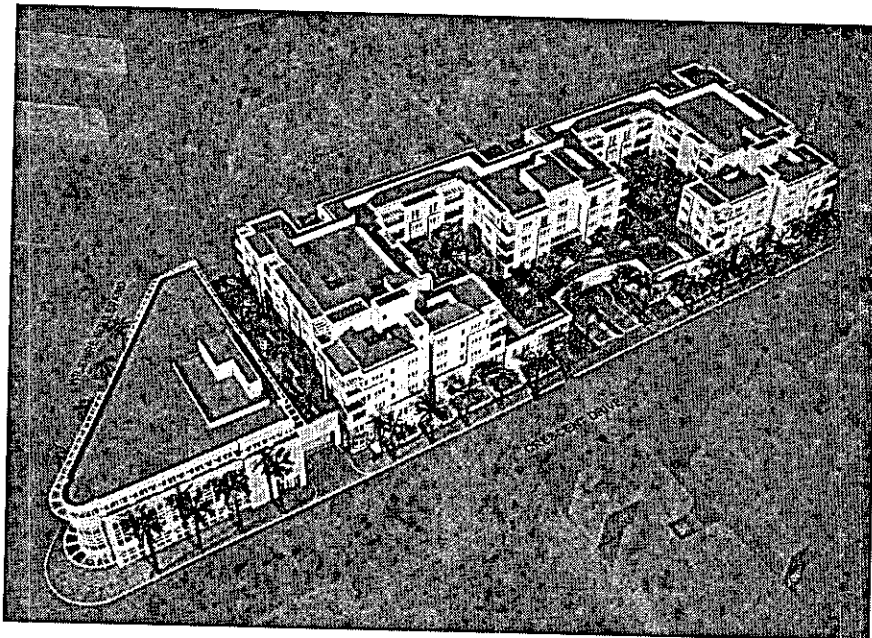


TECHNICAL APPENDICES B-E

DRAFT EIR

THE CRESCENT PROJECT



Prepared for
the City of Beverly Hills

By Willdan
July, 2002

TECHNICAL APPENDICES B-E

DRAFT EIR

TRIANGLE GATEWAY PROJECT

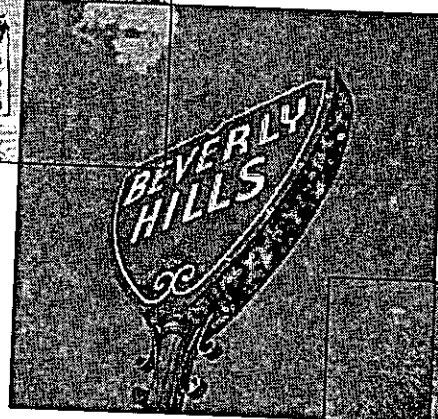
Appendix:

- B Traffic Study
- C Air Quality Analysis
- D Noise Analysis
- E Geotechnical Report

APPENDIX B

TRAFFIC ANALYSES

TRAFFIC AND PARKING IMPACT ANALYSIS FOR THE CRESCENT



Prepared for:
City of Beverly Hills

Prepared by:
Parsons Transportation Group

July 9, 2002

TABLE OF CONTENTS

1.	INTRODUCTION	1
	STUDY SCOPE AND PROCEDURES	3
2.	EXISTING TRAFFIC CONDITIONS	5
	ROADWAY SYSTEM.....	5
	STUDY INTERSECTIONS AND ROADWAY SEGMENTS	7
	EXISTING TRAFFIC VOLUMES	8
	LEVELS OF SERVICE.....	8
	EXISTING LEVELS OF SERVICE	9
3.	YEAR 2005 NO-PROJECT TRAFFIC CONDITIONS	16
	NO-PROJECT TRAFFIC VOLUMES.....	16
	NO-PROJECT LEVELS OF SERVICE.....	21
4.	PROJECT TRIP GENERATION, DISTRIBUTION, ASSIGNMENT.....	22
	PROJECT DESCRIPTION.....	22
	TRIP GENERATION	22
	TRIP DISTRIBUTION.....	23
	TRIP ASSIGNMENT	23
5.	YEAR 2005 WITH-PROJECT TRAFFIC CONDITIONS	33
	WITH-PROJECT TRAFFIC VOLUMES	33
	WITH-PROJECT LEVELS OF SERVICE	33
	TRAFFIC IMPACT SIGNIFICANCE CRITERIA.....	36
	PROJECT TRAFFIC IMPACTS.....	37
	RESIDENTIAL TRAFFIC IMPACTS.....	37
	CONGESTION MANAGEMENT PROGRAM ANALYSIS.....	39
6.	ON-SITE CIRCULATION, ACCESS, PARKING AND CONSTRUCTION-RELATED IMPACTS.....	42
	PARKING.....	42
	CIRCULATION AND ACCESS.....	44
	CONSTRUCTION RELATED IMPACTS	47
7.	ALTERNATIVES ANALYSIS.....	49
	ALTERNATIVE 1.....	49
	ALTERNATIVE 2.....	50
	ALTERNATIVE 3.....	50
8.	SUMMARY AND CONCLUSIONS	54
	APPENDIX A – TRAFFIC COUNT SHEETS	
	APPENDIX B – EXISTING LOS WORKSHEETS	
	APPENDIX C – NO-PROJECT LOS WORKSHEETS	
	APPENDIX D – WITH-PROJECT LOS WORKSHEETS	

