00/00/00  
 EPA ID: Not reported  
 Comments: Not reported

**A3** **SHUWA INVESTMENTS** **UST** **U003780095**  
**South** **1900 AVENUE OF THE STARS** **N/A**  
**< 1/8** **LOS ANGELES, CA 90067**

**220 ft.**  
**Relative:**  
**Higher**

**Actual:** **291 ft.**  
**Site 3 of 6 in cluster A**  
**State UST:**  
 Facility ID: 23571  
 Total Tanks: 1  
 Region: STATE  
 Local Agency: Los Angeles, Los Angeles County

**A4** **RESIDENCE** **UST** **U003781340**  
**South** **642 RICKDALE DR** **N/A**  
**< 1/8** **LOS ANGELES, CA 90067**

**250 ft.**  
**Relative:**  
**Higher**

**Actual:** **294 ft.**  
**Site 4 of 6 in cluster A**  
**State UST:**  
 Facility ID: 25026  
 Total Tanks: 1  
 Region: STATE  
 Local Agency: Los Angeles, Los Angeles County  
**UST San Francisco County:**  
 Facility ID: 25026 Case Number: Not reported  
 Tank ID: Not reported Owner Name: Not reported  
 Receive Date: Not reported Close Date: Not reported  
 Certified Date: 12/23/1993  
 Mailing Address: Not reported  
 Care Of Address : Not reported Number Of Tanks : Not reported  
 Local Tank Id : Not reported Tank Manufacturer Not reported  
 Compartmentalized Tank : Not reported  
 Date Tank Installed : Not reported  
 Tank Capacity : Not reported  
 # Of Tank Compartments : Not reported  
 Additional Desc : Not reported Tank Use : Not reported  
 Petroleum Type : Not reported Common Name : Not reported  
 Type Of Tank : Not reported  
 Tank Material - Primary Tank : Not reported  
 Tank Material - Secondary Tank : Not reported

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**U003781340**

|   |              |
|---|--------------|
| Tank Interior Lining/coating :                        | Not reported |
| Tank Int Lining Install Dt:                           | Not reported |
| Other Tank Corrosive Protection :                     | Not reported |
| Date Tank Corrosive Protection Install :              | Not reported |
| Type Of Spill Protection :                            |              |
| Spill Containment :                                   | Not reported |
| Drop Tube :   | Not reported |
| Striker Plate :                                       | Not reported |
| Year Overfill Protection Equipment Installed :        |              |
| Alarm :   | Not reported |
| Ball Float :  | Not reported |
| Fill Tube Shut :                                      | Not reported |
| Exempt :  | Not reported |
| Tank Leak Detection (Single Wall) :                   |              |
| Visual (Exposed Portion) :                            | Not reported |
| Automatic Tank Gauging :                              | Not reported |
| Continuous Atg :                                      | Not reported |
| Statscl Invntry Reconciliation & Biennial Tank Test : | Not reported |
| Manual Tank Gauging :                                 | Not reported |
| Vadose Zone Tank Leak Detection :                     | Not reported |
| Groundwater :   | Not reported |
| Tank Testing :  | Not reported |
| Other Detection :                                     | Not reported |
| Tank Leak Detection (Double Wall) :                   |              |
| Visual (Single Wall In Vault Only) :                  | Not reported |
| Continuous Interstitial Monitoring :                  | Not reported |
| Manual Monitoring :                                   | Not reported |
| Other Leak Detection :                                | Not reported |
| Estimated Date Last Used :                            | Not reported |
| Estimated Qty Of Substance Remaining :                | Not reported |
| Tank Filled With Inert Material :                     | Not reported |
| Piping System Type ( Underground ) :                  |              |
| Pressure :  | Not reported |
| Suction :   | Not reported |
| Gravity :   | Not reported |
| Piping System Type ( Aboveground ) :                  |              |
| Pressure :  | Not reported |
| Suction :   | Not reported |
| Gravity :   | Not reported |
| Piping Construction (Underground) :                   |              |
| Single Wall :   | Not reported |
| Double Wall :   | Not reported |
| Lined Trench :  | Not reported |
| Unknown :   | Not reported |
| Other :   | Not reported |
| Piping Manufacturer (Underground) :                   | Not reported |
| Piping Construction (Aboveground) :                   |              |
| Single Wall :   | Not reported |
| Double Wall :   | Not reported |
| Unknown :   | Not reported |
| Other :   | Not reported |
| Piping Manufacturer (Aboveground) :                   | Not reported |
| Piping Mat. And Corrosion Protection (Underground) :  |              |
| Bare Steel :  | Not reported |
| Stainless Steel :                                     | Not reported |
| Plastic Compatible With Contents :                    | Not reported |
| Fiberglass :  | Not reported |

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**U003781340**

|   |              |
|---|--------------|
| Steel W/coating :   | Not reported |
| FRP Compatible W/100% Methanol :                                | Not reported |
| Galvanized Steel :  | Not reported |
| Flexible (HDPE - High Density Polyethylene) :                   | Not reported |
| Cathodic Protection :   | Not reported |
| Unknown :   | Not reported |
| Other :   | Not reported |
| Piping Mat. & Corrosion Protec (Aboveground) :                  |              |
| Bare Steel :  | Not reported |
| Stainless Steel :   | Not reported |
| Plastic Compatible With Contents :                              | Not reported |
| Fiberglass :  | Not reported |
| Steel W/coating :   | Not reported |
| Frp Compatible W/100% Methanol :                                | Not reported |
| Galvanized Steel :  | Not reported |
| Flexible (HDPE - High Density Polyethylene) :                   | Not reported |
| Cathodic Protec :   | Not reported |
| Unknown :   | Not reported |
| Other :   | Not reported |
| Piping Leak Detection (Underground - Single Wall) :             |              |
| Electronic Line Leak Detector/ Auto Shutoff/ Alarms :           | Not reported |
| Monthly 0.2 Gph Test :  | Not reported |
| Annual Integrity Test :   | Not reported |
| Daily Visual Monitrng ,Trienn Integrity Test :                  | Not reported |
| Self Monitoring :   | Not reported |
| Biennial Integrity Test :                                       | Not reported |
| Piping Leak Detection (Secondarily Contained) :                 |              |
| Sump Sensor, Alarms ,Auto Shutoff For Leaks :                   | Not reported |
| Sump Snsr, Alm ,Auto Shutoff For Leaks, Failure, & Disconnect : | Not reported |
| Sump Sensor ,Alarms ,No Auto Shutoff :                          | Not reported |
| Pressure, Auto Leak Detctr ,Flow Shutoff Or Restrictn           | Not reported |
| Annual Integrity Test :   | Not reported |
| Suction,Gravity ,Sump Sensor,Alarms :                           | Not reported |
| Piping Leak Detection (Emergency Generators) :                  |              |
| Sump Sensor W/O Auto Shutoff /Alarms :                          | Not reported |
| Auto Leak Detector W/O Flow Shutoff Or Restrctn :               | Not reported |
| Annual Integrity Test :   | Not reported |
| Piping Leak Detecrn Abvegrnd - Emrgncy Gen - Daily Visual Chk : |              |
| Pipe Integrity Test, Underground :                              | Not reported |
| Piping Leak Detection (Aboveground - Single Wall) :             |              |
| Electronic Line Leak Detector /Auto Shutoff /Alarms :           | Not reported |
| Monthly 0.2 Gph Test :  | Not reported |
| Annual Integrity Test :   | Not reported |
| Single Wall, Pressure Daily Visual Check :                      | Not reported |
| Single Wall, Suction - Daily Visual Monitoring :                | Not reported |
| Triennial Integrity Test :                                      | Not reported |
| Self Monitoring :   | Not reported |
| Single Wall, Gravity - Daily Visual Monitoring :                | Not reported |
| Biennial Integrity Test :                                       | Not reported |
| Piping Leak Detection (Aboveground - Secondarily Contained)     |              |
| Sump Sensor, Alarms, Auto Shutoff For Leaks :                   | Not reported |
| Piping Leak Detection (Underground - Secondarily Contained)     |              |
| Sump Snsr, Alm , Auto Shutoff For Leaks, Failre & Disconct :    | Not reported |
| Sump Sensor, Alarms, No Auto Shutoff :                          | Not reported |
| Pressure - Auto Leak Detctr, Flow Shutoff /Restrctn :           | Not reported |
| Annual Integrity Test :   | Not reported |
| Suction/gravity - Sump Sensor , Alarms :                        | Not reported |

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**U003781340**

Piping Leak Detection Underground (Emergency Generators)  
 Sump Sensor Without Auto Shutoff , Alarms : Not reported  
 Auto Leak Detector W/o Flow Shutoff Or Restrctn : Not reported  
 Annual Integrity Test : Not reported  
 Daily Visual Check : Not reported  
 Pipe Integrity Test, Aboveground : Not reported  
 Date Dispenser Containment Installed : Not reported  
 Dispenser Containment Type : Not reported  
 Date Certified (Tank Unit) : Not reported  
 Owner/ Operator Name (Tank Unit) : Not reported  
 Owner/ Operator Title (Tank Unit) : Not reported  
 Permit Number : Not reported  
 Permit Approved By : Not reported  
 Permit Expiration Date : Not reported  
 Last Annual Monitoring Cert: Not reported  
 Secondary Containment Test : Not reported  
 Spill Containment Present : Not reported  
 Drop Tube Present : Not reported  
 Striker Plate Present : Not reported  
 Alarm Present : Not reported  
 Ball Float Present : Not reported  
 Fill Tube Present : Not reported  
 Other Tank Leak Detection Present : Not reported  
 UST Close ID : 1342  
 Application Date : Not reported  
 Application Name : Not reported  
 Applications : Not reported  
 2ndry Care Of Address : Not reported  
 Flag : CLOSED

**A5  
 South  
 < 1/8  
 254 ft.**

**SHUWA INVESTMENTS  
 1901 AVENUE OF THE STARS  
 LOS ANGELES, CA 90067**

**CA FID UST S101585198  
 N/A**

**Relative:  
 Higher**

**Site 5 of 6 in cluster A**

**Actual:  
 294 ft.**

FID: Facility ID: 19020933 Regulate ID: Not reported  
 Reg By: Active Underground Storage Tank Location  
 Cortese Code: Not reported SIC Code: Not reported  
 Status: Active Facility Tel: (213) 000-0000  
 Mail To: Not reported  
 UNK  
 LOS ANGELES, CA 90067  
 Contact: Not reported Contact Tel: Not reported  
 DUNs No: Not reported NPDES No: Not reported  
 Creation: 10/22/93 Modified: 00/00/00  
 EPA ID: Not reported  
 Comments: Not reported

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

Site

Database(s)      EDR ID Number  
 EPA ID Number

**A6**      **JMB/CONSTELLATION INC ET AL**  
**South**      **1999 AVENUE OF THE STARS**  
**< 1/8**      **LOS ANGELES, CA 90067**  
**254 ft.**

**UST**      **U003879579**  
                  **N/A**

**Site 6 of 6 in cluster A**

**Relative:**  
**Higher**

State UST:  
 Facility ID:      25037  
 Total Tanks:      1  
 Region:      STATE  
 Local Agency:      Los Angeles, Los Angeles County

**Actual:**  
**294 ft.**

**7**      **CENTURY PLAZA HOTEL AND TOWER**  
**SSE**      **2025 AVE OF THE STARS**  
**1/8-1/4**      **LOS ANGELES, CA 90067**  
**669 ft.**

**RCRA-SQG**      **1001404361**  
**FINDS**      **CAD040348633**  
**UST**

**Relative:**  
**Higher**

RCRAInfo:  
 Owner:      PIVOTAL CENTURY PLAZA HOTEL LLC  
                  (213) 956-7200  
 EPA ID:      CAD040348633  
 Contact:      VINCE HART  
                  (310) 551-3325

**Actual:**  
**304 ft.**

Classification:      Small Quantity Generator  
 TSDF Activities: Not reported  
 Violation Status: No violations found

**FINDS:**  
 Other Pertinent Environmental Activity Identified at Site:  
 Resource Conservation and Recovery Act Information system

State UST:  
 Facility ID:      23915  
 Total Tanks:      1  
 Region:      STATE  
 Local Agency:      Los Angeles, Los Angeles County

**8**      **CENTURY PARK PLAZA**  
**NE**      **1801 CENTURY E #820**  
**1/8-1/4**      **LOS ANGELES, CA 90067**  
**753 ft.**

**RCRA-SQG**      **1000422683**  
**FINDS**      **CAD981996861**  
**HAZNET**  
**CA WDS**

**Relative:**  
**Higher**

RCRAInfo:  
 Owner:      JMB GROUP TRUST  
                  (415) 555-1212  
 EPA ID:      CAD981996861  
 Contact:      Not reported  
 Classification:      Small Quantity Generator  
 TSDF Activities: Not reported

**Actual:**  
**284 ft.**



Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**CENTURY PARK PLAZA (Continued)**

**1000422683**

Violation Status: No violations found

**FINDS:**

Other Pertinent Environmental Activity Identified at Site:  
Resource Conservation and Recovery Act Information system

**HAZNET:**

Gepaid: CAD981996861  
TSD EPA ID: AZD983481813  
Gen County: Los Angeles  
Tsd County: 99  
Tons: 156.7608  
Waste Category: Asbestos-containing waste  
Disposal Method: Not reported  
Contact: JBM GROP TRUST III,AN IL TRUST  
Telephone: (310) 552-1801  
Mailing Address: 1801 CENTURY PARK E STE 470  
LOS ANGELES, CA 90067 - 2306  
County Los Angeles

Gepaid: CAD981996861  
TSD EPA ID: AZD983481813  
Gen County: Los Angeles  
Tsd County: 99  
Tons: 40.4544  
Waste Category:  
Disposal Method: Not reported  
Contact: JBM GROP TRUST III,AN IL TRUST  
Telephone: (310) 552-1801  
Mailing Address: 1801 CENTURY PARK E STE 470  
LOS ANGELES, CA 90067 - 2306  
County Los Angeles

Gepaid: CAD981996861  
TSD EPA ID: CAD067786749  
Gen County: Los Angeles  
Tsd County: Los Angeles  
Tons: 38.7688  
Waste Category: Asbestos-containing waste  
Disposal Method: Disposal, Land Fill  
Contact: JBM GROP TRUST III,AN IL TRUST  
Telephone: (310) 552-1801  
Mailing Address: 1801 CENTURY PARK E STE 470  
LOS ANGELES, CA 90067 - 2306  
County Los Angeles

Gepaid: CAD981996861  
TSD EPA ID: CAD067786749  
Gen County: Los Angeles  
Tsd County: Los Angeles  
Tons: .4214  
Waste Category: Asbestos-containing waste  
Disposal Method: Not reported  
Contact: JBM GROP TRUST III,AN IL TRUST  
Telephone: (310) 552-1801  
Mailing Address: 1801 CENTURY PARK E STE 470  
LOS ANGELES, CA 90067 - 2306  
County Los Angeles

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

**CENTURY PARK PLAZA (Continued)**

EDR ID Number  
 EPA ID Number

Database(s)

**1000422683**

Gepaid: CAD981996861  
 TSD EPA ID: AZD983473539  
 Gen County: Los Angeles  
 Tsd County: 99  
 Tons: .0900  
 Waste Category: Polychlorinated biphenyls and material containing PCB's  
 Disposal Method: Recycler  
 Contact: JBM GROP TRUST III,AN IL TRUST  
 Telephone: (310) 552-1801  
 Mailing Address: 1801 CENTURY PARK E STE 470  
 LOS ANGELES, CA 90067 - 2306  
 County: Los Angeles

[Click this hyperlink](#) while viewing on your computer to access  
 23 additional CA HAZNET record(s) in the EDR Site Report.

**WDS:**

Facility ID: Los Angeles River 196000514  
 Facility Contact: Margo Gangloff  
 Facility Telephone: (310) 522-1801  
 SIC Code: 6512  
 SIC Code 2: Not reported  
 Agency Name: DOUGLAS EMMETT & COMPANY  
 Agency Address: 0  
 Agency Contact: Not reported  
 Agency Phone: Not reported  
 Design Flow: 0 Million Gal/Day  
 Baseline Flow: 0 Million Gal/Day  
 Facility Type: Other - Does not fall into the category of Municipal/Domestic, Industrial, Agricultural or Solid Waste (Class I, II or III)  
 Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.  
 Agency Type: Private  
 Waste Type: Miscellaneous (Includes wastes from dewatering, recreational lake overflow, swimming pool wastes, water ride wastewater, ground water seepage and other wastes of this type) - Designated/Influent or Solid Wastes that pose a significant threat to water quality because of their high concentrations (E.G., BOD, Hardness, TRF, Chloride). 'Manageable' hazardous wastes (E.G., inorganic salts and heavy metals) are included in this category.  
 Threat to Water: 0  
 Complexity: Not reported  
 Reclamation: No reclamation requirements associated with this facility.  
 POTW: The facility is not a POTW.  
 NPDES Number: CAG994004 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board  
 Subregion: 4

9  
 ENE  
 1/8-1/4  
 754 ft.

**TARR EBER AND SILVERBERG MDS**  
**2080 CENTURY PARK E UNIT 208**  
**LOS ANGELES, CA 90067**

**RCRA-SQG 1000820397**  
**FINDS CAD983664327**

**Relative:**  
**Equal**

**Actual:**  
**282 ft.**

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

Site

Database(s)

EDR ID Number  
 EPA ID Number

**TARR EBER AND SILVERBERG MDS (Continued)**

**1000820397**

RCRAInfo:  
 Owner: TARR EBER AND SILVERBERG MDS  
 (310) 277-0808  
 EPA ID: CAD983664327  
 Contact: YVONNE THOMPSON  
 (310) 277-0253  
 Classification: Small Quantity Generator  
 TSDF Activities: Not reported  
 Violation Status: No violations found

FINDS:  
 Other Pertinent Environmental Activity Identified at Site:  
 Resource Conservation and Recovery Act Information system

**B10**  
**ENE**  
**1/8-1/4**  
**784 ft.**

**KIPER LASCU LTD**  
**1925 CENTURY PARK EAST STE2310**  
**LOS ANGELES, CA 90067**

**RCRA-SQG 1000210795**  
**FINDS CAD982024507**

**Site 1 of 2 in cluster B**

**Relative:**  
**Lower**

**Actual:**  
**280 ft.**

RCRAInfo:  
 Owner: CYNTHIA KIPER  
 (415) 555-1212  
 EPA ID: CAD982024507  
 Contact: ENVIRONMENTAL MANAGER  
 (415) 555-1212  
 Classification: Small Quantity Generator  
 TSDF Activities: Not reported  
 Violation Status: No violations found

FINDS:  
 Other Pertinent Environmental Activity Identified at Site:  
 Resource Conservation and Recovery Act Information system

**C11**  
**NNE**  
**1/8-1/4**  
**802 ft.**

**RANCHO VALLECITO**  
**1888 CENTURY PARK E**  
**LOS ANGELES, CA 90067**

**HIST UST U001562514**  
**N/A**

**Site 1 of 2 in cluster C**

**Relative:**  
**Higher**

**Actual:**  
**287 ft.**

|                 |                        |                    |                  |
|-----------------|------------------------|--------------------|------------------|
| UST HIST:       |                        | Owner Name:        | WAYNE M. HOFFMAN |
| Facility ID:    | 59181                  | Region:            | STATE            |
| Total Tanks:    | 1                      |                    |                  |
| Owner Address:  | 1888 CENTURY PARK EAST |                    |                  |
|                 | LOS ANGELES, CA 90067  |                    |                  |
| Tank Used for:  | PRODUCT                | Container Num:     | 1                |
| Tank Num:       | 1                      | Year Installed:    | Not reported     |
| Tank Capacity:  | 00000550               | Tank Construction: | Not Reported     |
| Type of Fuel:   | UNLEADED               |                    |                  |
| Leak Detection: | None                   | Telephone:         | (619) 765-1559   |
| Contact Name:   | PETE AUMAIER, MANAGER  | Other Type:        | RANCHO           |
| Facility Type:  | Other                  |                    |                  |

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation    Site

Database(s)    EDR ID Number  
 EPA ID Number

**B12**            **PACIFIC BELL**  
**East**            **2010 CENTURY PARK EAST**  
**1/8-1/4**         **LOS ANGELES, CA 90067**  
**849 ft.**

**RCRA-SQG**    **1000250356**  
**FINDS**        **CAT080023203**  
**HAZNET**  
**HIST UST**

**Site 2 of 2 in cluster B**

**Relative:**  
**Lower**

**Actual:**  
**279 ft.**

RCRAInfo:  
 Owner:            NOT REQUIRED  
                          (415) 555-1212  
 EPA ID:            CAT080023203  
 Contact:           Not reported  
 Classification:   Small Quantity Generator  
 TSDF Activities: Not reported  
 Violation Status: No violations found

**FINDS:**

Other Pertinent Environmental Activity Identified at Site:  
 HWTS-DATAMART  
 Resource Conservation and Recovery Act Information system

**HAZNET:**

Gepaid:            CAT080023203  
 TSD EPA ID:      CAD088504881  
 Gen County:      Los Angeles  
 Tsd County:      Orange  
 Tons:              1.0008  
 Waste Category: Liquids with pH <UN-> 2  
 Disposal Method: Treatment, Tank  
 Contact:           PACIFIC BELL  
 Telephone:        (925) 823-6161  
 Mailing Address: RM 3E000  
                          SAN RAMON, CA 94583 - 0995  
 County            Los Angeles

Gepaid:            CAT080023203  
 TSD EPA ID:      CAD009007626  
 Gen County:      Los Angeles  
 Tsd County:      Los Angeles  
 Tons:              0.8428  
 Waste Category: Asbestos-containing waste  
 Disposal Method: Disposal, Land Fill  
 Contact:           PACIFIC BELL  
 Telephone:        (925) 823-6161  
 Mailing Address: RM 3E000  
                          SAN RAMON, CA 94583 - 0995  
 County            Los Angeles

Gepaid:            CAT080023203  
 TSD EPA ID:      CAL000027741  
 Gen County:      Los Angeles  
 Tsd County:      5  
 Tons:              1.6856  
 Waste Category: Asbestos-containing waste  
 Disposal Method: Disposal, Land Fill  
 Contact:           PACIFIC BELL  
 Telephone:        (925) 823-6161  
 Mailing Address: RM 3E000  
                          SAN RAMON, CA 94583 - 0995  
 County            Los Angeles

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

Database(s)  
 EDR ID Number  
 EPA ID Number

**PACIFIC BELL (Continued)**

**1000250356**

Gepaid: CAT080023203  
 TSD EPA ID: CAD000088252  
 Gen County: Los Angeles  
 Tsd County: Los Angeles  
 Tons: .4128  
 Waste Category: Unspecified organic liquid mixture  
 Disposal Method: Transfer Station  
 Contact: PACIFIC BELL  
 Telephone: (925) 823-6161  
 Mailing Address: RM 3E000  
 SAN RAMON, CA 94583 - 0995  
 County: Los Angeles

Gepaid: CAT080023203  
 TSD EPA ID: CAT080013352  
 Gen County: Los Angeles  
 Tsd County: Los Angeles  
 Tons: 1.0425  
 Waste Category: Waste oil and mixed oil  
 Disposal Method: Not reported  
 Contact: PACIFIC BELL  
 Telephone: (925) 823-6161  
 Mailing Address: RM 3E000  
 SAN RAMON, CA 94583 - 0995  
 County: Los Angeles

Click this hyperlink while viewing on your computer to access 2 additional CA HAZNET record(s) in the EDR Site Report.

**UST HIST:**

|                 |   |                    |                |
|-----------------|---|--------------------|----------------|
| Facility ID:    | 61208                                       | Owner Name:        | PACIFIC BELL   |
| Total Tanks:    | 1   | Region:            | STATE          |
| Owner Address:  | 370 THIRD STREET<br>SAN FRANCISCO, CA 94107 |                    |                |
| Tank Used for:  | PRODUCT                                     |                    |                |
| Tank Num:       | 1   | Container Num:     | 1              |
| Tank Capacity:  | 00020000                                    | Year Installed:    | 1971           |
| Type of Fuel:   | DIESEL                                      | Tank Construction: | Not Reported   |
| Leak Detection: | None  |                    |                |
| Contact Name:   | E.J. KOEHLER                                | Telephone:         | (415) 542-6758 |
| Facility Type:  | Other                                       | Other Type:        | SIC 4800       |

**C13 RESIDENCE**  
**NNE 375 RHODE ISLAND ST**  
**1/8-1/4 LOS ANGELES, CA 90067**  
**853 ft.**

**UST 1000393447**  
**CA FID UST N/A**  
**HIST UST**

**Relative:**  
**Higher**

**Site 2 of 2 in cluster C**

**Actual:**  
**287 ft.**

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**1000393447**

**FID:**

|               |  |               |                |
|---------------|--|---------------|----------------|
| Facility ID:  | 19041575                                   | Regulate ID:  | 00050535       |
| Reg By:       | Inactive Underground Storage Tank Location | SIC Code:     | Not reported   |
| Cortese Code: | Not reported                               | Facility Tel: | (213) 203-0330 |
| Status:       | Inactive                                   |               |                |
| Mail To:      | Not reported                               |               |                |
|               | 2716 OCEAN PARK BLVD                       |               |                |
|               | LOS ANGELES, CA 90067                      |               |                |
| Contact:      | Not reported                               | Contact Tel:  | Not reported   |
| DUNs No:      | Not reported                               | NPDES No:     | Not reported   |
| Creation:     | 10/22/93                                   | Modified:     | 00/00/00       |
| EPA ID:       | Not reported                               |               |                |
| Comments:     | Not reported                               |               |                |

**UST HIST:**

|                 |                                |                    |                                |
|-----------------|--------------------------------|--------------------|--------------------------------|
| Facility ID:    | 50535                          | Owner Name:        | 1875/1925 CENTURY PARK EAST CO |
| Total Tanks:    | 1                              | Region:            | STATE                          |
| Owner Address:  | 2716 OCEAN PARK BOULEVARD      |                    |                                |
|                 | SANTA MONICA, CA 90406         |                    |                                |
| Tank Used for:  | PRODUCT                        | Container Num:     | 1                              |
| Tank Num:       | 1                              | Year Installed:    | 1980                           |
| Tank Capacity:  | 00001000                       | Tank Construction: | Not Reported                   |
| Type of Fuel:   | DIESEL                         |                    |                                |
| Leak Detection: | None                           | Telephone:         | (213) 203-0330                 |
| Contact Name:   | BEVERLY REGENBERG, BLDG. MANAG | Other Type:        | OFFICE BUILDINGS               |
| Facility Type:  | Other                          |                    |                                |

**State UST:**

|               |                                 |
|---------------|---------------------------------|
| Facility ID:  | 25022                           |
| Total Tanks:  | 1                               |
| Region:       | STATE                           |
| Local Agency: | Los Angeles, Los Angeles County |

**UST San Francisco County:**

|  |              |                   |              |
|--|--------------|-------------------|--------------|
| Facility ID:                             | 25022        | Case Number:      | Not reported |
| Tank ID:                                 | Not reported | Owner Name:       | Not reported |
| Receive Date:                            | Not reported | Close Date:       | Not reported |
| Certified Date:                          | Not reported |                   |              |
| Mailing Address:                         | Not reported | Number Of Tanks : | Not reported |
| Care Of Address :                        | Not reported | Tank Manufacturer | Not reported |
| Local Tank Id :                          | Not reported | Not reported      |              |
| Compartmentalized Tank :                 | Not reported | Not reported      |              |
| Date Tank Installed :                    | Not reported | Not reported      |              |
| Tank Capacity :                          | Not reported | Not reported      |              |
| # Of Tank Compartments :                 | Not reported | Tank Use :        | Not reported |
| Additional Desc :                        | Not reported | Common Name :     | Not reported |
| Petroleum Type :                         | Not reported | Not reported      |              |
| Type Of Tank :                           | Not reported | Not reported      |              |
| Tank Material - Primary Tank :           | Not reported | Not reported      |              |
| Tank Material - Secondary Tank :         | Not reported | Not reported      |              |
| Tank Interior Lining/coating :           | Not reported | Not reported      |              |
| Tank Int Lining Install Dt:              | Not reported | Not reported      |              |
| Other Tank Corrosive Protection :        | Not reported | Not reported      |              |
| Date Tank Corrosive Protection Install : | Not reported | Not reported      |              |
| Type Of Spill Protection :               | Not reported | Not reported      |              |
| Spill Containment :                      | Not reported | Not reported      |              |
| Drop Tube :                              | Not reported | Not reported      |              |
| Striker Plate :                          | Not reported | Not reported      |              |

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**1000393447**

Year Overfill Protection Equipment Installed :

- Alarm : Not reported
- Ball Float : Not reported
- Fill Tube Shut : Not reported
- Exempt : Not reported

Tank Leak Detection (Single Wall) :

- Visual (Exposed Portion) : Not reported
- Automatic Tank Gauging : Not reported
- Continuous Atg : Not reported
- Statscl Invntry Reconciliation & Biennial Tank Test : Not reported
- Manual Tank Gauging : Not reported
- Vadose Zone Tank Leak Detection : Not reported
- Groundwater : Not reported
- Tank Testing : Not reported
- Other Detection : Not reported

Tank Leak Detection (Double Wall) :

- Visual (Single Wall In Vault Only) : Not reported
- Continuous Interstitial Monitoring : Not reported
- Manual Monitoring : Not reported
- Other Leak Detection : Not reported

Estimated Date Last Used : Not reported

Estimated Qty Of Substance Remaining : Not reported

Tank Filled With Inert Material : Not reported

Piping System Type ( Underground ) :

- Pressure : Not reported
- Suction : Not reported
- Gravity : Not reported

Piping System Type ( Aboveground ) :

- Pressure : Not reported
- Suction : Not reported
- Gravity : Not reported

Piping Construction (Underground) :

- Single Wall : Not reported
- Double Wall : Not reported
- Lined Trench : Not reported
- Unknown : Not reported
- Other : Not reported

Piping Manufacturer (Underground) : Not reported

Piping Construction (Aboveground) :

- Single Wall : Not reported
- Double Wall : Not reported
- Unknown : Not reported
- Other : Not reported

Piping Manufacturer (Aboveground) : Not reported

Piping Mat. And Corrosion Protection (Underground) :

- Bare Steel : Not reported
- Stainless Steel : Not reported
- Plastic Compatible With Contents : Not reported
- Fiberglass : Not reported
- Steel W/coating : Not reported
- FRP Compatible W/100% Methanol : Not reported
- Galvanized Steel : Not reported
- Flexible (HDPE - High Density Polyethylene) : Not reported
- Cathodic Protection : Not reported
- Unknown : Not reported
- Other : Not reported

Piping Mat. & Corrosion Protec (Aboveground) :

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**1000393447**

|   |              |
|---|--------------|
| Bare Steel :  | Not reported |
| Stainless Steel :   | Not reported |
| Plastic Compatible With Contents :  | Not reported |
| Fiberglass :  | Not reported |
| Steel W/coating :   | Not reported |
| Frp Compatible W/100% Methanol :  | Not reported |
| Galvanized Steel :  | Not reported |
| Flexible (HDPE - High Density Polyethylene) :                                       | Not reported |
| Cathodic Protecctn :  | Not reported |
| Unknown :   | Not reported |
| Other :   | Not reported |
| <b>Piping Leak Detection (Underground - Single Wall) :</b>                          |              |
| Electronic Line Leak Detector/ Auto Shutoff/ Alarms :                               | Not reported |
| Monthly 0.2 Gph Test :  | Not reported |
| Annual Integrity Test :   | Not reported |
| Daily Visual Monitrng ,Trienn Integrity Test :                                      | Not reported |
| Self Monitoring :   | Not reported |
| Biennial Integrity Test :   | Not reported |
| <b>Piping Leak Detection (Secondarily Contained) :</b>                              |              |
| Sump Sensor, Alarms ,Auto Shutoff For Leaks :                                       | Not reported |
| Sump Snsr, Alm ,Auto Shutoff For Leaks, Failure, & Disconnect :                     | Not reported |
| Sump Sensor ,Alarms ,No Auto Shutoff :  | Not reported |
| Pressure, Auto Leak Detctr ,Flow Shutoff Or Restrctn :                              | Not reported |
| Annual Integrity Test :   | Not reported |
| Suction,Gravity ,Sump Sensor,Alarms :   | Not reported |
| <b>Piping Leak Detection (Emergency Generators) :</b>                               |              |
| Sump Sensor W/O Auto Shutoff /Alarms :  | Not reported |
| Auto Leak Detector W/O Flow Shutoff Or Restrctn :                                   | Not reported |
| Annual Integrity Test :   | Not reported |
| <b>Piping Leak Detectn Abvegrnd - Emrgncy Gen - Daily Visual Chk :</b> Not reported |              |
| Pipe Integrity Test, Underground :  | Not reported |
| <b>Piping Leak Detection (Aboveground - Single Wall) :</b>                          |              |
| Electronic Line Leak Detector /Auto Shutoff /Alarms :                               | Not reported |
| Monthly 0.2 Gph Test :  | Not reported |
| Annual Integrity Test :   | Not reported |
| Single Wall, Pressure Daily Visual Check :  | Not reported |
| Single Wall, Suction - Daily Visual Monitoring :                                    | Not reported |
| Triennial Integrity Test :  | Not reported |
| Self Monitoring :   | Not reported |
| Single Wall, Gravity - Daily Visual Monitoring :                                    | Not reported |
| Biennial Integrity Test :   | Not reported |
| <b>Piping Leak Detection (Aboveground - Secondarily Contained)</b>                  |              |
| Sump Sensor, Alarms, Auto Shutoff For Leaks :                                       | Not reported |
| <b>Piping Leak Detection (Underground - Secondarily Contained)</b>                  |              |
| Sump Snsr, Alm , Auto Shutoff For Leaks, Failre & Disconct :                        | Not reported |
| Sump Sensor, Alarms, No Auto Shutoff :  | Not reported |
| Pressure - Auto Leak Detctr, Flow Shutoff /Restrctn :                               | Not reported |
| Annual Integrity Test :   | Not reported |
| Suction/gravity - Sump Sensor , Alarms :  | Not reported |
| <b>Piping Leak Detection Underground (Emergency Generators)</b>                     |              |
| Sump Sensor Without Auto Shutoff , Alarms :   | Not reported |
| Auto Leak Detector W/o Flow Shutoff Or Restrctn :                                   | Not reported |
| Annual Integrity Test :   | Not reported |
| Daily Visual Check :  | Not reported |
| Pipe Integrity Test, Aboveground :  | Not reported |
| Date Dispenser Containment Installed :  | Not reported |
| Dispenser Containment Type :  | Not reported |



Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**1000393447**

Date Certified (Tank Unit) : Not reported  
 Owner/ Operator Name (Tank Unit) : Not reported  
 Owner/ Operator Title (Tank Unit) : Not reported  
 Permit Number : Not reported  
 Permit Approved By : Not reported  
 Permit Expiration Date : Not reported  
 Last Annual Monitoring Cert: Not reported  
 Secondary Containment Test : Not reported  
 Spill Containment Present : Not reported  
 Drop Tube Present : Not reported  
 Striker Plate Present : Not reported  
 Alarm Present : Not reported  
 Ball Float Present : Not reported  
 Fill Tube Present : Not reported  
 Other Tank Leak Detection Present : Not reported  
 UST Close ID : 1129  
 Application Date : 1  
 Application Name : Not reported  
 Applications : Not reported  
 2ndry Care Of Address : Not reported  
 Flag : CLOSED

**14  
 ENE  
 1/8-1/4  
 937 ft.**

**RESIDENCE  
 2760 SACRAMENTO ST  
 LOS ANGELES, CA 90067**

**UST U003879743  
 N/A**

**Relative:  
 Lower**

State UST:  
 Facility ID: 25045  
 Total Tanks: 1  
 Region: STATE  
 Local Agency: Los Angeles, Los Angeles County

**Actual:  
 281 ft.**

UST San Francisco County:  
 Facility ID: 25045 Case Number: Not reported  
 Tank ID: Not reported Owner Name: Not reported  
 Receive Date: Not reported Close Date: Not reported  
 Certified Date: 2/8/1997  
 Mailing Address: Not reported  
 Care Of Address : Not reported Number Of Tanks : Not reported  
 Local Tank Id : Not reported Tank Manufacturer Not reported  
 Compartmentalized Tank : Not reported  
 Date Tank Installed : Not reported  
 Tank Capacity : Not reported  
 # Of Tank Compartments : Not reported  
 Additional Desc : Not reported Tank Use : Not reported  
 Petroleum Type : Not reported Common Name : Not reported  
 Type Of Tank : Not reported  
 Tank Material - Primary Tank : Not reported  
 Tank Material - Secondary Tank : Not reported  
 Tank Interior Lining/coating : Not reported  
 Tank Int Lining Install Dt: Not reported  
 Other Tank Corrosive Protection : Not reported  
 Date Tank Corrosive Protection Install : Not reported  
 Type Of Spill Protection :  
 Spill Containment : Not reported  
 Drop Tube : Not reported  
 Striker Plate : Not reported  
 Year Overfill Protection Equipment Installed :

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**U003879743**

|   |              |
|---|--------------|
| Alarm :   | Not reported |
| Ball Float :  | Not reported |
| Fill Tube Shut :                                      | Not reported |
| Exempt :  | Not reported |
| Tank Leak Detection (Single Wall) :                   |              |
| Visual (Exposed Portion) :                            | Not reported |
| Automatic Tank Gauging :                              | Not reported |
| Continuous Atg :                                      | Not reported |
| Statscl Invntry Reconciliation & Biennial Tank Test : | Not reported |
| Manual Tank Gauging :                                 | Not reported |
| Vadose Zone Tank Leak Detection :                     | Not reported |
| Groundwater :   | Not reported |
| Tank Testing :  | Not reported |
| Other Detection :                                     | Not reported |
| Tank Leak Detection (Double Wall) :                   |              |
| Visual (Single Wall In Vault Only) :                  | Not reported |
| Continuous Interstitial Monitoring :                  | Not reported |
| Manual Monitoring :                                   | Not reported |
| Other Leak Detection :                                | Not reported |
| Estimated Date Last Used :                            | Not reported |
| Estimated Qty Of Substance Remaining :                | Not reported |
| Tank Filled With Inert Material :                     | Not reported |
| Piping System Type ( Underground ) :                  |              |
| Pressure :  | Not reported |
| Suction :   | Not reported |
| Gravity :   | Not reported |
| Piping System Type ( Aboveground ) :                  |              |
| Pressure :  | Not reported |
| Suction :   | Not reported |
| Gravity :   | Not reported |
| Piping Construction (Underground) :                   |              |
| Single Wall :   | Not reported |
| Double Wall :   | Not reported |
| Lined Trench :  | Not reported |
| Unknown :   | Not reported |
| Other :   | Not reported |
| Piping Manufacturer (Underground) :                   | Not reported |
| Piping Construction (Aboveground) :                   |              |
| Single Wall :   | Not reported |
| Double Wall :   | Not reported |
| Unknown :   | Not reported |
| Other :   | Not reported |
| Piping Manufacturer (Aboveground) :                   | Not reported |
| Piping Mat. And Corrosion Protection (Underground) :  |              |
| Bare Steel :  | Not reported |
| Stainless Steel :                                     | Not reported |
| Plastic Compatible With Contents :                    | Not reported |
| Fiberglass :  | Not reported |
| Steel W/coating :                                     | Not reported |
| FRP Compatible W/100% Methanol :                      | Not reported |
| Galvanized Steel :                                    | Not reported |
| Flexible (HDPE - High Density Polyethylene) :         | Not reported |
| Cathodic Protection :                                 | Not reported |
| Unknown :   | Not reported |
| Other :   | Not reported |
| Piping Mat. & Corrosion Protec (Aboveground) :        |              |
| Bare Steel :  | Not reported |

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**U003879743**

|   |              |
|---|--------------|
| Stainless Steel :   | Not reported |
| Plastic Compatible With Contents :                              | Not reported |
| Fiberglass :  | Not reported |
| Steel W/coating :   | Not reported |
| Frp Compatible W/100% Methanol :                                | Not reported |
| Galvanized Steel :  | Not reported |
| Flexible (HDPE - High Density Polyethylene) :                   | Not reported |
| Cathodic Protecن :  | Not reported |
| Unknown :   | Not reported |
| Other :   | Not reported |
| Piping Leak Detection (Underground - Single Wall) :             |              |
| Electronic Line Leak Detector/ Auto Shutoff/ Alarms :           | Not reported |
| Monthly 0.2 Gph Test :  | Not reported |
| Annual Integrity Test :   | Not reported |
| Daily Visual Monitrng ,Trienn Integrity Test :                  | Not reported |
| Self Monitoring :   | Not reported |
| Biennial Integrity Test :                                       | Not reported |
| Piping Leak Detection (Secondarily Contained) :                 |              |
| Sump Sensor, Alarms ,Auto Shutoff For Leaks :                   | Not reported |
| Sump Snsr, Alm ,Auto Shutoff For Leaks, Failure, & Disconnect : | Not reported |
| Sump Sensor ,Alarms ,No Auto Shutoff :                          | Not reported |
| Pressure, Auto Leak Detctr ,Flow Shutoff Or Restrctn            | Not reported |
| Annual Integrity Test :   | Not reported |
| Suction,Gravity ,Sump Sensor,Alarms :                           | Not reported |
| Piping Leak Detection (Emergency Generators) :                  |              |
| Sump Sensor W/O Auto Shutoff /Alarms :                          | Not reported |
| Auto Leak Detector W/O Flow Shutoff Or Restrctn :               | Not reported |
| Annual Integrity Test :   | Not reported |
| Piping Leak Detecn Abvegrnd - Emrgncy Gen - Daily Visual Chk :  | Not reported |
| Pipe Integrity Test, Underground :                              | Not reported |
| Piping Leak Detection (Aboveground - Single Wall) :             |              |
| Electronic Line Leak Detector /Auto Shutoff /Alarms :           | Not reported |
| Monthly 0.2 Gph Test :  | Not reported |
| Annual Integrity Test :   | Not reported |
| Single Wall, Pressure Daily Visual Check :                      | Not reported |
| Single Wall, Suction - Daily Visual Monitoring :                | Not reported |
| Triennial Integrity Test :                                      | Not reported |
| Self Monitoring :   | Not reported |
| Single Wall, Gravity - Daily Visual Monitoring :                | Not reported |
| Biennial Integrity Test :                                       | Not reported |
| Piping Leak Detection (Aboveground - Secondarily Contained)     |              |
| Sump Sensor, Alarms, Auto Shutoff For Leaks :                   | Not reported |
| Piping Leak Detection (Underground - Secondarily Contained)     |              |
| Sump Snsr, Alm , Auto Shutoff For Leaks, Failre & Disconct :    | Not reported |
| Sump Sensor, Alarms, No Auto Shutoff :                          | Not reported |
| Pressure - Auto Leak Detctr, Flow Shutoff /Restrctn :           | Not reported |
| Annual Integrity Test :   | Not reported |
| Suction/gravity - Sump Sensor , Alarms :                        | Not reported |
| Piping Leak Detection Underground (Emergency Generators)        |              |
| Sump Sensor Without Auto Shutoff , Alarms :                     | Not reported |
| Auto Leak Detector W/o Flow Shutoff Or Restrctn :               | Not reported |
| Annual Integrity Test :   | Not reported |
| Daily Visual Check :  | Not reported |
| Pipe Integrity Test, Aboveground :                              | Not reported |
| Date Dispenser Containment Installed :                          | Not reported |
| Dispenser Containment Type :                                    | Not reported |
| Date Certified (Tank Unit) :                                    | Not reported |

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**U003879743**

Owner/ Operator Name (Tank Unit) : Not reported  
 Owner/ Operator Title (Tank Unit) : Not reported  
 Permit Number : Not reported  
 Permit Approved By : Not reported  
 Permit Expiration Date : Not reported  
 Last Annual Monitoring Cert: Not reported  
 Secondary Containment Test : Not reported  
 Spill Containment Present : Not reported  
 Drop Tube Present : Not reported  
 Striker Plate Present : Not reported  
 Alarm Present : Not reported  
 Ball Float Present : Not reported  
 Fill Tube Present : Not reported  
 Other Tank Leak Detection Present : Not reported  
 UST Close ID : 1335  
 Application Date : Not reported  
 Application Name : Not reported  
 Applications : Not reported  
 2ndry Care Of Address : Not reported  
 Flag : CLOSED

**D15**  
**East**  
**1/8-1/4**  
**968 ft.**

**CENTURY PLAZA TOWERS**  
**2029/2049 CENTURY PARK EAST, S**  
**LOS ANGELES, CA 90067**

**HIST UST U001562509**  
**N/A**

**Site 1 of 3 in cluster D**

**Relative:**  
**Lower**

**Actual:**  
**275 ft.**

UST HIST:  
 Facility ID: 50757 Owner Name: DELTA TOWERS JOINT VENTURE, A  
 Total Tanks: 1 Region: STATE  
 Owner Address: 2049 CENTURY PARK EAST, S-2650  
 LOS ANGELES, CA 90067  
 Tank Used for: PRODUCT  
 Tank Num: 1 Container Num: ONE (1)  
 Tank Capacity: 00002000 Year Installed: 1975  
 Type of Fuel: DIESEL Tank Construction: Not Reported  
 Leak Detection: None  
 Contact Name: RAMI REDDY Telephone: (213) 552-8100  
 Facility Type: Other Other Type: OFFICE

**E16**  
**NW**  
**1/8-1/4**  
**974 ft.**

**RESIDENCE**  
**43 PRESIDIO AV**  
**LOS ANGELES, CA 90067**

**UST 1002849813**  
**N/A**

**Site 1 of 4 in cluster E**

**Relative:**  
**Higher**

**Actual:**  
**289 ft.**

State UST:  
 Facility ID: 25014  
 Total Tanks: 1  
 Region: STATE  
 Local Agency: Los Angeles, Los Angeles County  
 UST San Francisco County:  
 Facility ID: 25014 Case Number: Not reported  
 Tank ID: Not reported Owner Name: Not reported  
 Receive Date: Not reported Close Date: Not reported  
 Certified Date: 4/6/1995  
 Mailing Address: Not reported  
 Care Of Address : Not reported Number Of Tanks : 1

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**1002849813**

|   |              |                     |              |
|---|--------------|---------------------|--------------|
| Local Tank Id :                                       | Not reported | Tank Manufacturer : | Not reported |
| Compartmentalized Tank :                              |              |                     | Not reported |
| Date Tank Installed :                                 |              |                     | Not reported |
| Tank Capacity :                                       |              |                     | Not reported |
| # Of Tank Compartments :                              |              |                     | Not reported |
| Additional Desc :                                     | Not reported | Tank Use :          | Not reported |
| Petroleum Type :                                      | Not reported | Common Name :       | Not reported |
| Type Of Tank :  |              |                     | Not reported |
| Tank Material - Primary Tank :                        |              |                     | Not reported |
| Tank Material - Secondary Tank :                      |              |                     | Not reported |
| Tank Interior Lining/coating :                        |              |                     | Not reported |
| Tank Int Lining Install Dt:                           |              |                     | Not reported |
| Other Tank Corrosive Protection :                     |              |                     | Not reported |
| Date Tank Corrosive Protection Install :              |              |                     | Not reported |
| Type Of Spill Protection :                            |              |                     |              |
| Spill Containment :                                   |              |                     | Not reported |
| Drop Tube :   |              |                     | Not reported |
| Striker Plate :                                       |              |                     | Not reported |
| Year Overfill Protection Equipment Installed :        |              |                     |              |
| Alarm :   |              |                     | Not reported |
| Ball Float :  |              |                     | Not reported |
| Fill Tube Shut :                                      |              |                     | Not reported |
| Exempt :  |              |                     | Not reported |
| Tank Leak Detection (Single Wall) :                   |              |                     |              |
| Visual (Exposed Portion) :                            |              |                     | Not reported |
| Automatic Tank Gauging :                              |              |                     | Not reported |
| Continuous Atg :                                      |              |                     | Not reported |
| Statscl Invntry Reconciliation & Biennial Tank Test : |              |                     | Not reported |
| Manual Tank Gauging :                                 |              |                     | Not reported |
| Vadose Zone Tank Leak Detection :                     |              |                     | Not reported |
| Groundwater :   |              |                     | Not reported |
| Tank Testing :  |              |                     | Not reported |
| Other Detection :                                     |              |                     | Not reported |
| Tank Leak Detection (Double Wall) :                   |              |                     |              |
| Visual (Single Wall In Vault Only) :                  |              |                     | Not reported |
| Continuous Interstitial Monitoring :                  |              |                     | Not reported |
| Manual Monitoring :                                   |              |                     | Not reported |
| Other Leak Detection :                                |              |                     | Not reported |
| Estimated Date Last Used :                            |              |                     | Not reported |
| Estimated Qty Of Substance Remaining :                |              |                     | Not reported |
| Tank Filled With Inert Material :                     |              |                     | Not reported |
| Piping System Type ( Underground ) :                  |              |                     |              |
| Pressure :  |              |                     | Not reported |
| Suction :   |              |                     | Not reported |
| Gravity :   |              |                     | Not reported |
| Piping System Type ( Aboveground ) :                  |              |                     |              |
| Pressure :  |              |                     | Not reported |
| Suction :   |              |                     | Not reported |
| Gravity :   |              |                     | Not reported |
| Piping Construction (Underground) :                   |              |                     |              |
| Single Wall :   |              |                     | Not reported |
| Double Wall :   |              |                     | Not reported |
| Lined Trench :  |              |                     | Not reported |
| Unknown :   |              |                     | Not reported |
| Other :   |              |                     | Not reported |
| Piping Manufacturer (Underground) :                   |              |                     | Not reported |
| Piping Construction (Aboveground) :                   |              |                     |              |

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**1002849813**

|  |              |              |
|--|--------------|--------------|
| Single Wall :  | Not reported |              |
| Double Wall :  | Not reported |              |
| Unknown :  | Not reported |              |
| Other :  | Not reported |              |
| Piping Manufacturer (Aboveground) :                              | Not reported |              |
| Piping Mat. And Corrosion Protection (Underground) :             |              |              |
| Bare Steel :   | Not reported |              |
| Stainless Steel :  | Not reported |              |
| Plastic Compatible With Contents :                               | Not reported |              |
| Fiberglass :   | Not reported |              |
| Steel W/coating :  | Not reported |              |
| FRP Compatible W/100% Methanol :                                 | Not reported |              |
| Galvanized Steel :   | Not reported |              |
| Flexible (HDPE - High Density Polyethylene) :                    | Not reported |              |
| Cathodic Protection :  | Not reported |              |
| Unknown :  | Not reported |              |
| Other :  | Not reported |              |
| Piping Mat. & Corrosion Protec (Aboveground) :                   |              |              |
| Bare Steel :   | Not reported |              |
| Stainless Steel :  | Not reported |              |
| Plastic Compatible With Contents :                               | Not reported |              |
| Fiberglass :   | Not reported |              |
| Steel W/coating :  | Not reported |              |
| Frp Compatible W/100% Methanol :                                 | Not reported |              |
| Galvanized Steel :   | Not reported |              |
| Flexible (HDPE - High Density Polyethylene) :                    | Not reported |              |
| Cathodic Protec :  | Not reported |              |
| Unknown :  | Not reported |              |
| Other :  | Not reported |              |
| Piping Leak Detection (Underground - Single Wall) :              |              |              |
| Electronic Line Leak Detector/ Auto Shutoff/ Alarms :            | Not reported |              |
| Monthly 0.2 Gph Test :   | Not reported |              |
| Annual Integrity Test :  | Not reported |              |
| Daily Visual Monitrng ,Trienn Integrity Test :                   | Not reported |              |
| Self Monitoring :  | Not reported |              |
| Biennial Integrity Test :  | Not reported |              |
| Piping Leak Detection (Secondarily Contained) :                  |              |              |
| Sump Sensor, Alarms ,Auto Shutoff For Leaks :                    | Not reported |              |
| Sump Snsr, Alrm ,Auto Shutoff For Leaks, Failure, & Disconnect : | Not reported | Not reported |
| Sump Sensor ,Alarms ,No Auto Shutoff :                           | Not reported |              |
| Pressure, Auto Leak Detctr ,Flow Shutoff Or Restrictn            | Not reported |              |
| Annual Integrity Test :  | Not reported |              |
| Suction,Gravity ,Sump Sensor,Alarms :                            | Not reported |              |
| Piping Leak Detection (Emergency Generators) :                   |              |              |
| Sump Sensor W/O Auto Shutoff /Alarms :                           | Not reported |              |
| Auto Leak Detector W/O Flow Shutoff Or Restrctn :                | Not reported |              |
| Annual Integrity Test :  | Not reported |              |
| Piping Leak Detecln Abvegmd - Emrgncy Gen - Daily Visual Chk :   | Not reported |              |
| Pipe Integrity Test, Underground :                               | Not reported |              |
| Piping Leak Detection (Aboveground - Single Wall) :              |              |              |
| Electronic Line Leak Detector /Auto Shutoff /Alarms :            | Not reported |              |
| Monthly 0.2 Gph Test :   | Not reported |              |
| Annual Integrity Test :  | Not reported |              |
| Single Wall, Pressure Daily Visual Check :                       | Not reported |              |
| Single Wall, Suction - Daily Visual Monitoring :                 | Not reported |              |
| Triennial Integrity Test :                                       | Not reported |              |
| Self Monitoring :  | Not reported |              |

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**1002849813**

Single Wall, Gravity - Daily Visual Monitoring : Not reported  
 Biennial Integrity Test : Not reported  
 Piping Leak Detection (Aboveground - Secondarily Contained)  
 Sump Sensor, Alarms, Auto Shutoff For Leaks : Not reported  
 Piping Leak Detection (Underground - Secondarily Contained)  
 Sump Snsr, Alarm , Auto Shutoff For Leaks, Failre & Disconct : Not reported  
 Sump Sensor, Alarms, No Auto Shutoff : Not reported  
 Pressure - Auto Leak Detctr, Flow Shutoff /Restrctn : Not reported  
 Annual Integrity Test : Not reported  
 Suction/gravity - Sump Sensor , Alarms : Not reported  
 Piping Leak Detection Underground (Emergency Generators)  
 Sump Sensor Without Auto Shutoff , Alarms : Not reported  
 Auto Leak Detector W/o Flow Shutoff Or Restrctn : Not reported  
 Annual Integrity Test : Not reported  
 Daily Visual Check : Not reported  
 Pipe Integrity Test, Aboveground : Not reported  
 Date Dispenser Containment Installed : Not reported  
 Dispenser Containment Type : Not reported  
 Date Certified (Tank Unit) : Not reported  
 Owner/ Operator Name (Tank Unit) : Not reported  
 Owner/ Operator Title (Tank Unit) : Not reported  
 Permit Number : Not reported  
 Permit Approved By : Not reported  
 Permit Expiration Date : Not reported  
 Last Annual Monitoring Cert: Not reported  
 Secondary Containment Test : Not reported  
 Spill Containment Present : Not reported  
 Drop Tube Present : Not reported  
 Striker Plate Present : Not reported  
 Alarm Present : Not reported  
 Ball Float Present : Not reported  
 Fill Tube Present : Not reported  
 Other Tank Leak Detection Present : Not reported  
 UST Close ID : 1967  
 Application Date : Not reported  
 Application Name : Not reported  
 Applications : Not reported  
 2ndry Care Of Address : Not reported  
 Flag : CLOSED

**D17**  
**East**  
**1/8-1/4**  
**977 ft.**

**CENTRAL PLANTS,INC**  
**2052 CENTURY PARK E**  
**LOS ANGELES, CA 90067**

**UST U003879410**  
**N/A**

**Relative:**  
**Lower**

**Site 2 of 3 in cluster D**

**Actual:**  
**275 ft.**

State UST:  
 Facility ID: 25054  
 Total Tanks: 1  
 Region: STATE  
 Local Agency: Los Angeles, Los Angeles County

MAP FINDINGS

|                |      |             |               |
|----------------|------|-------------|---------------|
| Map ID         |      |             | EDR ID Number |
| Direction      |      |             |               |
| Distance       |      |             |               |
| Distance (ft.) |      |             |               |
| Elevation      | Site | Database(s) | EPA ID Number |

|   |   |                                 |  |
|---|---|---------------------------------|--|
| <b>D18</b><br>East<br>1/8-1/4<br>1033 ft. | <b>M R INSTITUTE OF CENTURY CITY</b><br>2070 CENTURY PARK EAST<br>LOS ANGELES, CA 90067 | <b>RCRA-SQG</b><br><b>FINDS</b> | <b>1000857639</b><br><b>CAD983670829</b> |
|---|---|---------------------------------|--|

**Relative:** Site 3 of 3 in cluster D  
**Lower**

RCRAInfo:  
 Owner: MOBILE M R INC  
 (714) 582-9200  
 EPA ID: CAD983670829  
 Contact: JANET VAN CLEAVE  
 (310) 201-6162

Classification: Small Quantity Generator  
 TSDF Activities: Not reported  
 Violation Status: No violations found

**Actual:** 272 ft.

**FINDS:**  
 Other Pertinent Environmental Activity Identified at Site:  
 Resource Conservation and Recovery Act Information system

|  |  |            |                                 |
|--|--|------------|---------------------------------|
| <b>19</b><br>West<br>1/8-1/4<br>1047 ft. | <b>RESIDENCE</b><br>745 43RD AV<br>LOS ANGELES, CA 90067 | <b>UST</b> | <b>U003780543</b><br><b>N/A</b> |
|--|--|------------|---------------------------------|

**Relative:** State UST:  
**Equal** Facility ID: 24106  
 Total Tanks: 1  
**Actual:** Region: STATE  
 282 ft. Local Agency: Los Angeles, Los Angeles County

UST San Francisco County:  
 Facility ID: 24106 Case Number: Not reported  
 Tank ID: Not reported Owner Name: Not reported  
 Receive Date: Not reported Close Date: Not reported  
 Certified Date: 12/8/1994  
 Mailing Address: Not reported  
 Care Of Address : Not reported Number Of Tanks : 1  
 Local Tank Id : Not reported Tank Manufacturer Not reported  
 Compartmentalized Tank : Not reported  
 Date Tank Installed : Not reported  
 Tank Capacity : Not reported  
 # Of Tank Compartments : Not reported  
 Additional Desc : Not reported Tank Use : Not reported  
 Petroleum Type : Not reported Common Name : Not reported  
 Type Of Tank : Not reported  
 Tank Material - Primary Tank : Not reported  
 Tank Material - Secondary Tank : Not reported  
 Tank Interior Lining/coating : Not reported  
 Tank Int Lining Install Dt: Not reported  
 Other Tank Corrosive Protection : Not reported  
 Date Tank Corrosive Protection Install : Not reported  
 Type Of Spill Protection :  
     Spill Containment : Not reported  
     Drop Tube : Not reported  
     Striker Plate : Not reported  
 Year Overfill Protection Equipment Installed :  
     Alarm : Not reported  
     Ball Float : Not reported



Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**U003780543**

|   |              |
|---|--------------|
| Fill Tube Shut :                                      | Not reported |
| Exempt :  | Not reported |
| Tank Leak Detection (Single Wall) :                   |              |
| Visual (Exposed Portion) :                            | Not reported |
| Automatic Tank Gauging :                              | Not reported |
| Continuous Atg :                                      | Not reported |
| Statscl Invntry Reconciliation & Biennial Tank Test : | Not reported |
| Manual Tank Gauging :                                 | Not reported |
| Vadose Zone Tank Leak Detection :                     | Not reported |
| Groundwater :   | Not reported |
| Tank Testing :  | Not reported |
| Other Detection :                                     | Not reported |
| Tank Leak Detection (Double Wall) :                   |              |
| Visual (Single Wall In Vault Only) :                  | Not reported |
| Continuous Interstitial Monitoring :                  | Not reported |
| Manual Monitoring :                                   | Not reported |
| Other Leak Detection :                                | Not reported |
| Estimated Date Last Used :                            | Not reported |
| Estimated Qty Of Substance Remaining :                | Not reported |
| Tank Filled With Inert Material :                     | Not reported |
| Piping System Type ( Underground ) :                  |              |
| Pressure :  | Not reported |
| Suction :   | Not reported |
| Gravity :   | Not reported |
| Piping System Type ( Aboveground ) :                  |              |
| Pressure :  | Not reported |
| Suction :   | Not reported |
| Gravity :   | Not reported |
| Piping Construction (Underground) :                   |              |
| Single Wall :   | Not reported |
| Double Wall :   | Not reported |
| Lined Trench :  | Not reported |
| Unknown :   | Not reported |
| Other :   | Not reported |
| Piping Manufacturer (Underground) :                   | Not reported |
| Piping Construction (Aboveground) :                   |              |
| Single Wall :   | Not reported |
| Double Wall :   | Not reported |
| Unknown :   | Not reported |
| Other :   | Not reported |
| Piping Manufacturer (Aboveground) :                   | Not reported |
| Piping Mat. And Corrosion Protection (Underground) :  |              |
| Bare Steel :  | Not reported |
| Stainless Steel :                                     | Not reported |
| Plastic Compatible With Contents :                    | Not reported |
| Fiberglass :  | Not reported |
| Steel W/coating :                                     | Not reported |
| FRP Compatible W/100% Methanol :                      | Not reported |
| Galvanized Steel :                                    | Not reported |
| Flexible (HDPE - High Density Polyethylene) :         | Not reported |
| Cathodic Protection :                                 | Not reported |
| Unknown :   | Not reported |
| Other :   | Not reported |
| Piping Mat. & Corrosion Protec (Aboveground) :        |              |
| Bare Steel :  | Not reported |
| Stainless Steel :                                     | Not reported |
| Plastic Compatible With Contents :                    | Not reported |

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**RESIDENCE (Continued)**

**U003780543**

|  |              |
|--|--------------|
| Fiberglass :   | Not reported |
| Steel W/coating :  | Not reported |
| Frp Compatible W/100% Methanol :                                 | Not reported |
| Galvanized Steel :   | Not reported |
| Flexible (HDPE - High Density Polyethylene) :                    | Not reported |
| Cathodic Protecن :   | Not reported |
| Unknown :  | Not reported |
| Other :  | Not reported |
| Piping Leak Detection (Underground - Single Wall) :              |              |
| Electronic Line Leak Detector/ Auto Shutoff/ Alarms :            | Not reported |
| Monthly 0.2 Gph Test :   | Not reported |
| Annual Integrity Test :  | Not reported |
| Daily Visual Monitrng , Trienn Integrity Test :                  | Not reported |
| Self Monitoring :  | Not reported |
| Biennial Integrity Test :  | Not reported |
| Piping Leak Detection (Secondarily Contained) :                  |              |
| Sump Sensor, Alarms ,Auto Shutoff For Leaks :                    | Not reported |
| Sump Snsr, Alrm ,Auto Shutoff For Leaks, Failure, & Disconnect : | Not reported |
| Sump Sensor ,Alarms ,No Auto Shutoff :                           | Not reported |
| Pressure, Auto Leak Detctr ,Flow Shutoff Or Restrictn            | Not reported |
| Annual Integrity Test :  | Not reported |
| Suction,Gravity ,Sump Sensor,Alarms :                            | Not reported |
| Piping Leak Detection (Emergency Generators) :                   |              |
| Sump Sensor W/O Auto Shutoff /Alarms :                           | Not reported |
| Auto Leak Detector W/O Flow Shutoff Or Restrctn :                | Not reported |
| Annual Integrity Test :  | Not reported |
| Piping Leak Detecn Abvegrnd - Emrgncy Gen - Daily Visual Chk :   | Not reported |
| Pipe Integrity Test, Underground :                               | Not reported |
| Piping Leak Detection (Aboveground - Single Wall) :              |              |
| Electronic Line Leak Detector /Auto Shutoff /Alarms :            | Not reported |
| Monthly 0.2 Gph Test :   | Not reported |
| Annual Integrity Test :  | Not reported |
| Single Wall, Pressure Daily Visual Check :                       | Not reported |
| Single Wall, Suction - Daily Visual Monitoring :                 | Not reported |
| Triennial Integrity Test :                                       | Not reported |
| Self Monitoring :  | Not reported |
| Single Wall, Gravity - Daily Visual Monitoring :                 | Not reported |
| Biennial Integrity Test :  | Not reported |
| Piping Leak Detection (Aboveground - Secondarily Contained)      |              |
| Sump Sensor, Alarms, Auto Shutoff For Leaks :                    | Not reported |
| Piping Leak Detection (Underground - Secondarily Contained)      |              |
| Sump Snsr, Alrm , Auto Shutoff For Leaks, Failre & Disconct :    | Not reported |
| Sump Sensor, Alarms, No Auto Shutoff :                           | Not reported |
| Pressure - Auto Leak Detctr, Flow Shutoff /Restrctn :            | Not reported |
| Annual Integrity Test :  | Not reported |
| Suction/gravity - Sump Sensor , Alarms :                         | Not reported |
| Piping Leak Detection Underground (Emergency Generators)         |              |
| Sump Sensor Without Auto Shutoff , Alarms :                      | Not reported |
| Auto Leak Detector W/o Flow Shutoff Or Restrctn :                | Not reported |
| Annual Integrity Test :  | Not reported |
| Daily Visual Check :   | Not reported |
| Pipe Integrity Test, Aboveground :                               | Not reported |
| Date Dispenser Containment Installed :                           | Not reported |
| Dispenser Containment Type :                                     | Not reported |
| Date Certified (Tank Unit) :                                     | Not reported |
| Owner/ Operator Name (Tank Unit) :                               | Not reported |
| Owner/ Operator Title (Tank Unit) :                              | Not reported |

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

**RESIDENCE (Continued)**

EDR ID Number  
 EPA ID Number

Database(s)

**U003780543**

Permit Number : Not reported  
 Permit Approved By : Not reported  
 Permit Expiration Date : Not reported  
 Last Annual Monitoring Cert: Not reported  
 Secondary Containment Test : Not reported  
 Spill Containment Present : Not reported  
 Drop Tube Present : Not reported  
 Striker Plate Present : Not reported  
 Alarm Present : Not reported  
 Ball Float Present : Not reported  
 Fill Tube Present : Not reported  
 Other Tank Leak Detection Present : Not reported  
 UST Close ID : 1878  
 Application Date : 1  
 Application Name : Not reported  
 Applications : Not reported  
 2ndry Care Of Address : Not reported  
 Flag : CLOSED

**20**  
**North**  
**1/8-1/4**  
**1049 ft.**

**NORTHROP CORP**  
**1840 CENTURY CITY PK EAST**  
**LOS ANGELES, CA 90067**

**RCRA-SQG 1000409998**  
**HAZNET CAD982506511**  
**CA FID UST**  
**HIST UST**

**Relative:**  
**Higher**

**RCRAInfo:**  
 Owner: NOT REQUIRED  
 (415) 555-1212  
**EPA ID:** CAD982506511  
 Contact: Not reported  
 Classification: Small Quantity Generator  
 TSDF Activities: Not reported  
 Violation Status: No violations found

**Actual:**  
**284 ft.**

**HAZNET:**  
 Gepaid: CAD982506511  
 TSD EPA ID: CAT080013352  
 Gen County: Los Angeles  
 Tsd County: Los Angeles  
 Tons: .0075  
 Waste Category: Unspecified oil-containing waste  
 Disposal Method: Recycler  
 Contact: Not reported  
 Telephone: (000) 000-0000  
 Mailing Address: ONE NORTHROP AVE  
 HAWTHORNE, CA 90250  
 County: Los Angeles

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

**NORTHROP CORP (Continued)**

EDR ID Number  
 EPA ID Number

Database(s)

**1000409998**

**FID:**

|               |  |               |                |
|---------------|--|---------------|----------------|
| Facility ID:  | 19009337                                   | Regulate ID:  | 00003615       |
| Reg By:       | Inactive Underground Storage Tank Location | SIC Code:     | Not reported   |
| Cortese Code: | Not reported                               | Facility Tel: | (213) 553-6262 |
| Status:       | Inactive                                   |               |                |
| Mail To:      | Not reported                               |               |                |
|               | 1840 CENTURY PARK EAST                     |               |                |
|               | LOS ANGELES, CA 90067                      |               |                |
| Contact:      | Not reported                               | Contact Tel:  | Not reported   |
| DUNs No:      | Not reported                               | NPDES No:     | Not reported   |
| Creation:     | 10/22/93                                   | Modified:     | 00/00/00       |
| EPA ID:       | Not reported                               |               |                |
| Comments:     | Not reported                               |               |                |

**UST HIST:**

|                 |                        |                    |                      |
|-----------------|------------------------|--------------------|----------------------|
| Facility ID:    | 3615                   | Owner Name:        | NORTHROP CORPORATION |
| Total Tanks:    | 1                      | Region:            | STATE                |
| Owner Address:  | 1840 CENTURY PARK EAST |                    |                      |
|                 | LOS ANGELES, CA 90067  |                    |                      |
| Tank Used for:  | PRODUCT                | Container Num:     | 1                    |
| Tank Num:       | 1                      | Year Installed:    | 1984                 |
| Tank Capacity:  | 00043500               | Tank Construction: | 12 inches            |
| Type of Fuel:   | REGULAR                |                    |                      |
| Leak Detection: | Visual                 | Telephone:         | (213) 553-6262       |
| Contact Name:   | J. C. DESPAIN          | Other Type:        | CORPORATE OFFICES    |
| Facility Type:  | Other                  |                    |                      |

**E21  
 NW  
 1/8-1/4  
 1074 ft.**

**GATEWAY LANDOWNERS  
 1801 AVENUE OF THE STARS  
 LA, CA 90067**

**CA FID UST S101583934  
 N/A**

**Site 2 of 4 in cluster E**

**Relative:  
 Higher**

**Actual:  
 288 ft.**

**FID:**

|               |  |               |                |
|---------------|--|---------------|----------------|
| Facility ID:  | 19007437                                 | Regulate ID:  | Not reported   |
| Reg By:       | Active Underground Storage Tank Location | SIC Code:     | Not reported   |
| Cortese Code: | Not reported                             | Facility Tel: | (213) 000-0000 |
| Status:       | Active                                   |               |                |
| Mail To:      | Not reported                             |               |                |
|               | 1987 W HOLT AVE                          |               |                |
|               | LA, CA 90067                             |               |                |
| Contact:      | Not reported                             | Contact Tel:  | Not reported   |
| DUNs No:      | Not reported                             | NPDES No:     | Not reported   |
| Creation:     | 10/22/93                                 | Modified:     | 00/00/00       |
| EPA ID:       | Not reported                             |               |                |
| Comments:     | Not reported                             |               |                |

**E22  
 NW  
 1/8-1/4  
 1074 ft.**

**YOSEL GOLDFINGER  
 1800 AVENUE OF THE STARS  
 LOS ANGELES, CA 90067**

**CA FID UST S101585724  
 N/A**

**Site 3 of 4 in cluster E**

**Relative:  
 Higher**

**Actual:  
 287 ft.**

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

**YOSEL GOLDFINGER (Continued)**

Database(s) **EDR ID Number**  
**EPA ID Number**

**S101585724**

FID:  
 Facility ID: 19027929 Regulate ID: Not reported  
 Reg By: Active Underground Storage Tank Location  
 Cortese Code: Not reported SIC Code: Not reported  
 Status: Active Facility Tel: (213) 000-0000  
 Mail To: Not reported  
 1800 AVENUE OF THE STARS  
 LOS ANGELES, CA 90067  
 Contact: Not reported Contact Tel: Not reported  
 DUNs No: Not reported NPDES No: Not reported  
 Creation: 10/22/93 Modified: 00/00/00  
 EPA ID: Not reported  
 Comments: Not reported

**E23  
 NW  
 1/8-1/4  
 1074 ft.**

**CENTURY CITY CAR CARE  
 1800 AVE OF THE STARS LVL B  
 CENTURY CITY, CA 90067**

**RCRA-SQG 1000132571  
 FINDS CAD982462863  
 HAZNET**

**Site 4 of 4 in cluster E**

**Relative:  
 Higher**

**Actual:  
 287 ft.**

RCRAInfo:  
 Owner: NOT REQUIRED  
 (415) 555-1212  
 EPA ID: CAD982462863  
 Contact: ENVIRONMENTAL MANAGER  
 Classification: Small Quantity Generator  
 TSD Activities: Not reported  
 Violation Status: No violations found

**FINDS:**

Other Pertinent Environmental Activity Identified at Site:  
 Resource Conservation and Recovery Act Information system

**HAZNET:**

Gepaid: CAD982462863  
 TSD EPA ID: CAT080013352  
 Gen County: Los Angeles  
 Tsd County: Los Angeles  
 Tons: 1.6680  
 Waste Category: Oil/water separation sludge  
 Disposal Method: Recycler  
 Contact: JOHN MCGINLEY  
 Telephone: (310) 552-2180  
 Mailing Address: 1800 AVENUE OF THE STARS  
 LOS ANGELES, CA 90067 - 4212  
 County: Los Angeles  
 Gepaid: CAD982462863  
 TSD EPA ID: CAD099452708  
 Gen County: Los Angeles  
 Tsd County: Los Angeles  
 Tons: 1.4970  
 Waste Category: Oil/water separation sludge  
 Disposal Method: Transfer Station  
 Contact: JOHN MCGINLEY  
 Telephone: (310) 552-2180  
 Mailing Address: 1800 AVENUE OF THE STARS

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation    Site

Database(s)    EDR ID Number  
 EPA ID Number

**CENTURY CITY CAR CARE (Continued)**

**1000132571**

County                    LOS ANGELES, CA 90067 - 4212  
 County                    Los Angeles  
 Gepaid:                    CAD982462863  
 TSD EPA ID:              CAD000088252  
 Gen County:              Los Angeles  
 Tsd County:              Los Angeles  
 Tons:                      .2293  
 Waste Category:        Paint sludge  
 Disposal Method:       Transfer Station  
 Contact:                  JOHN MCGINLEY  
 Telephone:                (310) 552-2180  
 Mailing Address:        1800 AVENUE OF THE STARS  
                                  LOS ANGELES, CA 90067 - 4212  
 County                    Los Angeles  
 Gepaid:                    CAD982462863  
 TSD EPA ID:              CAD000088252  
 Gen County:              Los Angeles  
 Tsd County:              Los Angeles  
 Tons:                      .9174  
 Waste Category:        Other organic solids  
 Disposal Method:       Transfer Station  
 Contact:                  JOHN MCGINLEY  
 Telephone:                (310) 552-2180  
 Mailing Address:        1800 AVENUE OF THE STARS  
                                  LOS ANGELES, CA 90067 - 4212  
 County                    Los Angeles  
 Gepaid:                    CAD982462863  
 TSD EPA ID:              CAD000088252  
 Gen County:              Los Angeles  
 Tsd County:              Los Angeles  
 Tons:                      .2293  
 Waste Category:        Aqueous solution with metals (restricted levels and Alkaline solution (pH  
                                  <UN-> 12.5) with metals (antimony, arsenic, barium, beryllium, cadmium,  
                                  chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium,  
                                  silver, thallium, vanadium, and zinc )  
 Disposal Method:       Transfer Station  
 Contact:                  JOHN MCGINLEY  
 Telephone:                (310) 552-2180  
 Mailing Address:        1800 AVENUE OF THE STARS  
                                  LOS ANGELES, CA 90067 - 4212  
 County                    Los Angeles

**F24  
 ESE  
 1/8-1/4  
 1195 ft.**

**CENTURY PLAZA TOWERS  
 2049 CENTURY PARK EAST  
 LOS ANGELES, CA 90067**

**CA FID UST    S101617629  
 CA WDS        N/A**

**Site 1 of 4 in cluster F**

**Relative:  
 Lower**

**Actual:  
 264 ft.**

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**CENTURY PLAZA TOWERS (Continued)**

**S101617629**

**FID:**

|               |  |               |                |
|---------------|--|---------------|----------------|
| Facility ID:  | 19026064                                 | Regulate ID:  | Not reported   |
| Reg By:       | Active Underground Storage Tank Location |               |                |
| Cortese Code: | Not reported                             | SIC Code:     | Not reported   |
| Status:       | Active                                   | Facility Tel: | (213) 552-8151 |
| Mail To:      | Not reported                             |               |                |
|               | 2049 CENTURY PARK EAST                   |               |                |
|               | LOS ANGELES, CA 90067                    |               |                |
| Contact:      | Not reported                             | Contact Tel:  | Not reported   |
| DUNS No:      | Not reported                             | NPDES No:     | Not reported   |
| Creation:     | 10/22/93                                 | Modified:     | 00/00/00       |
| EPA ID:       | Not reported                             |               |                |
| Comments:     | Not reported                             |               |                |

|               |  |               |                |
|---------------|--|---------------|----------------|
| Facility ID:  | 19055541                                 | Regulate ID:  | 00050757       |
| Reg By:       | Active Underground Storage Tank Location |               |                |
| Cortese Code: | Not reported                             | SIC Code:     | Not reported   |
| Status:       | Active                                   | Facility Tel: | (213) 552-8100 |
| Mail To:      | Not reported                             |               |                |
|               | 2049 CENTURY PK EAST-SUIT                |               |                |
|               | LOS ANGELES, CA 90067                    |               |                |
| Contact:      | Not reported                             | Contact Tel:  | Not reported   |
| DUNS No:      | Not reported                             | NPDES No:     | Not reported   |
| Creation:     | 10/22/93                                 | Modified:     | 00/00/00       |
| EPA ID:       | Not reported                             |               |                |
| Comments:     | Not reported                             |               |                |

**WDS:**

|                  |   |                    |                   |
|------------------|---|--------------------|-------------------|
| Facility ID:     | Los Angeles River 196000408   |                    |                   |
| Facility Contact | Mike/Jeff   | Facility Telephone | (310) 277-0800    |
| SIC Code:        | 9999  | SIC Code 2:        | Not reported      |
| Agency Name:     | ONE HUNDRED TOWERS LLC  |                    |                   |
| Agency Address:  | 0   |                    |                   |
| Agency Contact:  | Not reported  | Agency Phone:      | Not reported      |
| Design Flow:     | 0 Million Gal/Day   | Baseline Flow:     | 0 Million Gal/Day |
| Facility Type:   | Other - Does not fall into the category of Municipal/Domestic, Industrial, Agricultural or Solid Waste (Class I, II or III)   |                    |                   |
| Facility Status: | Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.   |                    |                   |
| Agency Type:     | Private   |                    |                   |
| Waste Type:      | Miscellaneous (Includes wastes from dewatering, recreational lake overflow, swimming pool wastes, water ride wastewater, ground water seepage and other wastes of this type) - Designated/Influent or Solid Wastes that pose a significant threat to water quality because of their high concentrations (E.G., BOD, Hardness, TRF, Chloride). 'Manageable' hazardous wastes (E.G., inorganic salts and heavy metals) are included in this category. |                    |                   |
| Threat to Water: | 0   |                    |                   |
| Complexity:      | Not reported  |                    |                   |
| Reclamation:     | No reclamation requirements associated with this facility.  |                    |                   |
| POTW:            | The facility is not a POTW.   |                    |                   |
| NPDES Number:    | CAG994004 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board  |                    |                   |
| Subregion:       | 4   |                    |                   |

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

Site

Database(s)      EDR ID Number  
 EPA ID Number

**F25**      **CENTRAL PLANTS INCORPORATED**  
**ESE**      **2052 CENTURY PARK EAST**  
**1/8-1/4**      **LOS ANGELES, CA 90067**  
**1209 ft.**

**RCRA-SQG**      **1000172457**  
**FINDS**      **CAT000623942**  
**HIST UST**

**Site 2 of 4 in cluster F**

**Relative:**  
**Lower**

RCRAInfo:  
 Owner: NOT REQUIRED  
 (415) 555-1212  
 EPA ID: CAT000623942  
 Contact: Not reported  
 Classification: Small Quantity Generator  
 TSDF Activities: Not reported  
 Violation Status: No violations found

**Actual:**  
**264 ft.**

**FINDS:**

Other Pertinent Environmental Activity Identified at Site:  
 Aerometric Information Retrieval System/AIRS Facility Subsystem  
 HWTS-DATAMART  
 National Emissions Inventory  
 Resource Conservation and Recovery Act Information system

**UST HIST:**

Facility ID: 7818  
 Total Tanks: 4  
 Owner Address: 6055 E. WASHINGTON BLVD.  
 COMMERCE, CA 90010  
 Tank Used for: PRODUCT  
 Tank Num: 1  
 Tank Capacity: 00040000  
 Type of Fuel: DIESEL  
 Leak Detection: Pressure Test  
 Contact Name: DANIEL G. HERNANDEZ  
 Facility Type: Other

Owner Name: CENTRAL PLANTS, INC.  
 Region: STATE

Container Num: 1  
 Year Installed: 1965  
 Tank Construction: 5/8 inches

Telephone: (213) 879-0110  
 Other Type: DISTRICT HTG/COOLING

Facility ID: 7818  
 Total Tanks: 4  
 Owner Address: 6055 E. WASHINGTON BLVD.  
 COMMERCE, CA 90010  
 Tank Used for: PRODUCT  
 Tank Num: 2  
 Tank Capacity: 00040000  
 Type of Fuel: DIESEL  
 Leak Detection: Pressure Test  
 Contact Name: DANIEL G. HERNANDEZ  
 Facility Type: Other

Owner Name: CENTRAL PLANTS, INC.  
 Region: STATE

Container Num: 2  
 Year Installed: 1965  
 Tank Construction: 5/8 inches

Telephone: (213) 879-0110  
 Other Type: DISTRICT HTG/COOLING

Facility ID: 7818  
 Total Tanks: 4  
 Owner Address: 6055 E. WASHINGTON BLVD.  
 COMMERCE, CA 90010  
 Tank Used for: PRODUCT  
 Tank Num: 3  
 Tank Capacity: 00040000  
 Type of Fuel: DIESEL  
 Leak Detection: Pressure Test  
 Contact Name: DANIEL G. HERNANDEZ  
 Facility Type: Other

Owner Name: CENTRAL PLANTS, INC.  
 Region: STATE

Container Num: 3  
 Year Installed: 1972  
 Tank Construction: 3/8 inches

Telephone: (213) 879-0110  
 Other Type: DISTRICT HTG/COOLING



Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

**CENTRAL PLANTS INCORPORATED (Continued)**

**1000172457**

|                 |  |                    |                      |
|-----------------|--|--------------------|----------------------|
| Facility ID:    | 7818   | Owner Name:        | CENTRAL PLANTS, INC. |
| Total Tanks:    | 4  | Region:            | STATE                |
| Owner Address:  | 6055 E. WASHINGTON BLVD.<br>COMMERCE, CA 90010 |                    |                      |
| Tank Used for:  | WASTE  | Container Num:     | FOUR                 |
| Tank Num:       | 4  | Year Installed:    | 1965                 |
| Tank Capacity:  | 00001700                                       | Tank Construction: | 3/16 inches          |
| Type of Fuel:   | WASTE OIL                                      | Telephone:         | (213) 879-0110       |
| Leak Detection: | Pressure Test                                  | Other Type:        | DISTRICT HTG/COOLING |
| Contact Name:   | DANIEL G. HERNANDEZ                            |                    |                      |
| Facility Type:  | Other  |                    |                      |

**F26  
 ESE  
 1/8-1/4  
 1209 ft.**

**CENTRAL PLANTS, INC.  
 2052 CENTURY PARK  
 LOS ANGELES, CA 90067**

**HAZNET S103640732  
 Cortese N/A**

**Site 3 of 4 in cluster F**

**Relative:  
 Lower**

**Actual:  
 264 ft.**

HAZNET:

Gepaid: CAT000623942  
 TSD EPA ID: Not reported  
 Gen County: Los Angeles  
 Tsd County: Los Angeles  
 Tons: 12.64  
 Waste Category: Asbestos-containing waste  
 Disposal Method: Disposal, Land Fill  
 Contact: STANLEY ZISON DIR SAFETY & ENV  
 Telephone: (213) 244-4195  
 Mailing Address: PO BOX 30900  
 LOS ANGELES, CA 90030 - 0900  
 County: Not reported

Gepaid: CAT000623942  
 TSD EPA ID: Not reported  
 Gen County: Los Angeles  
 Tsd County: Los Angeles  
 Tons: 0.05  
 Waste Category: Off-specification, aged, or surplus inorganics  
 Disposal Method: Disposal, Other  
 Contact: STANLEY ZISON DIR SAFETY & ENV  
 Telephone: (213) 244-4195  
 Mailing Address: PO BOX 30900  
 LOS ANGELES, CA 90030 - 0900  
 County: Not reported

Gepaid: CAT000623942  
 TSD EPA ID: Not reported  
 Gen County: Los Angeles  
 Tsd County: Los Angeles  
 Tons: 0.02  
 Waste Category: Off-specification, aged, or surplus organics  
 Disposal Method: Recycler  
 Contact: STANLEY ZISON DIR SAFETY & ENV  
 Telephone: (213) 244-4195  
 Mailing Address: PO BOX 30900  
 LOS ANGELES, CA 90030 - 0900  
 County: Not reported

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

**CENTRAL PLANTS, INC. (Continued)**

EDR ID Number  
 EPA ID Number

Database(s)

**S103640732**

Gepaid: CAT000623942  
 TSD EPA ID: Not reported  
 Gen County: Los Angeles  
 Tsd County: Los Angeles  
 Tons: 0.16  
 Waste Category: Unspecified organic liquid mixture  
 Disposal Method: Disposal, Other  
 Contact: STANLEY ZISON DIR SAFETY & ENV  
 Telephone: (213) 244-4195  
 Mailing Address: PO BOX 30900  
 LOS ANGELES, CA 90030 - 0900  
 County: Not reported

Gepaid: CAT000623942  
 TSD EPA ID: Not reported  
 Gen County: Los Angeles  
 Tsd County: Los Angeles  
 Tons: 2.33  
 Waste Category: Waste oil and mixed oil  
 Disposal Method: Recycler  
 Contact: STANLEY ZISON DIR SAFETY & ENV  
 Telephone: (213) 244-4195  
 Mailing Address: PO BOX 30900  
 LOS ANGELES, CA 90030 - 0900  
 County: Not reported

[Click this hyperlink](#) while viewing on your computer to access 46 additional CA HAZNET record(s) in the EDR Site Report.

CORTESE:  
 Region: CORTESE  
 Fac Address 2: Not reported

**F27  
 ESE  
 1/8-1/4  
 1209 ft.**

**CENTRAL PLANTS, INC.  
 2052 CENTURY PARK E  
 CENTURY CITY, CA 90067**

**LUST S101296952  
 N/A**

**Site 4 of 4 in cluster F**

**Relative:  
 Lower**

**Actual:  
 264 ft.**

State LUST:  
 Cross Street: OLYMPIC BLVD  
 Qty Leaked: Not reported  
 Case Number: 900670025  
 Reg Board: 4  
 Chemical: Gasoline  
 Lead Agency: Local Agency  
 Local Agency : 19050  
 Case Type: Soil only  
 Status: Case Closed  
 Review Date: Not reported  
 Workplan: Not reported  
 Pollution Char: Not reported  
 Remed Action: Not reported  
 Monitoring: Not reported  
 Close Date: 1998-07-10 00:00:00  
 Release Date: Not reported  
 Cleanup Fund Id : Not reported  
 Discover Date : Not reported  
 Enforcement Dt : Not reported

Confirm Leak: Not reported  
 Prelim Assess: Not reported  
 Remed Plan: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**CENTRAL PLANTS, INC. (Continued)**

**S101296952**

Enf Type: Not reported  
Enter Date : 1990-05-16 00:00:00  
Funding: Not reported  
Staff Initials: PEJ  
How Discovered: Not reported  
How Stopped: Not reported  
Interim : Not reported  
Leak Cause: UNK  
Leak Source: Tank  
MTBE Date : Not reported  
Max MTBE GW : Not reported  
MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.  
Priority: Not reported  
Local Case # : Not reported  
Beneficial: Not reported  
Staff : UNK  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: SAN FERNANDO VALLEY  
Operator : Not reported  
Oversight Prgm: LUST  
Review Date : 1998-07-10 00:00:00  
Stop Date : Not reported  
Work Suspended :Not reported  
Responsible Party:CENTRAL PLANTS, INC.  
RP Address: 2052 CENTURY PARK EAST, LOS ANGELES, 90067  
Global Id: T0603701214  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported  
Summary : 11/14 EDR;12/12WP; MTBE DATE 4/20/98.

**LUST Region 4:**

Report Date: 5/11/1990  
Lead Agency: Local Agency  
Local Agency: 19050  
Substance: Gasoline  
Case Type: Soil  
Status: Case Closed  
Region: 4  
Staff: UNK  
Date Case Last Changed on Database: 7/10/1998  
Date Leak Record Entered: 5/16/1990  
Historical Max MTBE Date: Not reported  
GW Qualifier: Not reported  
Soil Qualifier: Not reported  
Hist Max MTBE Conc in Groundwater: Not reported  
Hist Max MTBE Conc in Soil : Not reported  
County: Los Angeles  
Organization : Not reported  
Regional Board: 04

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**CENTRAL PLANTS, INC. (Continued)**

**S101296952**

Owner Contact: Not reported  
 Responsible Party: CENTRAL PLANTS, INC.  
 RP Address: 2052 CENTURY PARK EAST, LOS ANGELES, 90067  
 Significant Interim Remedial Action Taken: Not reported  
 Program : LUST  
 Lat / Long : 34.0594457 / -1  
 Local Agency Staff: PEJ  
 Beneficial Use : Not reported  
 Priority : Not reported  
 Cleanup Fund Id : Not reported  
 Suspended : Not reported  
 Local Case No : Not reported  
 Substance Quantity : Not reported  
 Abatement Method Used at the Site: Not reported  
 Operator : Not reported  
 Water System : Not reported  
 Well Name : Not reported  
 Approx. Dist To Production Well (ft) : 4655.1338734873960910053548002  
 Assigned Name : Not reported  
 W Global ID : Not reported  
 Source of Cleanup Funding: Not reported  
 Date the Leak was Discovered: Not reported  
 How the Leak was Discovered: Not reported  
 How the Leak was Stopped: Not reported  
 Cause of Leak: UNK  
 Leak Source: Tank  
 Date The Leak was Stopped: Not reported  
 Date Confirmation Leak Began: Not reported  
 Preliminary Site Assessment Workplan Submitted: Not reported  
 Preliminary Site Assessment Began: Not reported  
 Pollution Characterization Began: 4/18/1990  
 Remediation Plan Submitted: Not reported  
 Remedial Action Underway: Not reported  
 Post Remedial Action Monitoring Began: Not reported  
 Date the Case was Closed: 7/10/1998  
 Enforcement Action Date: Not reported  
 Date Leak First Reported: 5/11/1990  
 Enforcement Type: Not reported  
 Global ID : T0603701214  
 Cross Street: OLYMPIC BLVD  
 Summary :

28  
 SSE  
 1/8-1/4  
 1219 ft.

**AP PROPERTIES LTD/C  
 1999 AVENUE OF THE STARS  
 LOS ANGELES, CA 90067**

**CA FID UST S101587988  
 N/A**

**Relative:  
 Higher**

**Actual:  
 302 ft.**

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

**AP PROPERTIES LTD/C (Continued)**

EDR ID Number  
 EPA ID Number

Database(s)

**S101587988**

FID:  
 Facility ID: 19056220 Regulate ID: Not reported  
 Reg By: Active Underground Storage Tank Location  
 Cortese Code: Not reported SIC Code: Not reported  
 Status: Active Facility Tel: (213) 000-0000  
 Mail To: Not reported  
 1999 AVENUE OF THE STARS  
 LOS ANGELES, CA 90067  
 Contact: Not reported Contact Tel: Not reported  
 DUNS No: Not reported NPDES No: Not reported  
 Creation: 10/22/93 Modified: 00/00/00  
 EPA ID: Not reported  
 Comments: Not reported

**G29  
 NNW  
 1/8-1/4  
 1256 ft.**

**CENTURY CITY NORTH OFFICE BLDG  
 10100 SANTA MONICA BLVD  
 LOS ANGELES, CA 90067**

**FINDS 1000422670  
 RCRA-LQG CAD981162548**

**Site 1 of 2 in cluster G**

**Relative:  
 Higher**

RCRAInfo:  
 Owner: JMB INCOME PROPERTIES LTD  
 (415) 555-1212  
 EPA ID: CAD981162548  
 Contact: Not reported  
 Classification: Large Quantity Generator  
 TSDF Activities: Not reported  
 Violation Status: No violations found

**Actual:  
 284 ft.**

FINDS:  
 Other Pertinent Environmental Activity Identified at Site:  
 Resource Conservation and Recovery Act Information system

**G30  
 NNW  
 1/8-1/4  
 1256 ft.**

**MB PROPERTIES  
 10100 SANTA MONICA BLVD  
 LOS ANGELES, CA 90067**

**CA FID UST S101585102  
 N/A**

**Site 2 of 2 in cluster G**

**Relative:  
 Higher**

FID:  
 Facility ID: 19019566 Regulate ID: Not reported  
 Reg By: Active Underground Storage Tank Location  
 Cortese Code: Not reported SIC Code: Not reported  
 Status: Active Facility Tel: (818) 997-0170  
 Mail To: Not reported  
 10100 SANTA MONICA BLVD  
 LOS ANGELES, CA 90067  
 Contact: Not reported Contact Tel: Not reported  
 DUNS No: Not reported NPDES No: Not reported  
 Creation: 10/22/93 Modified: 00/00/00  
 EPA ID: Not reported  
 Comments: Not reported

**Actual:  
 284 ft.**

MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

Site

Database(s) EDR ID Number  
 EPA ID Number

**31**  
**North**  
**1/8-1/4**  
**1289 ft.**

**AGFA GEVAERT INC**  
**1801 CENTURY PARK EAST**  
**LOS ANGELES, CA 90067**

**RCRA-SQG** **1000142591**  
**FINDS** **CAD098601131**

**Relative:** RCRAInfo:  
**Lower** Owner: JMB GROUP INC  
 (415) 555-1212

**Actual:** EPA ID: CAD098601131  
**281 ft.** Contact: ENVIRONMENTAL MANAGER  
 (213) 552-9633

Classification: Small Quantity Generator  
 TSDF Activities: Not reported

Violation Status: No violations found

**FINDS:**  
 Other Pertinent Environmental Activity Identified at Site:  
 Resource Conservation and Recovery Act Information system

**32**  
**West**  
**1/4-1/2**  
**1710 ft.**

**BEVERLY CREST CLEANERS**  
**10301 SANTA MONICA BLVD**  
**LOS ANGELES, CA 90025**

**RCRA-SQG** **1000216060**  
**FINDS** **CAD981654379**  
**HAZNET**  
**CA SLIC**  
**CLEANERS**  
**EMI**

**Relative:**  
**Higher**

**Actual:** RCRAInfo:  
**287 ft.** Owner: MEHDIAN HARRY  
 (415) 555-1212

EPA ID: CAD981654379

Contact: ENVIRONMENTAL MANAGER  
 (213) 277-5165

Classification: Small Quantity Generator  
 TSDF Activities: Not reported

Violation Status: No violations found

**FINDS:**  
 Other Pertinent Environmental Activity Identified at Site:  
 HWTS-DATAMART  
 Resource Conservation and Recovery Act Information system

**CA Cleaners:**

Inactive Date: Not reported  
 EPA Id: CAD981654379  
 Facility Address 2 : Not reported  
 NAICS Code : 81232  
 Facility Active : Yes  
 Mail Name : Not reported  
 Mailing Address: 10301 SANTA MONICA BLVD  
 LOS ANGELES, CA 90025

Owner Name : BEVERLY CREST CLEANERS  
 Mailing Address: 10301 SANTA MONICA BLVD  
 LOS ANGELES, CA 90025

Owner Telephone : 3102775165  
 Contact Name : H MEHDIAN, OWNER  
 Mailing Address: 10301 SANTA MONICA BLVD  
 LOS ANGELES, CA --

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**BEVERLY CREST CLEANERS (Continued)**

**1000216060**

Contact Telephone : 3102775165  
Region Code : 3  
Create Date : 04/10/87

Inactive Date: Not reported  
EPA Id: CAD981654379  
Facility Address 2 : Not reported  
NAICS Code : 81232  
Facility Active : Yes  
Mail Name : Not reported  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA 90025

Owner Name : BEVERLY CREST CLEANERS  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA 90025

Owner Telephone : 3102775165  
Contact Name : H MEHDIAN, OWNER  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA --

Contact Telephone : 3102775165  
Region Code : 3  
Create Date : 04/10/87

Inactive Date: Not reported  
EPA Id: CAD981654379  
Facility Address 2 : Not reported  
NAICS Code : 81232  
Facility Active : Yes  
Mail Name : Not reported  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA 90025

Owner Name : BEVERLY CREST CLEANERS  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA 90025

Owner Telephone : 3102775165  
Contact Name : H MEHDIAN, OWNER  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA --

Contact Telephone : 3102775165  
Region Code : 3  
Create Date : 04/10/87

Inactive Date: Not reported  
EPA Id: CAD981654379  
Facility Address 2 : Not reported  
NAICS Code : 81232  
Facility Active : Yes  
Mail Name : Not reported  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA 90025

Owner Name : BEVERLY CREST CLEANERS  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA 90025

Owner Telephone : 3102775165  
Contact Name : H MEHDIAN, OWNER  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA --

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**BEVERLY CREST CLEANERS (Continued)**

**1000216060**

Contact Telephone : 3102775165  
Region Code : 3  
Create Date : 04/10/87

HAZNET:

Gepaid: CAD981654379  
TSD EPA ID: AZD009015389  
Gen County: Los Angeles  
Tsd County: 99  
Tons: .2293  
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)  
Disposal Method: Recycler  
Contact: H MEHDIAN  
Telephone: (000) 000-0000  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA 90025  
County Los Angeles

Gepaid: CAD981654379  
TSD EPA ID: AZD009015389  
Gen County: Los Angeles  
Tsd County: 99  
Tons: .0000  
Waste Category:  
Disposal Method: Recycler  
Contact: H MEHDIAN  
Telephone: (000) 000-0000  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA 90025  
County Los Angeles

Gepaid: CAD981654379  
TSD EPA ID: CAD981397417  
Gen County: Los Angeles  
Tsd County: Los Angeles  
Tons: .0000  
Waste Category:  
Disposal Method: Recycler  
Contact: H MEHDIAN  
Telephone: (000) 000-0000  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA 90025  
County Los Angeles

Gepaid: CAD981654379  
TSD EPA ID: CAD981397417  
Gen County: Los Angeles  
Tsd County: Los Angeles  
Tons: 1.4913  
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)  
Disposal Method: Recycler  
Contact: H MEHDIAN  
Telephone: (000) 000-0000  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA 90025  
County Los Angeles



Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**BEVERLY CREST CLEANERS (Continued)**

**1000216060**

Gepaid: CAD981654379  
TSD EPA ID: Not reported  
Gen County: Los Angeles  
Tsd County: Los Angeles  
Tons: 0  
Waste Category: Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.)  
Disposal Method: Not reported  
Contact: H MEHDIAN, OWNER  
Telephone: (310) 277-5165  
Mailing Address: 10301 SANTA MONICA BLVD  
LOS ANGELES, CA 90025  
County: Not reported

[Click this hyperlink](#) while viewing on your computer to access 8 additional CA HAZNET record(s) in the EDR Site Report.

**CA STATE SLIC :**

Global Id : SL599992897  
Region : STATE  
Assigned Name : SLICSITE  
Lead Agency Contact : DAVID B. RASMUSSEN  
Lead Agency : LOS ANGELES RWQCB (REGION 4)  
Lead Agency Case Number : Not reported  
Responsible Party : Not reported  
Recent Dtw : Not reported  
Substance Released : Not reported

**SLIC Region 4:**

Facility Status: Site Assessment  
Region: 4  
SLIC: 1096  
Staff: DBR  
Substance: VOC

**EMISSIONS :**

Facility ID : 19432  
Air District Code : SC  
SIC Code : 7216  
Total Priority Score : Not reported  
Health Risk Assessment : Not reported  
Non-cancer Chronic Haz Index : Not reported  
Non-cancer Acute Haz Index : Not reported  
Air Basin : SC  
Air District Name : SOUTH COAST AQMD  
Community Health Air Pollution Info System : Not reported  
Consolidated Emission Reporting Rule : Not reported  
County Code : 19  
County ID : 19

**33  
NE  
1/4-1/2  
1789 ft.**

**BEVERLY HILLS U S D  
241 MORENO DR  
BEVERLY HILLS, CA 90212**

**HAZNET 1001614433  
LUST N/A**

**Relative:  
Lower**

State LUST:  
Cross Street: Not reported  
Qty Leaked: Not reported  
Case Number: R-16760  
Reg Board: 4  
Chemical: Diesel

**Actual:  
256 ft.**

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**BEVERLY HILLS U S D (Continued)**

**1001614433**

Lead Agency: Local Agency  
Local Agency : 19000  
Case Type: Soil only  
Status: Leak being confirmed  
Review Date: 1999-10-27 00:00:00 Confirm Leak: 1999-10-27 00:00:00  
Workplan: Not reported Prelim Assess: Not reported  
Pollution Char: Not reported Remed Plan: Not reported  
Remed Action: Not reported  
Monitoring: Not reported  
Close Date: Not reported  
Release Date: Not reported  
Cleanup Fund Id : Not reported  
Discover Date : Not reported  
Enforcement Dt : Not reported  
Enf Type: Not reported  
Enter Date : Not reported  
Funding: Not reported  
Staff Initials: Not reported  
How Discovered: Repair Tank  
How Stopped: Not reported  
Interim : Not reported  
Leak Cause: UNK  
Leak Source: UNK  
MTBE Date : Not reported  
Max MTBE GW : Not reported  
MTBE Tested: Not Required to be Tested.  
Priority: Not reported  
Local Case # : Not reported  
Beneficial: Not reported  
Staff : UNK  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: SAN FERNANDO VALLEY  
Operator : Not reported  
Oversight Prgm: LUST  
Review Date : 1999-10-27 00:00:00  
Stop Date : Not reported  
Work Suspended :Not reported  
Responsible Party: BEVERLY HILLS UNIFIED SCHOOL D  
RP Address: 255 LASKY DR., BEVERLY HILLS, CA 90212  
Global Id: T0603792986  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtb Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported  
Summary : 11/14 EDR;12/12WP; MTBE DATE 4/20/98.

LUST Region 4:  
Report Date: 10/27/1999  
Lead Agency: Local Agency  
Local Agency: 19000  
Substance: Diesel

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**BEVERLY HILLS U S D (Continued)**

**1001614433**

Case Type: Soil  
 Status: Leak being confirmed  
 Region: 4  
 Staff: UNK  
 Date Case Last Changed on Database: 10/27/1999  
 Date Leak Record Entered: Not reported  
 Historical Max MTBE Date: Not reported  
 GW Qualifier: Not reported  
 Soil Qualifier: Not reported  
 Hist Max MTBE Conc in Groundwater: Not reported  
 Hist Max MTBE Conc in Soil : Not reported  
 County: Los Angeles  
 Organization : Not reported  
 Regional Board: 04  
 Owner Contact: Not reported  
 Responsible Party: BEVERLY HILLS UNIFIED SCHOOL D  
 RP Address: 255 LASKY DR., BEVERLY HILLS, CA 90212  
 Significant Interim Remedial Action Taken: Not reported  
 Program : LUST  
 Lat / Long : 34.06254 / -1  
 Local Agency Staff: Not reported  
 Beneficial Use : Not reported  
 Priority : Not reported  
 Cleanup Fund Id : Not reported  
 Suspended : Not reported  
 Local Case No : Not reported  
 Substance Quantity : Not reported  
 Abatement Method Used at the Site: Not reported  
 Operator : Not reported  
 Water System : Not reported  
 Well Name : Not reported  
 Approx. Dist To Production Well (ft) : 4651.27975687330437827776284  
 Assigned Name : Not reported  
 W Global ID : Not reported  
 Source of Cleanup Funding: Not reported  
 Date the Leak was Discovered: 8/19/1998  
 How the Leak was Discovered: TR  
 How the Leak was Stopped: Not reported  
 Cause of Leak: UNK  
 Leak Source: UNK  
 Date The Leak was Stopped: 8/19/1998  
 Date Confirmation Leak Began: 10/27/1999  
 Preliminary Site Assessment Workplan Submitted: Not reported  
 Preliminary Site Assessment Began: Not reported  
 Pollution Characterization Began: Not reported  
 Remediation Plan Submitted: Not reported  
 Remedial Action Underway: Not reported  
 Post Remedial Action Monitoring Began: Not reported  
 Date the Case was Closed: Not reported  
 Enforcement Action Date: Not reported  
 Date Leak First Reported: 10/27/1999  
 Enforcement Type: Not reported  
 Global ID : T0603792986  
 Cross Street: Not reported  
 Summary :

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**BEVERLY HILLS U S D (Continued)**

**1001614433**

HAZNET:  
Gepaid: CAD982036618  
TSD EPA ID: CAD067786749  
Gen County: Los Angeles  
Tsd County: Los Angeles  
Tons: 19.3844  
Waste Category: Asbestos-containing waste  
Disposal Method: Disposal, Land Fill  
Contact: BEVERLY HILLS U S D  
Telephone: (000) 000-0000  
Mailing Address: 255 S LASKY DR  
BEVERLY HILLS, CA 90212 - 3644  
County: Los Angeles  
Gepaid: CAD982036618  
TSD EPA ID: CAD981402522  
Gen County: Los Angeles  
Tsd County: Kern  
Tons: .1668  
Waste Category: Photochemicals/photoprocessing waste  
Disposal Method: Recycler  
Contact: BEVERLY HILLS U S D  
Telephone: (000) 000-0000  
Mailing Address: 255 S LASKY DR  
BEVERLY HILLS, CA 90212 - 3644  
County: Los Angeles  
Gepaid: CAD982036618  
TSD EPA ID: CAD009007626  
Gen County: Los Angeles  
Tsd County: Los Angeles  
Tons: 15.1703  
Waste Category: Asbestos-containing waste  
Disposal Method: Disposal, Land Fill  
Contact: BEVERLY HILLS U S D  
Telephone: (000) 000-0000  
Mailing Address: 255 S LASKY DR  
BEVERLY HILLS, CA 90212 - 3644  
County: Los Angeles  
Gepaid: CAD982036618  
TSD EPA ID: AZC950823111  
Gen County: Los Angeles  
Tsd County: 99  
Tons: 20.2272  
Waste Category: Asbestos-containing waste  
Disposal Method: Not reported  
Contact: BEVERLY HILLS U S D  
Telephone: (000) 000-0000  
Mailing Address: 255 S LASKY DR  
BEVERLY HILLS, CA 90212 - 3644  
County: Los Angeles

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**BEVERLY HILLS U S D (Continued)**

**1001614433**

Gepaid: CAD982036618  
 TSD EPA ID: CAD009007626  
 Gen County: Los Angeles  
 Tsd County: Los Angeles  
 Tons: 178.1678  
 Waste Category: Asbestos-containing waste  
 Disposal Method: Disposal, Land Fill  
 Contact: BEVERLY HILLS U S D  
 Telephone: (000) 000-0000  
 Mailing Address: 255 S LASKY DR  
 BEVERLY HILLS, CA 90212 - 3644  
 County: Los Angeles

[Click this hyperlink](#) while viewing on your computer to access  
 17 additional CA HAZNET record(s) in the EDR Site Report.

**34**  
**NNE**  
**1/4-1/2**  
**2030 ft.**

**CHEVRON**  
**9975 SANTA MONICA BLVD**  
**BEVERLY HILLS, CA 90210**

**LUST S102426997**  
**Cortese N/A**

**Relative:**  
**Equal**

**Actual:**  
**282 ft.**

State LUST:  
 Cross Street: MORENO DR  
 Qty Leaked: Not reported  
 Case Number: I-10833  
 Reg Board: 4  
 Chemical: Gasoline  
 Lead Agency: Local Agency  
 Local Agency : 19000  
 Case Type: Soil only  
 Status: Case Closed  
 Review Date: Not reported  
 Workplan: 1989-10-20 00:00:00  
 Pollution Char: Not reported  
 Remed Action: Not reported  
 Monitoring: Not reported  
 Close Date: 1992-12-22 00:00:00  
 Release Date: Not reported  
 Cleanup Fund Id : Not reported  
 Discover Date : Not reported  
 Enforcement Dt : 1965-01-01 00:00:00  
 Enf Type: 222  
 Enter Date : 1990-05-01 00:00:00  
 Funding: Federal Funds  
 Staff Initials: Not reported  
 How Discovered: Not reported  
 How Stopped: Not reported  
 Interim : Not reported  
 Leak Cause: Not reported  
 Leak Source: Not reported  
 MTBE Date : Not reported  
 Max MTBE GW : Not reported  
 MTBE Tested: Site NOT Tested for MTBE.Includes Unknown and Not Analyzed.  
 Priority: Not reported  
 Local Case # : Not reported  
 Beneficial: Not reported  
 Staff : UNK  
 GW Qualifier : Not reported

Confirm Leak: Not reported  
 Prelim Assess: 1989-10-20 00:00:00  
 Remed Plan: Not reported

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**CHEVRON (Continued)**

**S102426997**

Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: SAN FERNANDO VALLEY  
Operator : GARY WEBB & SONS  
Oversight Prgm: LUST  
Review Date : 1992-06-30 00:00:00  
Stop Date : Not reported  
Work Suspended :Not reported  
Responsible Party:MAURICE DOUEK  
RP Address: 207 N MAPLE DR, BEVERLY HILLS, CA 90210  
Global Id: T0603703660  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 0  
Mtbe Fuel: 1  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported  
Summary : DUPLICATE CASENO 042390-14

LUST Region 4:

Report Date: 10/23/1989  
Lead Agency: Local Agency  
Local Agency: 19000  
Substance: Gasoline  
Case Type: Soil  
Status: Case Closed  
Region: 4  
Staff: UNK  
Date Case Last Changed on Database: 6/30/1992  
Date Leak Record Entered: 5/1/1990  
Historical Max MTBE Date: Not reported  
GW Qualifier: Not reported  
Soil Qualifier: Not reported  
Hist Max MTBE Conc in Groundwater: Not reported  
Hist Max MTBE Conc in Soil : Not reported  
County: Los Angeles  
Organization : Not reported  
Regional Board: 04  
Owner Contact: Not reported  
Responsible Party: MAURICE DOUEK  
RP Address: 207 N MAPLE DR, BEVERLY HILLS, CA 90210  
Significant Interim Remedial Action Taken: Not reported  
Program : LUST  
Lat / Long : 34.0643645 / -1  
Local Agency Staff: Not reported  
Beneficial Use : Not reported  
Priority : Not reported  
Cleanup Fund Id : Not reported  
Suspended : Not reported  
Local Case No : Not reported  
Substance Quantity : Not reported  
Abatement Method Used at the Site: Not reported  
Operator : GARY WEBB & SONS  
Water System : Not reported  
Well Name : Not reported

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
 EPA ID Number

**CHEVRON (Continued)**

**S102426997**

Approx. Dist To Production Well (ft) : 4557.7927958210575343953968977  
 Assigned Name : Not reported  
 W Global ID : Not reported  
 Source of Cleanup Funding: Federal Funds  
 Date the Leak was Discovered: Not reported  
 How the Leak was Discovered: Not reported  
 How the Leak was Stopped: Not reported  
 Cause of Leak: Not reported  
 Leak Source: Not reported  
 Date The Leak was Stopped: Not reported  
 Date Confirmation Leak Began: Not reported  
 Preliminary Site Assessment Workplan Submitted: 6/11/1989  
 Preliminary Site Assessment Began: 10/20/1989  
 Pollution Characterization Began: Not reported  
 Remediation Plan Submitted: Not reported  
 Remedial Action Underway: Not reported  
 Post Remedial Action Monitoring Began: Not reported  
 Date the Case was Closed: 12/22/1992  
 Enforcement Action Date: 1/1/1965  
 Date Leak First Reported: 10/23/1989  
 Enforcement Type: 222  
 Global ID : T0603703660  
 Cross Street: MORENO DR  
 Summary : DUPLICATE CASENO 042390-14

**CORTESE:**

Region: CORTESE  
 Fac Address 2: 9975 SANTA MONICA BLVD

H35  
 WSW  
 1/4-1/2  
 2523 ft.

**TOSCO - 76 STATION #1715**  
**10389 SANTA MONICA BLVD**  
**SAWTELLE, CA 90025**

**LUST S105693815**  
**N/A**

**Site 1 of 3 in cluster H**

**Relative:**  
**Lower**

**Actual:**  
**250 ft.**

State LUST:  
 Cross Street: BEVERLY GLEN BLVD  
 Qty Leaked: Not reported  
 Case Number: 900250061  
 Reg Board: 4  
 Chemical: Diesel  
 Lead Agency: Regional Board  
 Local Agency : 19050  
 Case Type: Other ground water affected  
 Status: Remediation Plan  
 Abate Method: Pump and Treat Ground Water - generally employed to remove dissolved  
 contaminants, Vapor Extraction  
 Review Date: Not reported  
 Workplan: Not reported  
 Pollution Char: 1997-08-18 00:00:00  
 Remed Action: 1997-08-01 00:00:00  
 Monitoring: Not reported  
 Close Date: Not reported  
 Release Date: Not reported  
 Cleanup Fund Id : Not reported  
 Discover Date : Not reported  
 Enforcement Dt : Not reported  
 Enf Type: SEL  
 Enter Date : 1988-05-13 00:00:00  
 Confirm Leak: Not reported  
 Prelim Assess: Not reported  
 Remed Plan: 1997-08-18 00:00:00

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

EDR ID Number  
EPA ID Number  
Database(s)

TOSCO - 76 STATION #1715 (Continued)

S105693815

Funding: Not reported  
Staff Initials: PEJ  
How Discovered: Tank Test  
How Stopped: Not reported  
Interim : Yes  
Leak Cause: Not reported  
Leak Source: Tank  
MTBE Date : 1965-01-01 00:00:00  
Max MTBE GW : 350,000 Parts per Billion  
MTBE Tested: MTBE Detected. Site tested for MTBE & MTBE detected  
Priority: Not reported  
Local Case # : Not reported  
Beneficial: Not reported  
Staff : TCS  
GW Qualifier : Not reported  
Max MTBE Soil : Not reported  
Soil Qualifier : Not reported  
Hydr Basin #: SAN FERNANDO VALLEY  
Operator : (NEXT TO COMSTOCK BUILDING)  
Oversight Prgm: LUST  
Review Date : 2002-10-15 00:00:00  
Stop Date : Not reported  
Work Suspended :Not reported  
Responsible Party:MICHAEL BRYAN  
RP Address: 555 ANTON  
Global Id: T0603700691  
Org Name: Not reported  
Contact Person: Not reported  
MTBE Conc: 2  
Mtbe Fuel: 0  
Water System Name: Not reported  
Well Name: Not reported  
Distance To Lust: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported  
Summary : COMSTOCK BLD ADJACENT TO UNOCAL HAD DIESEL SEEPING INTO DEWATERING SUMP. NPDES CAG834001 ISSUED FOR DISCHARGE TO STORMWATER. PRESENCE OF CL-HC AT SUMP, NOT AT UNOCAL SITE. FREE PRODUCT DIESEL INITIAL 5 GW WELLS WAS 2-10+ FT.

LUST Region 4:  
Report Date: 10/23/1987  
Lead Agency: Regional Board  
Local Agency: 19050  
Substance: Diesel  
Case Type: Groundwater  
Status: Remediation Plan  
Region: 4  
Staff: TCS  
Date Case Last Changed on Database: 10/15/2002  
Date Leak Record Entered: 5/13/1988  
Historical Max MTBE Date: 1/1/1965  
GW Qualifier: Not reported  
Soil Qualifier: =  
Hist Max MTBE Conc in Groundwater: 350000  
Hist Max MTBE Conc in Soil : 1500  
County: Los Angeles  
Organization : Not reported



Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

**TOSCO - 76 STATION #1715 (Continued)**

EDR ID Number  
 EPA ID Number

Database(s)

**S105693815**

|   |  |
|---|--|
| Regional Board:                                 | 04   |
| Owner Contact:                                  | Not reported   |
| Responsible Party:                              | MICHAEL BRYAN  |
| RP Address:                                     | 555 ANTON  |
| Significant Interim Remedial Action Taken:      | Yes  |
| Program :                                       | LUST   |
| Lat / Long :                                    | 34.0575326 / -1  |
| Local Agency Staff:                             | PEJ  |
| Beneficial Use :                                | Not reported   |
| Priority :                                      | Not reported   |
| Cleanup Fund Id :                               | Not reported   |
| Suspended :                                     | Not reported   |
| Local Case No :                                 | Not reported   |
| Substance Quantity :                            | Not reported   |
| Abatement Method Used at the Site:              | GTVE   |
| Operator :                                      | (NEXT TO COMSTOCK BUILDING)  |
| Water System :                                  | Not reported   |
| Well Name :                                     | Not reported   |
| Approx. Dist To Production Well (ft) :          | 7890.663254339704364242533451  |
| Assigned Name :                                 | Not reported   |
| W Global ID :                                   | Not reported   |
| Source of Cleanup Funding:                      | Not reported   |
| Date the Leak was Discovered:                   | 10/21/1987   |
| How the Leak was Discovered:                    | Tank Test  |
| How the Leak was Stopped:                       | Not reported   |
| Cause of Leak:                                  | Not reported   |
| Leak Source:                                    | Tank   |
| Date The Leak was Stopped:                      | 10/21/1987   |
| Date Confirmation Leak Began:                   | Not reported   |
| Preliminary Site Assessment Workplan Submitted: | Not reported   |
| Preliminary Site Assessment Began:              | Not reported   |
| Pollution Characterization Began:               | Not reported   |
| Remediation Plan Submitted:                     | 8/18/1997  |
| Remedial Action Underway:                       | 8/1/1997   |
| Post Remedial Action Monitoring Began:          | Not reported   |
| Date the Case was Closed:                       | Not reported   |
| Enforcement Action Date:                        | Not reported   |
| Date Leak First Reported:                       | 10/23/1987   |
| Enforcement Type:                               | SEL  |
| Global ID :                                     | T0603700691  |
| Cross Street:                                   | BEVERLY GLEN BLVD  |
| Summary :                                       | COMSTOCK BLD ADJACENT TO UNOCAL HAD DIESEL SEEPING INTO DEWATERING SUMP. NPDES CAG834001 ISSUED FOR DISCHARGE TO STORMWATER. PRESENCE OF CL-HC AT SUMP, NOT AT UNOCAL SITE. FREE PRODUCT DIESEL INITIAL 5 GW WELLS WAS 2-10+ FT. |

H36  
 WSW  
 1/4-1/2  
 2523 ft.

**76 PRODUCTS STATION #1715**  
**10389 SANTA MONICA**  
**LOS ANGELES, CA 90025**

**Cortese S103065911**  
**N/A**

Relative:  
 Lower

**Site 2 of 3 in cluster H**

Actual:  
 250 ft.

CORTESE:  
 Region: CORTESE  
 Fac Address 2: Not reported

Map ID  
 Direction  
 Distance  
 Distance (ft.)  
 Elevation

MAP FINDINGS

Site

Database(s)      EDR ID Number  
 EPA ID Number

**H37**      **WEISS DEVELOPMENT**  
**WSW**      **10400 SANTA MONICA BLVD**  
**1/4-1/2**      **LOS ANGELES, CA 90025**  
**2607 ft.**

**LUST**      **S105691834**  
**N/A**

**Site 3 of 3 in cluster H**

**Relative:**  
**Lower**

**State LUST:**

**Actual:**  
**242 ft.**

|                    |   |                |                     |
|--------------------|---|----------------|---------------------|
| Cross Street:      | Not reported  | Confirm Leak:  | 1997-02-04 00:00:00 |
| Qty Leaked:        | Not reported  | Prelim Assess: | Not reported        |
| Case Number        | 900250225   | Remed Plan:    | 2001-09-10 00:00:00 |
| Reg Board:         | 4   |                |                     |
| Chemical:          | Gasoline  |                |                     |
| Lead Agency:       | Regional Board                                      |                |                     |
| Local Agency :     | Not reported  |                |                     |
| Case Type:         | Soil only   |                |                     |
| Status:            | Case Closed   |                |                     |
| Review Date:       | 1997-02-04 00:00:00                                 |                |                     |
| Workplan:          | Not reported  |                |                     |
| Pollution Char:    | 2001-09-10 00:00:00                                 |                |                     |
| Remed Action:      | 2001-09-21 00:00:00                                 |                |                     |
| Monitoring:        | Not reported  |                |                     |
| Close Date:        | 2002-02-01 00:00:00                                 |                |                     |
| Release Date:      | Not reported  |                |                     |
| Cleanup Fund Id :  | Not reported  |                |                     |
| Discover Date :    | Not reported  |                |                     |
| Enforcement Dt :   | Not reported  |                |                     |
| Enf Type:          | Not reported  |                |                     |
| Enter Date :       | Not reported  |                |                     |
| Funding:           | Not reported  |                |                     |
| Staff Initials:    | Not reported  |                |                     |
| How Discovered:    | OM  |                |                     |
| How Stopped:       | Not reported  |                |                     |
| Interim :          | Not reported  |                |                     |
| Leak Cause:        | UNK   |                |                     |
| Leak Source:       | UNK   |                |                     |
| MTBE Date :        | 2001-08-01 00:00:00                                 |                |                     |
| Max MTBE GW :      | 2 Parts per Billion                                 |                |                     |
| MTBE Tested:       | MTBE Detected. Site tested for MTBE & MTBE detected |                |                     |
| Priority:          | Not reported  |                |                     |
| Local Case # :     | Not reported  |                |                     |
| Beneficial:        | Not reported  |                |                     |
| Staff :            | TCS   |                |                     |
| GW Qualifier :     | <   |                |                     |
| Max MTBE Soil :    | 0.01 Parts per Million                              |                |                     |
| Soil Qualifier :   | <   |                |                     |
| Hydr Basin #:      | SAN FERNANDO VALLEY                                 |                |                     |
| Operator :         | MR. MITCHELL WEISS                                  |                |                     |
| Oversight Prgm:    | LUST  |                |                     |
| Review Date :      | 2001-12-20 00:00:00                                 |                |                     |
| Stop Date :        | Not reported  |                |                     |
| Work Suspended :   | Not reported  |                |                     |
| Responsible Party: | MR. MITCHELL WEISS                                  |                |                     |
| RP Address:        | 8950 W. OLYMPIC BLVD. #212                          |                |                     |
| Global Id:         | T060372659  |                |                     |
| Org Name:          | Not reported  |                |                     |
| Contact Person:    | Not reported  |                |                     |
| MTBE Conc:         | 2   |                |                     |
| Mtbe Fuel:         | 1   |                |                     |
| Water System Name: | Not reported  |                |                     |

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s)  
EDR ID Number  
EPA ID Number

**WEISS DEVELOPMENT (Continued)**

**S105691834**

Well Name: Not reported  
Distance To LUST: 0  
Waste Discharge Global ID: Not reported  
Waste Disch Assigned Name: Not reported  
Summary : Haz Mat incident report filed : CLOSE TANK

**LUST Region 4:**

Report Date: 8/1/2001  
Lead Agency: Regional Board  
Local Agency: Not reported  
Substance: Gasoline  
Case Type: Soil  
Status: Case Closed  
Region: 4  
Staff: TCS  
Date Case Last Changed on Database: 12/20/2001  
Date Leak Record Entered: Not reported  
Historical Max MTBE Date: 8/1/2001  
GW Qualifier: <  
Soil Qualifier: <  
Hist Max MTBE Conc in Groundwater: 2  
Hist Max MTBE Conc in Soil : .01  
County: Los Angeles  
Organization : Not reported  
Regional Board: 04  
Owner Contact: Not reported  
Responsible Party: MR. MITCHELL WEISS  
RP Address: 8950 W. OLYMPIC BLVD. #212  
Significant Interim Remedial Action Taken: Not reported  
Program : LUST  
Lat / Long : 34.057407 / -1  
Local Agency Staff: Not reported  
Beneficial Use : Not reported  
Priority : Not reported  
Cleanup Fund Id : Not reported  
Suspended : Not reported  
Local Case No : Not reported  
Substance Quantity : Not reported  
Abatement Method Used at the Site: Not reported  
Operator : MR. MITCHELL WEISS  
Water System : Not reported  
Well Name : Not reported  
Approx. Dist To Production Well (ft) : 8056.949527217477887543965033  
Assigned Name : Not reported  
W Global ID : Not reported  
Source of Cleanup Funding: Not reported  
Date the Leak was Discovered: Not reported  
How the Leak was Discovered: OM  
How the Leak was Stopped: Not reported  
Cause of Leak: UNK  
Leak Source: UNK  
Date The Leak was Stopped: Not reported  
Date Confirmation Leak Began: 2/4/1997  
Preliminary Site Assessment Workplan Submitted: 2/4/1997  
Preliminary Site Assessment Began: Not reported  
Pollution Characterization Began: 8/1/2001  
Remediation Plan Submitted: 9/10/2001  
Remedial Action Underway: 9/21/2001

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number  
EPA ID Number

**WEISS DEVELOPMENT (Continued)**

**S105691834**

Post Remedial Action Monitoring Began: Not reported  
Date the Case was Closed: 2/1/2002  
Enforcement Action Date: Not reported  
Date Leak First Reported: 8/1/2001  
Enforcement Type: Not reported  
Global ID : T060372659  
Cross Street: Not reported  
Summary : Haz Mat incident report filed : CLOSE TANK

ORPHAN SUMMARY

| City        | EDR ID     | Site Name                 | Site Address                   | Zip   | Database(s) |
|-------------|------------|---------------------------|--------------------------------|-------|-------------|
| LOS ANGELES | S106539437 | THOUSAND OAKS COUNTY 1962 | 11100 SANTA MONICA BL. STE. 30 | 90025 | SWF/LF      |



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Elapsed ASTM days:** Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

## FEDERAL ASTM STANDARD RECORDS

### **NPL: National Priority List**

Source: EPA

Telephone: N/A

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/14/04

Date Made Active at EDR: 02/03/05

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 02/01/05

Elapsed ASTM days: 2

Date of Last EDR Contact: 02/01/05

### **NPL Site Boundaries**

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)

Telephone: 202-564-7333

EPA Region 1

Telephone 617-918-1143

EPA Region 3

Telephone 215-814-5418

EPA Region 4

Telephone 404-562-8033

EPA Region 6

Telephone: 214-655-6659

EPA Region 8

Telephone: 303-312-6774

### **Proposed NPL: Proposed National Priority List Sites**

Source: EPA

Telephone: N/A

Date of Government Version: 12/14/04

Date Made Active at EDR: 02/03/05

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 02/01/05

Elapsed ASTM days: 2

Date of Last EDR Contact: 02/01/05

### **CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System**

Source: EPA

Telephone: 703-413-0223

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 12/14/04

Date Made Active at EDR: 02/08/05

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/21/04

Elapsed ASTM days: 49

Date of Last EDR Contact: 12/21/04

### **CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned**

Source: EPA

Telephone: 703-413-0223

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/14/04  
Date Made Active at EDR: 02/08/05  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/21/04  
Elapsed ASTM days: 49  
Date of Last EDR Contact: 12/21/04

### **CORRACTS:** Corrective Action Report

Source: EPA  
Telephone: 800-424-9346  
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/15/04  
Date Made Active at EDR: 02/25/05  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/07/05  
Elapsed ASTM days: 49  
Date of Last EDR Contact: 12/07/04

### **RCRA:** Resource Conservation and Recovery Act Information

Source: EPA  
Telephone: 800-424-9346  
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 11/23/04  
Date Made Active at EDR: 01/18/05  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 11/24/04  
Elapsed ASTM days: 55  
Date of Last EDR Contact: 11/24/04

### **ERNS:** Emergency Response Notification System

Source: National Response Center, United States Coast Guard  
Telephone: 202-260-2342  
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/03  
Date Made Active at EDR: 03/12/04  
Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/26/04  
Elapsed ASTM days: 46  
Date of Last EDR Contact: 01/27/05

### **FEDERAL ASTM SUPPLEMENTAL RECORDS**

#### **BRS:** Biennial Reporting System

Source: EPA/NTIS  
Telephone: 800-424-9346  
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/01/01  
Database Release Frequency: Biennially

Date of Last EDR Contact: 12/13/04  
Date of Next Scheduled EDR Contact: 03/14/05

#### **CONSENT:** Superfund (CERCLA) Consent Decrees

Source: Department of Justice, Consent Decree Library  
Telephone: Varies  
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/05/04  
Database Release Frequency: Varies

Date of Last EDR Contact: 10/25/04  
Date of Next Scheduled EDR Contact: 01/24/05

**ROD: Records Of Decision**

Source: EPA  
Telephone: 703-416-0223

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/09/04  
Database Release Frequency: Annually

Date of Last EDR Contact: 01/05/05  
Date of Next Scheduled EDR Contact: 04/04/05

**DELISTED NPL: National Priority List Deletions**

Source: EPA  
Telephone: N/A

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/14/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/01/05  
Date of Next Scheduled EDR Contact: 05/02/05

**FINDS: Facility Index System/Facility Identification Initiative Program Summary Report**

Source: EPA  
Telephone: N/A

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 01/12/05  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/03/05  
Date of Next Scheduled EDR Contact: 04/04/05

**HMIRS: Hazardous Materials Information Reporting System**

Source: U.S. Department of Transportation  
Telephone: 202-366-4555

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/08/04  
Database Release Frequency: Annually

Date of Last EDR Contact: 01/19/05  
Date of Next Scheduled EDR Contact: 04/18/05

**MLTS: Material Licensing Tracking System**

Source: Nuclear Regulatory Commission  
Telephone: 301-415-7169

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 11/30/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/03/05  
Date of Next Scheduled EDR Contact: 04/04/05

**MINES: Mines Master Index File**

Source: Department of Labor, Mine Safety and Health Administration  
Telephone: 303-231-5959

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/15/05  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/28/04  
Date of Next Scheduled EDR Contact: 03/28/05

**NPL LIENS:** Federal Superfund Liens

Source: EPA  
Telephone: 202-564-4267

Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 02/22/05  
Date of Next Scheduled EDR Contact: 05/23/05

**PADS:** PCB Activity Database System

Source: EPA  
Telephone: 202-564-3887

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/30/04  
Database Release Frequency: Annually

Date of Last EDR Contact: 02/23/05  
Date of Next Scheduled EDR Contact: 05/09/05

**DOD:** Department of Defense Sites

Source: USGS  
Telephone: 703-692-8801

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 10/01/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/08/05  
Date of Next Scheduled EDR Contact: 05/09/05

**UMTRA:** Uranium Mill Tailings Sites

Source: Department of Energy  
Telephone: 505-845-0011

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized. In 1978, 24 inactive uranium mill tailings sites in Oregon, Idaho, Wyoming, Utah, Colorado, New Mexico, Texas, North Dakota, South Dakota, Pennsylvania, and on Navajo and Hopi tribal lands, were targeted for cleanup by the Department of Energy.

Date of Government Version: 12/29/04  
Database Release Frequency: Varies

Date of Last EDR Contact: 12/21/04  
Date of Next Scheduled EDR Contact: 03/21/05

**ODI:** Open Dump Inventory

Source: Environmental Protection Agency  
Telephone: 800-424-9346

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/85  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 05/23/95  
Date of Next Scheduled EDR Contact: N/A

**FUDS:** Formerly Used Defense Sites

Source: U.S. Army Corps of Engineers  
Telephone: 202-528-4285

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/03  
Database Release Frequency: Varies

Date of Last EDR Contact: 01/03/05  
Date of Next Scheduled EDR Contact: 04/04/05

## **INDIAN RESERV:** Indian Reservations

Source: USGS

Telephone: 202-208-3710

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 10/01/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/08/05  
Date of Next Scheduled EDR Contact: 05/09/05

## **RAATS:** RCRA Administrative Action Tracking System

Source: EPA

Telephone: 202-564-4104

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 12/06/04  
Date of Next Scheduled EDR Contact: 03/07/05

## **TRIS:** Toxic Chemical Release Inventory System

Source: EPA

Telephone: 202-566-0250

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/02  
Database Release Frequency: Annually

Date of Last EDR Contact: 12/20/04  
Date of Next Scheduled EDR Contact: 03/21/05

## **TSCA:** Toxic Substances Control Act

Source: EPA

Telephone: 202-260-5521

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/02  
Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 12/06/04  
Date of Next Scheduled EDR Contact: 03/07/05

## **FTTS INSP:** FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Source: EPA

Telephone: 202-564-2501

Date of Government Version: 04/13/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/01/04  
Date of Next Scheduled EDR Contact: 03/21/05

## **SSTS:** Section 7 Tracking Systems

Source: EPA

Telephone: 202-564-5008

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 11/29/04  
Date of Next Scheduled EDR Contact: 04/18/05

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**FTTS:** FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-564-2501

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 09/13/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/01/04  
Date of Next Scheduled EDR Contact: 03/21/05

**STATE OF CALIFORNIA ASTM STANDARD RECORDS**

**AWP:** Annual Workplan Sites

Source: California Environmental Protection Agency

Telephone: 916-323-3400

Known Hazardous Waste Sites. California DTSC's Annual Workplan (AWP), formerly BEP, identifies known hazardous substance sites targeted for cleanup.

Date of Government Version: 11/09/04  
Date Made Active at EDR: 01/04/05  
Database Release Frequency: Annually

Date of Data Arrival at EDR: 12/02/04  
Elapsed ASTM days: 33  
Date of Last EDR Contact: 03/01/05

**CAL-SITES:** Calsites Database

Source: Department of Toxic Substance Control

Telephone: 916-323-3400

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database.

Date of Government Version: 11/09/04  
Date Made Active at EDR: 01/04/05  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/02/04  
Elapsed ASTM days: 33  
Date of Last EDR Contact: 03/01/05

**CHMIRS:** California Hazardous Material Incident Report System

Source: Office of Emergency Services

Telephone: 916-845-8400

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/03  
Date Made Active at EDR: 06/25/04  
Database Release Frequency: Varies

Date of Data Arrival at EDR: 05/18/04  
Elapsed ASTM days: 38  
Date of Last EDR Contact: 02/23/05

**CORTESE:** "Cortese" Hazardous Waste & Substances Sites List

Source: CAL EPA/Office of Emergency Information

Telephone: 916-323-9100

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

Date of Government Version: 04/01/01  
Date Made Active at EDR: 07/26/01  
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 05/29/01  
Elapsed ASTM days: 58  
Date of Last EDR Contact: 01/25/05

**NOTIFY 65:** Proposition 65 Records

Source: State Water Resources Control Board

Telephone: 916-445-3846

Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/21/93  
Date Made Active at EDR: 11/19/93  
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 11/01/93  
Elapsed ASTM days: 18  
Date of Last EDR Contact: 01/17/05

**TOXIC PITS:** Toxic Pits Cleanup Act Sites

Source: State Water Resources Control Board  
Telephone: 916-227-4364

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/95  
Date Made Active at EDR: 09/26/95  
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 08/30/95  
Elapsed ASTM days: 27  
Date of Last EDR Contact: 02/01/05

**SWF/LF (SWIS):** Solid Waste Information System

Source: Integrated Waste Management Board  
Telephone: 916-341-6320

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/13/04  
Date Made Active at EDR: 01/24/05  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/14/04  
Elapsed ASTM days: 41  
Date of Last EDR Contact: 12/14/04

**WMUDS/SWAT:** Waste Management Unit Database

Source: State Water Resources Control Board  
Telephone: 916-227-4448

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/00  
Date Made Active at EDR: 05/10/00  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 04/10/00  
Elapsed ASTM days: 30  
Date of Last EDR Contact: 12/06/04

**LUST:** Leaking Underground Storage Tank Information System

Source: State Water Resources Control Board  
Telephone: 916-341-5752

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 01/10/05  
Date Made Active at EDR: 02/21/05  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/10/05  
Elapsed ASTM days: 42  
Date of Last EDR Contact: 01/10/05

**CA BOND EXP. PLAN:** Bond Expenditure Plan

Source: Department of Health Services  
Telephone: 916-255-2118

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/89  
Date Made Active at EDR: 08/02/94  
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 07/27/94  
Elapsed ASTM days: 6  
Date of Last EDR Contact: 05/31/94

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## CA UST:

### UST: Active UST Facilities

Source: SWRCB

Telephone: 916-341-5752

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 01/10/05

Date Made Active at EDR: 02/21/05

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 01/10/05

Elapsed ASTM days: 42

Date of Last EDR Contact: 01/10/05

## VCP: Voluntary Cleanup Program Properties

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 11/09/04

Date Made Active at EDR: 01/24/05

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/02/04

Elapsed ASTM days: 53

Date of Last EDR Contact: 03/01/05

## INDIAN LUST: Leaking Underground Storage Tanks on Indian Land

Source: Environmental Protection Agency

Telephone: 415-972-3372

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/14/05

Date Made Active at EDR: 03/03/05

Database Release Frequency: Varies

Date of Data Arrival at EDR: 01/14/05

Elapsed ASTM days: 48

Date of Last EDR Contact: 02/22/05

## INDIAN LUST: Leaking Underground Storage Tanks on Indian Land

Source: EPA Region 10

Telephone: 206-553-2857

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 12/21/04

Date Made Active at EDR: 02/03/05

Database Release Frequency: Varies

Date of Data Arrival at EDR: 12/21/04

Elapsed ASTM days: 44

Date of Last EDR Contact: 01/31/05

## INDIAN UST: Underground Storage Tanks on Indian Land

Source: EPA Region 9

Telephone: 415-972-3368

Date of Government Version: 11/02/04

Date Made Active at EDR: 12/13/04

Database Release Frequency: Varies

Date of Data Arrival at EDR: 11/03/04

Elapsed ASTM days: 40

Date of Last EDR Contact: 02/22/05

## CA FID UST: Facility Inventory Database

Source: California Environmental Protection Agency

Telephone: 916-445-6532

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/94

Date Made Active at EDR: 09/29/95

Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 09/05/95

Elapsed ASTM days: 24

Date of Last EDR Contact: 12/28/98

## HIST UST: Hazardous Substance Storage Container Database

Source: State Water Resources Control Board

Telephone: 916-341-5700

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/90  
Date Made Active at EDR: 02/12/91  
Database Release Frequency: No Update Planned

Date of Data Arrival at EDR: 01/25/91  
Elapsed ASTM days: 18  
Date of Last EDR Contact: 07/26/01

## STATE OF CALIFORNIA ASTM SUPPLEMENTAL RECORDS

**AST:** Aboveground Petroleum Storage Tank Facilities  
Source: State Water Resources Control Board  
Telephone: 916-341-5712  
Registered Aboveground Storage Tanks.

Date of Government Version: 12/01/03  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/24/05  
Date of Next Scheduled EDR Contact: 05/02/05

**CLEANERS:** Cleaner Facilities  
Source: Department of Toxic Substance Control  
Telephone: 916-225-0873

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes:  
power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 11/29/04  
Database Release Frequency: Annually

Date of Last EDR Contact: 01/04/05  
Date of Next Scheduled EDR Contact: 04/04/05

**CA WDS:** Waste Discharge System  
Source: State Water Resources Control Board  
Telephone: 916-341-5227  
Sites which have been issued waste discharge requirements.

Date of Government Version: 12/20/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/21/04  
Date of Next Scheduled EDR Contact: 03/21/05

**DEED:** Deed Restriction Listing  
Source: Department of Toxic Substances Control  
Telephone: 916-323-3400

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 10/04/04  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/04/05  
Date of Next Scheduled EDR Contact: 04/04/05

**NFA:** No Further Action Determination  
Source: Department of Toxic Substances Control  
Telephone: 916-323-3400

This category contains properties at which DTSC has made a clear determination that the property does not pose a problem to the environment or to public health.

Date of Government Version: 11/09/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/01/05  
Date of Next Scheduled EDR Contact: 05/30/05

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### **EMI:** Emissions Inventory Data

Source: California Air Resources Board

Telephone: 916-322-2990

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/02

Database Release Frequency: Varies

Date of Last EDR Contact: 01/21/05

Date of Next Scheduled EDR Contact: 04/18/05

### **REF:** Unconfirmed Properties Referred to Another Agency

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

This category contains properties where contamination has not been confirmed and which were determined as not requiring direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local regulatory agency.

Date of Government Version: 11/09/04

Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/01/05

Date of Next Scheduled EDR Contact: 05/30/05

### **SCH:** School Property Evaluation Program

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 11/09/04

Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/01/05

Date of Next Scheduled EDR Contact: 05/30/05

### **NFE:** Properties Needing Further Evaluation

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

This category contains properties that are suspected of being contaminated. These are unconfirmed contaminated properties that need to be assessed using the PEA process. PEA in Progress indicates properties where DTSC is currently conducting a PEA. PEA Required indicates properties where DTSC has determined a PEA is required, but not currently underway.

Date of Government Version: 11/09/04

Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/01/05

Date of Next Scheduled EDR Contact: 05/30/05

### **SLIC:** Statewide SLIC Cases

Source: State Water Resources Control Board

Telephone: 916-341-5752

The Spills, Leaks, Investigations, and Cleanups (SLIC) listings includes unauthorized discharges from spills and leaks, other than from underground storage tanks or other regulated sites.

Date of Government Version: 01/10/05

Database Release Frequency: Varies

Date of Last EDR Contact: 01/10/05

Date of Next Scheduled EDR Contact: 04/11/05

### **HAZNET:** Facility and Manifest Data

Source: California Environmental Protection Agency

Telephone: 916-255-1136

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/02

Database Release Frequency: Annually

Date of Last EDR Contact: 02/17/05

Date of Next Scheduled EDR Contact: 05/09/05



# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## LOCAL RECORDS

### **ALAMEDA COUNTY:**

#### **Local Oversight Program Listing of UGT Cleanup Sites**

Source: Alameda County Environmental Health Services  
Telephone: 510-567-6700

Date of Government Version: 11/24/04  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/24/05  
Date of Next Scheduled EDR Contact: 04/25/05

#### **Underground Tanks**

Source: Alameda County Environmental Health Services  
Telephone: 510-567-6700

Date of Government Version: 11/24/04  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/24/05  
Date of Next Scheduled EDR Contact: 04/25/05

### **CONTRA COSTA COUNTY:**

#### **Site List**

Source: Contra Costa Health Services Department  
Telephone: 925-646-2286

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 12/13/04  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/28/05  
Date of Next Scheduled EDR Contact: 05/30/05

### **FRESNO COUNTY:**

#### **CUPA Resources List**

Source: Dept. of Community Health  
Telephone: 559-445-3271

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/19/05  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/19/05  
Date of Next Scheduled EDR Contact: 05/09/05

### **KERN COUNTY:**

#### **Underground Storage Tank Sites & Tank Listing**

Source: Kern County Environment Health Services Department  
Telephone: 661-862-8700  
Kern County Sites and Tanks Listing.

Date of Government Version: 12/13/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/06/04  
Date of Next Scheduled EDR Contact: 03/07/05

### **LOS ANGELES COUNTY:**

#### **List of Solid Waste Facilities**

Source: La County Department of Public Works  
Telephone: 818-458-5185

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/03/03  
Database Release Frequency: Varies

Date of Last EDR Contact: 02/18/05  
Date of Next Scheduled EDR Contact: 05/16/05

**City of El Segundo Underground Storage Tank**  
Source: City of El Segundo Fire Department  
Telephone: 310-524-2236

Date of Government Version: 02/14/05  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/14/05  
Date of Next Scheduled EDR Contact: 05/16/05

**City of Long Beach Underground Storage Tank**  
Source: City of Long Beach Fire Department  
Telephone: 562-570-2543

Date of Government Version: 03/28/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 02/23/05  
Date of Next Scheduled EDR Contact: 05/23/05

**City of Torrance Underground Storage Tank**  
Source: City of Torrance Fire Department  
Telephone: 310-618-2973

Date of Government Version: 12/03/04  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/28/05  
Date of Next Scheduled EDR Contact: 05/16/05

**City of Los Angeles Landfills**  
Source: Engineering & Construction Division  
Telephone: 213-473-7869

Date of Government Version: 03/01/04  
Database Release Frequency: Varies

Date of Last EDR Contact: 12/13/04  
Date of Next Scheduled EDR Contact: 03/14/05

**HMS: Street Number List**

Source: Department of Public Works  
Telephone: 626-458-3517  
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 09/30/04  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/14/05  
Date of Next Scheduled EDR Contact: 05/16/05

**Site Mitigation List**

Source: Community Health Services  
Telephone: 323-890-7806  
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 02/26/04  
Database Release Frequency: Annually

Date of Last EDR Contact: 02/14/05  
Date of Next Scheduled EDR Contact: 05/16/05

**San Gabriel Valley Areas of Concern**

Source: EPA Region 9  
Telephone: 415-972-3178  
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/98  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 07/06/99  
Date of Next Scheduled EDR Contact: N/A

**MARIN COUNTY:**

**Underground Storage Tank Sites**

Source: Public Works Department Waste Management  
Telephone: 415-499-6647  
Currently permitted USTs in Marin County.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/16/04  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/31/05  
Date of Next Scheduled EDR Contact: 05/02/05

## NAPA COUNTY:

### Sites With Reported Contamination

Source: Napa County Department of Environmental Management  
Telephone: 707-253-4269

Date of Government Version: 12/27/04  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/28/04  
Date of Next Scheduled EDR Contact: 03/28/05

### Closed and Operating Underground Storage Tank Sites

Source: Napa County Department of Environmental Management  
Telephone: 707-253-4269

Date of Government Version: 12/27/04  
Database Release Frequency: Annually

Date of Last EDR Contact: 12/27/04  
Date of Next Scheduled EDR Contact: 03/28/05

## ORANGE COUNTY:

### List of Underground Storage Tank Cleanups

Source: Health Care Agency  
Telephone: 714-834-3446  
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 12/01/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/10/04  
Date of Next Scheduled EDR Contact: 03/07/05

### List of Underground Storage Tank Facilities

Source: Health Care Agency  
Telephone: 714-834-3446  
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 12/01/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/10/04  
Date of Next Scheduled EDR Contact: 03/07/05

### List of Industrial Site Cleanups

Source: Health Care Agency  
Telephone: 714-834-3446  
Petroleum and non-petroleum spills.

Date of Government Version: 12/01/04  
Database Release Frequency: Annually

Date of Last EDR Contact: 12/10/04  
Date of Next Scheduled EDR Contact: 03/07/05

## PLACER COUNTY:

### Master List of Facilities

Source: Placer County Health and Human Services  
Telephone: 530-889-7312  
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 01/13/05  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/20/04  
Date of Next Scheduled EDR Contact: 03/21/05

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## RIVERSIDE COUNTY:

### Listing of Underground Tank Cleanup Sites

Source: Department of Public Health  
Telephone: 909-358-5055  
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 12/06/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/17/05  
Date of Next Scheduled EDR Contact: 04/18/05

### Underground Storage Tank Tank List

Source: Health Services Agency  
Telephone: 909-358-5055

Date of Government Version: 02/14/05  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/17/04  
Date of Next Scheduled EDR Contact: 04/18/05

## SACRAMENTO COUNTY:

### CS - Contaminated Sites

Source: Sacramento County Environmental Management  
Telephone: 916-875-8406

Date of Government Version: 08/28/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/04/05  
Date of Next Scheduled EDR Contact: 05/02/05

### ML - Regulatory Compliance Master List

Source: Sacramento County Environmental Management  
Telephone: 916-875-8406

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 10/15/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/04/05  
Date of Next Scheduled EDR Contact: 05/02/05

## SAN BERNARDINO COUNTY:

### Hazardous Material Permits

Source: San Bernardino County Fire Department Hazardous Materials Division  
Telephone: 909-387-3041

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 01/07/05  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/06/04  
Date of Next Scheduled EDR Contact: 03/07/05

## SAN DIEGO COUNTY:

### Solid Waste Facilities

Source: Department of Health Services  
Telephone: 619-338-2209  
San Diego County Solid Waste Facilities.

Date of Government Version: 08/01/00  
Database Release Frequency: Varies

Date of Last EDR Contact: 02/22/05  
Date of Next Scheduled EDR Contact: 05/23/05

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

## Hazardous Materials Management Division Database

Source: Hazardous Materials Management Division

Telephone: 619-338-2268

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 06/29/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/10/05  
Date of Next Scheduled EDR Contact: 04/04/05

## SAN FRANCISCO COUNTY:

### Local Oversight Facilities

Source: Department Of Public Health San Francisco County

Telephone: 415-252-3920

Date of Government Version: 12/09/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/06/04  
Date of Next Scheduled EDR Contact: 03/07/05

### Underground Storage Tank Information

Source: Department of Public Health

Telephone: 415-252-3920

Date of Government Version: 12/09/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/06/04  
Date of Next Scheduled EDR Contact: 03/07/05

## SAN MATEO COUNTY:

### Fuel Leak List

Source: San Mateo County Environmental Health Services Division

Telephone: 650-363-1921

Date of Government Version: 10/27/04  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/10/05  
Date of Next Scheduled EDR Contact: 04/11/05

### Business Inventory

Source: San Mateo County Environmental Health Services Division

Telephone: 650-363-1921

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 08/19/04  
Database Release Frequency: Annually

Date of Last EDR Contact: 01/10/05  
Date of Next Scheduled EDR Contact: 04/11/05

## SANTA CLARA COUNTY:

### Fuel Leak Site Activity Report

Source: Santa Clara Valley Water District

Telephone: 408-265-2600

Date of Government Version: 06/30/04  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/28/04  
Date of Next Scheduled EDR Contact: 03/28/05

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### Hazardous Material Facilities

Source: City of San Jose Fire Department  
Telephone: 408-277-4659

Date of Government Version: 10/01/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 12/06/04  
Date of Next Scheduled EDR Contact: 03/07/05

### SOLANO COUNTY:

#### Leaking Underground Storage Tanks

Source: Solano County Department of Environmental Management  
Telephone: 707-421-6770

Date of Government Version: 12/14/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/13/04  
Date of Next Scheduled EDR Contact: 03/14/05

#### Underground Storage Tanks

Source: Solano County Department of Environmental Management  
Telephone: 707-421-6770

Date of Government Version: 12/14/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/13/04  
Date of Next Scheduled EDR Contact: 03/14/05

### SONOMA COUNTY:

#### Leaking Underground Storage Tank Sites

Source: Department of Health Services  
Telephone: 707-565-6565

Date of Government Version: 01/27/05  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/24/05  
Date of Next Scheduled EDR Contact: 04/25/05

### SUTTER COUNTY:

#### Underground Storage Tanks

Source: Sutter County Department of Agriculture  
Telephone: 530-822-7500

Date of Government Version: 01/29/04  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/03/05  
Date of Next Scheduled EDR Contact: 04/04/05

### VENTURA COUNTY:

#### Inventory of Illegal Abandoned and Inactive Sites

Source: Environmental Health Division  
Telephone: 805-654-2813  
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 08/01/04  
Database Release Frequency: Annually

Date of Last EDR Contact: 02/23/05  
Date of Next Scheduled EDR Contact: 05/23/05

#### Listing of Underground Tank Cleanup Sites

Source: Environmental Health Division  
Telephone: 805-654-2813  
Ventura County Underground Storage Tank Cleanup Sites (LUST).

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/30/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/17/04  
Date of Next Scheduled EDR Contact: 03/14/05

## Underground Tank Closed Sites List

Source: Environmental Health Division  
Telephone: 805-654-2813

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 12/01/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/14/05  
Date of Next Scheduled EDR Contact: 04/11/05

## Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

Source: Ventura County Environmental Health Division  
Telephone: 805-654-2813

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/01/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/17/04  
Date of Next Scheduled EDR Contact: 03/14/05

## YOLO COUNTY:

### Underground Storage Tank Comprehensive Facility Report

Source: Yolo County Department of Health  
Telephone: 530-666-8646

Date of Government Version: 01/18/05  
Database Release Frequency: Annually

Date of Last EDR Contact: 01/17/05  
Date of Next Scheduled EDR Contact: 04/18/05

## California Regional Water Quality Control Board (RWQCB) LUST Records

### LUST REG 1: Active Toxic Site Investigation

Source: California Regional Water Quality Control Board North Coast (1)  
Telephone: 707-576-2220

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/01  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 02/23/05  
Date of Next Scheduled EDR Contact: 05/23/05

### LUST REG 2: Fuel Leak List

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)  
Telephone: 510-286-0457

Date of Government Version: 09/30/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/10/05  
Date of Next Scheduled EDR Contact: 04/11/05

### LUST REG 3: Leaking Underground Storage Tank Database

Source: California Regional Water Quality Control Board Central Coast Region (3)  
Telephone: 805-549-3147

Date of Government Version: 05/19/03  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 02/14/05  
Date of Next Scheduled EDR Contact: 05/16/05

### LUST REG 4: Underground Storage Tank Leak List

Source: California Regional Water Quality Control Board Los Angeles Region (4)  
Telephone: 213-576-6600

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/07/04  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 12/27/04  
Date of Next Scheduled EDR Contact: 03/28/05

**LUST REG 5:** Leaking Underground Storage Tank Database  
Source: California Regional Water Quality Control Board Central Valley Region (5)  
Telephone: 916-464-3291

Date of Government Version: 01/01/05  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/07/05  
Date of Next Scheduled EDR Contact: 04/04/05

**LUST REG 6L:** Leaking Underground Storage Tank Case Listing  
Source: California Regional Water Quality Control Board Lahontan Region (6)  
Telephone: 916-542-5424

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/03  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 12/06/04  
Date of Next Scheduled EDR Contact: 03/07/05

**LUST REG 6V:** Leaking Underground Storage Tank Case Listing  
Source: California Regional Water Quality Control Board Victorville Branch Office (6)  
Telephone: 760-346-7491

Date of Government Version: 08/09/04  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 01/03/05  
Date of Next Scheduled EDR Contact: 04/04/05

**LUST REG 7:** Leaking Underground Storage Tank Case Listing  
Source: California Regional Water Quality Control Board Colorado River Basin Region (7)  
Telephone: 760-346-7491

Date of Government Version: 02/26/04  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 12/27/04  
Date of Next Scheduled EDR Contact: 03/28/05

**LUST REG 8:** Leaking Underground Storage Tanks  
Source: California Regional Water Quality Control Board Santa Ana Region (8)  
Telephone: 951-782-4130

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 11/01/04  
Database Release Frequency: Varies

Date of Last EDR Contact: 02/08/05  
Date of Next Scheduled EDR Contact: 05/09/05

**LUST REG 9:** Leaking Underground Storage Tank Report  
Source: California Regional Water Quality Control Board San Diego Region (9)  
Telephone: 858-467-2980

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/01  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 01/17/05  
Date of Next Scheduled EDR Contact: 04/18/05

## California Regional Water Quality Control Board (RWQCB) SLIC Records

**SLIC REG 1:** Active Toxic Site Investigations  
Source: California Regional Water Quality Control Board, North Coast Region (1)  
Telephone: 707-576-2220

Date of Government Version: 04/03/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/23/05  
Date of Next Scheduled EDR Contact: 05/23/05



## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**SLIC REG 2:** Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: Regional Water Quality Control Board San Francisco Bay Region (2)

Telephone: 510-286-0457

Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 09/30/04

Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/10/05

Date of Next Scheduled EDR Contact: 04/11/05

**SLIC REG 3:** Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: California Regional Water Quality Control Board Central Coast Region (3)

Telephone: 805-549-3147

Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 11/18/04

Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/14/05

Date of Next Scheduled EDR Contact: 05/23/05

**SLIC REG 4:** Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: Region Water Quality Control Board Los Angeles Region (4)

Telephone: 213-576-6600

Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 11/17/04

Database Release Frequency: Varies

Date of Last EDR Contact: 01/24/05

Date of Next Scheduled EDR Contact: 04/25/05

**SLIC REG 5:** Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: Regional Water Quality Control Board Central Valley Region (5)

Telephone: 916-464-3291

Unregulated sites that impact groundwater or have the potential to impact groundwater.

Date of Government Version: 10/01/04

Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/04/05

Date of Next Scheduled EDR Contact: 04/04/05

**SLIC REG 6L:** SLIC Sites

Source: California Regional Water Quality Control Board, Lahontan Region

Telephone: 530-542-5574

Date of Government Version: 09/07/04

Database Release Frequency: Varies

Date of Last EDR Contact: 12/06/04

Date of Next Scheduled EDR Contact: 03/07/05

**SLIC REG 6V:** Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: Regional Water Quality Control Board, Victorville Branch

Telephone: 619-241-6583

Date of Government Version: 04/01/04

Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/17/04

Date of Next Scheduled EDR Contact: 04/04/05

**SLIC REG 7:** SLIC List

Source: California Regional Quality Control Board, Colorado River Basin Region

Telephone: 760-346-7491

Date of Government Version: 11/24/04

Database Release Frequency: Varies

Date of Last EDR Contact: 02/22/05

Date of Next Scheduled EDR Contact: 05/23/05

**SLIC REG 8:** Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: California Region Water Quality Control Board Santa Ana Region (8)

Telephone: 951-782-3298

Date of Government Version: 07/01/04

Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/07/05

Date of Next Scheduled EDR Contact: 04/04/05

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Source: California Regional Water Quality Control Board San Diego Region (9)

Telephone: 858-467-2980

Date of Government Version: 09/10/04

Database Release Frequency: Annually

Date of Last EDR Contact: 03/01/05

Date of Next Scheduled EDR Contact: 05/30/05

### EDR PROPRIETARY HISTORICAL DATABASES

**Former Manufactured Gas (Coal Gas) Sites:** The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

#### Disclaimer Provided by Real Property Scan, Inc.

The information contained in this report has predominantly been obtained from publicly available sources produced by entities other than Real Property Scan. While reasonable steps have been taken to insure the accuracy of this report, Real Property Scan does not guarantee the accuracy of this report. Any liability on the part of Real Property Scan is strictly limited to a refund of the amount paid. No claim is made for the actual existence of toxins at any site. This report does not constitute a legal opinion.

### BROWNFIELDS DATABASES

#### VCP: Voluntary Cleanup Program Properties

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 11/09/04

Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/01/05

Date of Next Scheduled EDR Contact: 05/30/05

#### US BROWNFIELDS: A Listing of Brownfields Sites

Source: Environmental Protection Agency

Telephone: 202-566-2777

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients--States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: N/A

Database Release Frequency: Semi-Annually

Date of Last EDR Contact: N/A

Date of Next Scheduled EDR Contact: N/A

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

**Oil/Gas Pipelines:** This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

#### **Electric Power Transmission Line Data**

Source: PennWell Corporation

Telephone: (800) 823-6277

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

**Sensitive Receptors:** There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

#### **AHA Hospitals:**

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

#### **Medical Centers: Provider of Services Listing**

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

#### **Nursing Homes**

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

#### **Public Schools**

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

#### **Private Schools**

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

#### **Daycare Centers: Licensed Facilities**

Source: Department of Social Services

Telephone: 916-657-4041

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

## **GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING**

### **STREET AND ADDRESS INFORMATION**

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## GEOCHECK<sup>®</sup> - PHYSICAL SETTING SOURCE ADDENDUM

### TARGET PROPERTY ADDRESS

URBAN DEVELOPMENT  
10131 CONSTELLATION BOULEVARD  
CENTURY CITY, CA 90067

### TARGET PROPERTY COORDINATES

|                                |                             |
|--------------------------------|-----------------------------|
| Latitude (North):              | 34.059299 - 34° 3' 33.5"    |
| Longitude (West):              | 118.415802 - 118° 24' 56.9" |
| Universal Transverse Mercator: | Zone 11                     |
| UTM X (Meters):                | 369336.9                    |
| UTM Y (Meters):                | 3769440.8                   |
| Elevation:                     | 282 ft. above sea level     |

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

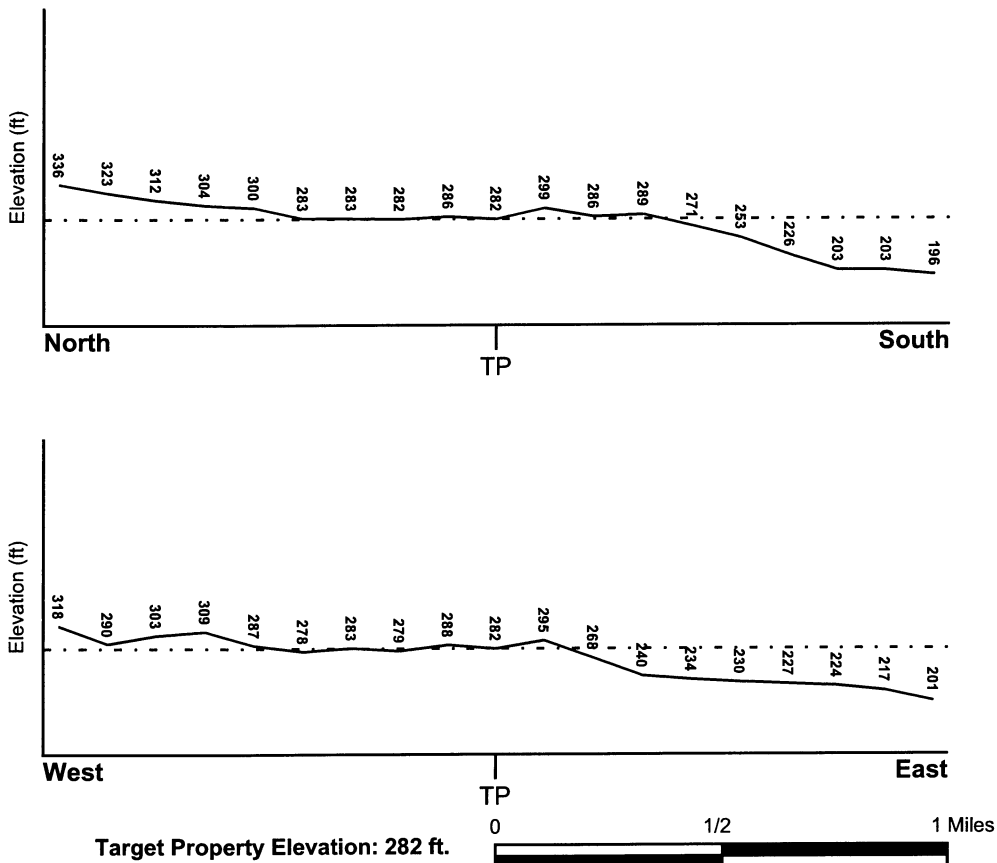
## TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

### TARGET PROPERTY TOPOGRAPHY

USGS Topographic Map: 34118-A4 BEVERLY HILLS, CA  
 General Topographic Gradient: General ENE  
 Source: USGS 7.5 min quad index

## SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

## FEMA FLOOD ZONE

|  |   |
|--|---|
| <u>Target Property County</u><br>LOS ANGELES, CA | <u>FEMA Flood Electronic Data</u><br>YES - refer to the Overview Map and Detail Map |
| Flood Plain Panel at Target Property:            | 0601370071  |
| Additional Panels in search area:                | 0606550000A<br>0601370062C  |

## NATIONAL WETLAND INVENTORY

|   |   |
|---|---|
| <u>NWI Quad at Target Property</u><br>BEVERLY HILLS | <u>NWI Electronic Data Coverage</u><br>YES - refer to the Overview Map and Detail Map |
|---|---|

## HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

### *Site-Specific Hydrogeological Data\*:*

|                |            |
|----------------|------------|
| Search Radius: | 1.25 miles |
| Status:        | Not found  |

## AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

| <u>MAP ID</u> | <u>LOCATION FROM TP</u> | <u>GENERAL DIRECTION GROUNDWATER FLOW</u> |
|---------------|-------------------------|---|
| 3             | 1/2 - 1 Mile North      | SSE                                       |
| 4             | 1/2 - 1 Mile SSW        | SW  |
| 6             | 1/2 - 1 Mile East       | Not Reported                              |

For additional site information, refer to Physical Setting Source Map Findings.

\* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

### GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

#### ROCK STRATIGRAPHIC UNIT

Era: Cenozoic  
 System: Quaternary  
 Series: Quaternary  
 Code: Q (decoded above as Era, System & Series)

#### GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: URBAN LAND

Soil Surface Texture: variable

Hydrologic Group: Not reported

Soil Drainage Class: Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 10 inches

Depth to Bedrock Max: > 10 inches

| Soil Layer Information |          |          |                    |                |              |                           |                        |
|------------------------|----------|----------|--------------------|----------------|--------------|---------------------------|------------------------|
| Layer                  | Boundary |          | Soil Texture Class | Classification |              | Permeability Rate (in/hr) | Soil Reaction (pH)     |
|                        | Upper    | Lower    |                    | AASHTO Group   | Unified Soil |                           |                        |
| 1                      | 0 inches | 6 inches | variable           | Not reported   | Not reported | Max: 0.00<br>Min: 0.00    | Max: 0.00<br>Min: 0.00 |



## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: loam  
clay  
silt loam  
clay loam  
sandy loam  
gravelly - sandy loam  
loamy sand  
fine sand  
coarse sand  
sand  
gravelly - sand

Surficial Soil Types: loam  
clay  
silt loam  
clay loam  
sandy loam  
gravelly - sandy loam  
loamy sand  
fine sand  
coarse sand  
sand  
gravelly - sand

Shallow Soil Types: fine sandy loam  
gravelly - loam  
sand  
silty clay

Deeper Soil Types: stratified  
clay loam  
silty clay loam  
gravelly - sandy loam  
coarse sand  
sand  
weathered bedrock  
very fine sandy loam

### ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## WELL SEARCH DISTANCE INFORMATION

| <u>DATABASE</u>  | <u>SEARCH DISTANCE (miles)</u> |
|------------------|--------------------------------|
| Federal USGS     | 1.000                          |
| Federal FRDS PWS | Nearest PWS within 1 mile      |
| State Database   | 1.000                          |

## **FEDERAL USGS WELL INFORMATION**

| <u>MAP ID</u> | <u>WELL ID</u> | <u>LOCATION FROM TP</u> |
|---------------|----------------|-------------------------|
| 5             | USGS0138154    | 1/2 - 1 Mile NNE        |

## **FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION**

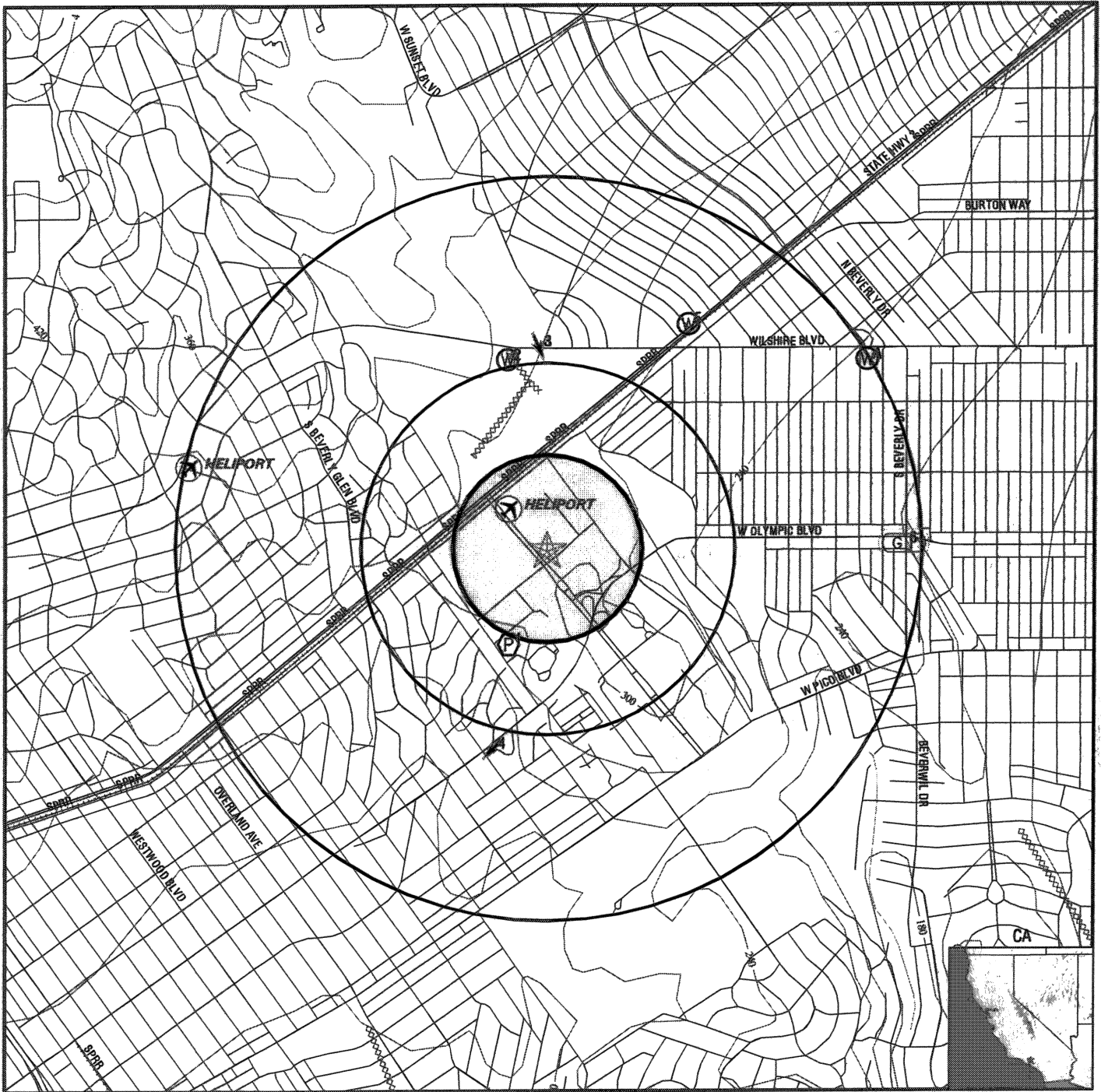
| <u>MAP ID</u> | <u>WELL ID</u> | <u>LOCATION FROM TP</u> |
|---------------|----------------|-------------------------|
| 1             | CA1400005      | 1/4 - 1/2 Mile SSW      |

Note: PWS System location is not always the same as well location.

## **STATE DATABASE WELL INFORMATION**

| <u>MAP ID</u> | <u>WELL ID</u> | <u>LOCATION FROM TP</u> |
|---------------|----------------|-------------------------|
| 2             | 22986          | 1/2 - 1 Mile NNW        |
| A7            | 1501           | 1/2 - 1 Mile ENE        |
| A8            | 1500           | 1/2 - 1 Mile ENE        |
| A9            | 1499           | 1/2 - 1 Mile ENE        |

**PHYSICAL SETTING SOURCE MAP - 01380800.1r**



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

|                         |                               |                   |                        |
|-------------------------|-------------------------------|-------------------|------------------------|
| <b>TARGET PROPERTY:</b> | Urban Development             | <b>CUSTOMER:</b>  | Geokinetics            |
| <b>ADDRESS:</b>         | 10131 Constellation Boulevard | <b>CONTACT:</b>   | JoLynn Tofani          |
| <b>CITY/STATE/ZIP:</b>  | Century City CA 90067         | <b>INQUIRY #:</b> | 01380800.1r            |
| <b>LAT/LONG:</b>        | 34.0593 / 118.4158            | <b>DATE:</b>      | March 16, 2005 7:59 pm |

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
Direction  
Distance  
Elevation

Database      EDR ID Number

**1**  
**SSW**  
**1/4 - 1/2 Mile**  
**Lower**

**FRDS PWS      CA1400005**

PWS ID: CA1400005      PWS Status: Not Reported  
Date Initiated: Not Reported      Date Deactivated: Not Reported  
PWS Name: OWENS VALLEY WATER CO.  
BISHOP, CA 93514

Addressee / Facility: System Owner/Responsible Party  
OWENS VALLEY WATER CO  
P O BOX 673  
LOS ANGELES, CA 90067

Facility Latitude: 34 03 20      Facility Longitude: 118 25 00  
City Served: Not Reported  
Treatment Class: Untreated      Population: 300

PWS currently has or had major violation(s) or enforcement: Yes

Violations information not reported.

**ENFORCEMENT INFORMATION:**

|                    |                                    |                   |              |
|--------------------|------------------------------------|-------------------|--------------|
| System Name:       | OWENS VALLEY WATER COMPANY         |                   |              |
| Violation Type:    | Initial Tap Sampling for Pb and Cu |                   |              |
| Contaminant:       | LEAD & COPPER RULE                 |                   |              |
| Compliance Period: | 1993-07-01 - 2015-12-31            | Analytical Value: | 0            |
| Violation ID:      | 95V0001                            | Enforcement ID:   | Not Reported |
| Enforcement Date:  | Not Reported                       | Enf. Action:      | Not Reported |

|                    |                                    |                   |              |
|--------------------|------------------------------------|-------------------|--------------|
| System Name:       | OWENS VALLEY WATER CO.             |                   |              |
| Violation Type:    | Initial Tap Sampling for Pb and Cu |                   |              |
| Contaminant:       | LEAD & COPPER RULE                 |                   |              |
| Compliance Period: | 1993-07-01 - 2015-12-31            | Analytical Value: | 0            |
| Violation ID:      | 95V0001                            | Enforcement ID:   | Not Reported |
| Enforcement Date:  | Not Reported                       | Enf. Action:      | Not Reported |

|                    |                                    |                   |                   |
|--------------------|------------------------------------|-------------------|-------------------|
| System Name:       | OWENS VALLEY WATER CO.             |                   |                   |
| Violation Type:    | Initial Tap Sampling for Pb and Cu |                   |                   |
| Contaminant:       | LEAD & COPPER RULE                 |                   |                   |
| Compliance Period: | 1993-07-01 - 2015-12-31            | Analytical Value: | 0000000.000000000 |
| Violation ID:      | 95V0001                            | Enforcement ID:   | Not Reported      |
| Enforcement Date:  | Not Reported                       | Enf. Action:      | Not Reported      |

**2**  
**NNW**  
**1/2 - 1 Mile**  
**Higher**

**CA WELLS      22986**

**Water System Information:**

|                     |  |               |                     |
|---------------------|--|---------------|---------------------|
| Prime Station Code: | G19/204-PURMWDJ                        | User ID:      | MET                 |
| FRDS Number:        | 1910204001                             | County:       | Los Angeles         |
| District Number:    | 15                                     | Station Type: | Not Reported        |
| Water Type:         | Surface Water                          | Well Status:  | Active Treated      |
| Source Lat/Long:    | 340400.1 1182500.0                     | Precision:    | 1 Mile (One Minute) |
| Source Name:        | PURCHASED TREATED WATER - MWD - JENSEN |               |                     |



## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

**A7**  
**ENE**  
 1/2 - 1 Mile  
 Lower

**CA WELLS      1501**

**Water System Information:**

|   |  |             |
|---|--|-------------|
| Prime Station Code: 01S/14W-18J04 S   | User ID: 4TH                               | Los Angeles |
| FRDS Number: 1910156003   | County: Los Angeles                        |             |
| District Number: 07   | Station Type: WELL/AMBNT/MUN/INTAKE/SUPPLY |             |
| Water Type: Well/Groundwater  | Well Status: Destroyed                     |             |
| Source Lat/Long: 340400.0 1182400.0   | Precision: Undefined                       |             |
| Source Name: MELROSE A - DESTROYED  |  |             |
| System Number: 1910156  |  |             |
| System Name: CITY OF BEVERLY HILLS  |  |             |
| Organization That Operates System:<br>450 N CRESCENT DR RM 300<br>BEVERLY HILLS 90210 |  |             |
| Pop Served: 31783   | Connections: 9869                          |             |
| Area Served: BEVERLY HILLS  |  |             |

**A8**  
**ENE**  
 1/2 - 1 Mile  
 Lower

**CA WELLS      1500**

**Water System Information:**

|   |  |             |
|---|--|-------------|
| Prime Station Code: 01S/14W-18J01 S   | User ID: 4TH                               | Los Angeles |
| FRDS Number: 1910156004   | County: Los Angeles                        |             |
| District Number: 07   | Station Type: WELL/AMBNT/MUN/INTAKE/SUPPLY |             |
| Water Type: Well/Groundwater  | Well Status: Destroyed                     |             |
| Source Lat/Long: 340400.0 1182400.0   | Precision: Undefined                       |             |
| Source Name: MELROSE M - DESTROYED  |  |             |
| System Number: 1910156  |  |             |
| System Name: CITY OF BEVERLY HILLS  |  |             |
| Organization That Operates System:<br>450 N CRESCENT DR RM 300<br>BEVERLY HILLS 90210 |  |             |
| Pop Served: 31783   | Connections: 9869                          |             |
| Area Served: BEVERLY HILLS  |  |             |

**A9**  
**ENE**  
 1/2 - 1 Mile  
 Lower

**CA WELLS      1499**

**Water System Information:**

|                                      |  |             |
|--------------------------------------|--|-------------|
| Prime Station Code: 01S/14W-18H02 S  | User ID: 4TH                               | Los Angeles |
| FRDS Number: 1910156007              | County: Los Angeles                        |             |
| District Number: 07                  | Station Type: WELL/AMBNT/MUN/INTAKE/SUPPLY |             |
| Water Type: Well/Groundwater         | Well Status: Destroyed                     |             |
| Source Lat/Long: 340400.0 1182400.0  | Precision: Undefined                       |             |
| Source Name: SHERMAN 06A - DESTROYED |  |             |

## **GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS**

System Number: 1910156  
System Name: CITY OF BEVERLY HILLS  
Organization That Operates System:  
450 N CRESCENT DR RM 300  
BEVERLY HILLS 90210  
Pop Served: 31783  
Area Served: BEVERLY HILLS  
Connections: 9869

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

## AREA RADON INFORMATION

State Database: CA Radon

### Radon Test Results

| Zip   | Total Sites | > 4 Pci/L | Pct. > 4 Pci/L |
|-------|-------------|-----------|----------------|
| 90067 | 6           | 0         | 0.00           |

Federal EPA Radon Zone for LOS ANGELES County: 2

- Note: Zone 1 indoor average level > 4 pCi/L.
- : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
- : Zone 3 indoor average level < 2 pCi/L.

---

### Federal Area Radon Information for LOS ANGELES COUNTY, CA

Number of sites tested: 63

| Area                    | Average Activity | % <4 pCi/L   | % 4-20 pCi/L | % >20 pCi/L  |
|-------------------------|------------------|--------------|--------------|--------------|
| Living Area - 1st Floor | 0.711 pCi/L      | 98%          | 2%           | 0%           |
| Living Area - 2nd Floor | Not Reported     | Not Reported | Not Reported | Not Reported |
| Basement                | 0.933 pCi/L      | 100%         | 0%           | 0%           |



# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

### **USGS 7.5' Digital Elevation Model (DEM)**

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002. 7.5-Minute DEMs correspond to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps.

## HYDROLOGIC INFORMATION

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

## HYDROGEOLOGIC INFORMATION

### **AQUIFLOW<sup>R</sup> Information System**

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

### **Geologic Age and Rock Stratigraphic Unit**

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### **STATSGO: State Soil Geographic Database**

Source: Department of Agriculture, Natural Resources Conservation Services

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

## ADDITIONAL ENVIRONMENTAL RECORD SOURCES

### **FEDERAL WATER WELLS**

#### **PWS: Public Water Systems**

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

#### **PWS ENF: Public Water Systems Violation and Enforcement Data**

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

#### **USGS Water Wells: USGS National Water Inventory System (NWIS)**

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## STATE RECORDS

### California Drinking Water Quality Database

Source: Department of Health Services  
Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

### California Oil and Gas Well Locations for District 2, 3, 5 and 6

Source: Department of Conservation  
Telephone: 916-323-1779

## RADON

### State Database: CA Radon

Source: Department of Health Services  
Telephone: 916-324-2208  
Radon Database for California

### Area Radon Information

Source: USGS  
Telephone: 703-356-4020  
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

### EPA Radon Zones

Source: EPA  
Telephone: 703-356-4020  
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

## OTHER

### Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

### Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

**California Earthquake Fault Lines:** The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

ORPHAN SUMMARY

| City        | EDR ID     | Site Name                 | Site Address                    | Zip | Database(s) |
|-------------|------------|---------------------------|---------------------------------|-----|-------------|
| LOS ANGELES | S106539437 | THOUSAND OAKS COUNTY 1962 | 11100 SANTA MONICA BL. STE. 300 |     | SWF/LF      |



DETAILED ORPHAN LISTING

| Site   | Database(s)   | EDR ID Number     | EPA ID Number |
|--|---|-------------------|---------------|
| <b>THOUSAND OAKS COUNTY 1962<br/>11100 SANTA MONICA BL. STE. 300<br/>LOS ANGELES, CA</b> | <b>SWF/LF</b>   | <b>S106539437</b> | <b>N/A</b>    |
| LF:  |   |                   |               |
| Facility ID: (ID#34)   | Operator:   | Not reported      |               |
| Operator Addr:   |   |                   |               |
| Activity: Not reported   |   |                   |               |
| Operator's Status: Not reported  |   |                   |               |
| Owner: Spectrum Club Co  |   |                   |               |
| Owner Address: Not reported  |   |                   |               |
|  | Not reported  |                   |               |
| Operator Phone: Not reported   | Owner Telephone:  | Not reported      |               |
| Regulation Status: Not reported  | Region:   | VENTURA           |               |
| Location:  | 275 Conejo Ridge Ave. Thousand Oaks   |                   |               |
| Parcel Num:  | Parcel #'s 676-0-180-320  |                   |               |
| Land Use:  | Not reported  |                   |               |
| Sig. Change Since Last Visit:  | Not reported  |                   |               |
| Site Size:   | Not reported  |                   |               |
| Other Observations:  | Not reported  |                   |               |
| Issue And Observations:  | Date of Field Visit: 12/10/98 Sig. Change Since Last Visit? N, Surface<br>Condition: O.K., Landfill gas: N/A Leachate: None Observed Other: |                   |               |
| Recommendations / Follow Up:   | Emergency Response: N/A Other:, Reassess Site: No No Further Action: N/A<br>Priority for Site Assessment: Low                               |                   |               |
| Lat/Long: Not reported   | Permit Date:  | Not reported      |               |
| Accepted Waste:  |   |                   |               |
| Restrictions:  |   |                   |               |
| Status : Not reported  | Swisnumber :  | 56-CR-0033        |               |
| Site Type : Not reported   | Aka :   | Not reported      |               |
| Type Of Waste : Normal household refuse  | Disposal Area :   | Not reported      |               |
| SWFP Date : Not reported   | WDR Number :  | Not reported      |               |
| Dates Operation : Not reported   | Closure Approve :   | Closure 19        |               |
| Dt Of Field Units : Not reported   | Surface Condition :   | Not reported      |               |
| Lea Date : 2/10/99   | Reassess Site :   | Not reported      |               |
| Leachate : Not reported  | Emrgncy Response:   | Not reported      |               |
| Landfill Gas :   | Not reported  |                   |               |
| Priority For Site Assessment :   | Not reported  |                   |               |
| Other Recommendation :   | Not reported  |                   |               |
| Explanation:   | Not Reported  |                   |               |
| No Further Action:   | Not Reported  |                   |               |
| Permitted Throughput with Units:   | Not reported  |                   |               |
| Actual Throughput with Units:  | Not reported  |                   |               |
| Actual Capacity with Units:  | Not reported  |                   |               |
| Permitted Capacity with Units:   | Not reported  |                   |               |
| Remaining Capacity with Units:   | Not reported  |                   |               |
| Permitted Total Acreage:   | Not reported  |                   |               |
| Remaining Capacity :   | Not reported  |                   |               |
| Fill Area: Not reported  | Inspec Frequency :  | Not reported      |               |
| Landuse Name: Not reported   | GIS Source:   | Not reported      |               |
| Permit Status: Not reported  | Category:   | Not reported      |               |
| Unit Number: Not reported  | Closure Date:   | Not reported      |               |
| Closure Type: Not reported   | Disposal Acreage:   | Not reported      |               |
| Year Opened: Not reported  | Year Closed:  | Not reported      |               |
| Last Waste Tire Inspection Count :   | Not reported  |                   |               |
| Last Waste Tire Inspection Date:   | Not reported  |                   |               |
| Original Waste Tire Count:   | Not reported  |                   |               |
| Original Waste Tire Count Date:  | Not reported  |                   |               |
| Type Of Refuse: Not reported   |   |                   |               |
| Avg Depth Of Fill:   | Not reported  |                   |               |

DETAILED ORPHAN LISTING

| Site                                  | Database(s) | EDR ID Number |
|---------------------------------------|-------------|---------------|
|                                       |             | EPA ID Number |
| THOUSAND OAKS COUNTY 1962 (Continued) |             | S106539437    |
| Addtl Expansion Area:                 |             | Not reported  |
| Site Description:                     |             | Not Reported  |



**PCR SANTA MONICA**

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Suite 130  
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FAX 310.451.5279

**PCR IRVINE**

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Irvine, CA 92618  
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FAX 949.753.7002