LIST OF TABLES

Table 1	INTERSECTION LOS DEFINITION (SIGNALIZED).....	12
Table 2	INTERSECTION LOS DEFINITION (UNSIGNALIZED).....	13
Table 3	EXISTING INTERSECTION LOS (SIGNALIZED).....	15
Table 4	EXISTING INTERSECTION LOS (UNSIGNALIZED).....	15
Table 5	RELATED PROJECTS TRIP GENERATION.....	18
Table 6	NO-PROJECT LOS (SIGNALIZED).....	21
Table 7	NO-PROJECT LOS (UNSIGNALIZED).....	21
Table 8	PROPOSED LAND USE TRIP GENERATION.....	24
Table 9	EXISTING LAND USE TRIP GENERATION.....	24
Table 10	TOTAL NET TRIP GENERATION.....	25
Table 11	WITH-PROJECT LOS (SIGNALIZED).....	36
Table 12	WITH-PROJECT LOS (UNSIGNALIZED).....	36
Table 13	LOS COMPARISON (SIGNALIZED).....	38
Table 14	LOS COMPARISON (UNSIGNALIZED).....	38
Table 15	RESIDENTIAL TRAFFIC IMPACT THRESHOLDS.....	39
Table 16	IMPACTS ON RESIDENTIAL STREETS (ADT).....	40
Table 17	IMPACTS ON RESIDENTIAL STREETS (PEAK HOUR).....	41
Table 18	VERIFICATION OF PARKING SUPPLY.....	43
Table 19	WEEKDAY PARKING ACCUMULATION.....	45
Table 20	SATURDAY PARKING ACCUMULATION.....	46
Table 21	TOTAL NET TRIP GENERATION.....	51
Table 22	ALTERNATIVES LOS COMPARISON (SIGNALIZED).....	52
Table 23	ALTERNATIVES LOS COMPARISON (UNSIGNALIZED).....	53

LIST OF FIGURES

Figure 1	PROJECT LOCATION.....	2
Figure 2	EXISTING INTERSECTION TURNING MOVEMENT VOLUMES.....	10
Figure 3	EXISTING AVERAGE DAILY TRAFFIC VOLUMES	11
Figure 4	EXISTING LANE CONFIGURATIONS.....	14
Figure 5	NO-PROJECT INTERSECTION TURNING MOVEMENT VOLUMES	19
Figure 6	NO-PROJECT AVERAGE DAILY TRAFFIC VOLUMES.....	20
Figure 7	REGIONAL TRIP DISTRIBUTION.....	26
Figure 8	RESIDENTIAL TRIP DISTRIBUTION (INBOUND)	27
Figure 9	RESIDENTIAL TRIP DISTRIBUTION (OUTBOUND)	28
Figure 10	COMMERCIAL TRIP DISTRIBUTION (INBOUND)	29
Figure 11	COMMERCIAL TRIP DISTRIBUTION (OUTBOUND)	30
Figure 12	PROJECT INTERSECTION TRIP ASSIGNMENT	31
Figure 13	PROJECT ROADWAY TRIP ASSIGNMENT.....	32
Figure 14	WITH-PROJECT INTERSECTION TURNING MOVEMENT VOLUMES.....	34
Figure 15	WITH-PROJECT AVERAGE DAILY TRAFFIC VOLUMES	35

1. INTRODUCTION

Parsons Transportation Group (Parsons) has been retained by the City of Beverly Hills to perform traffic and parking impact analysis to support the environmental impact report for the proposed mixed-use project at 131-191 North Crescent Drive in the City of Beverly Hills (also known as The Crescent, and referred in this report as the "Project"). The site is bordered by Clifton Way to the north, Wilshire Boulevard to the south, Crescent Drive to the east and an alley to the west. The Project site location is shown on Figure 1. Currently, the site is occupied on the southern portion with a two-story office/retail building of approximately 19,000 square feet and a surface parking lot for use by the building tenants. The northern portion of the site is a commercial public parking lot that also fulfills a parking covenant with a nearby office and Spago Restaurant.

The proposed Project will replace the existing 142-space surface parking lot and commercial building located at the southwest corner of Crescent Drive – Clifton Way with 88 residential apartments, 40,000 square feet of office/retail and a 534-car parking structure that satisfies both covenant requirements (192 spaces) and Project needs (227 residential spaces and 115 office/retail spaces).

The Project access is via four driveways – two on Crescent Drive and two on the southbound alley running between Canon Drive and Crescent Drive. The driveways on

Crescent Drive have two separate purposes. The northerly driveway will be a fully-directional driveway serving the residential motorcourt and parking facility only. The southerly driveway will serve the parking areas designated for commercial uses (including some covenant-replaced parking spaces for the Coldwell Banker building). This driveway is proposed to be restricted to right-turn in, right-turn out only movements.

The northerly driveway from the alley will provide access to the parking area that is designated for Spago's use. The southerly driveway from the alley will provide access and egress to the commercial parking area that will be designated for the users of the covenant parking spaces (such as Coldwell Banker) and the proposed Project commercial uses.

STUDY SCOPE AND PROCEDURES

The following analysis steps were undertaken:

1. **Project Initiation** – Discussions were held with the City of Beverly Hills and the Applicant to understand the scope of work of this Project, location of study intersections and roadway segments; hours of study; level-of-service analysis methodology; and approved and/or planned projects ("related" projects), which would be considered as part of the cumulative development setting.
2. **Collection of Data** – The Project-related documents provided by the City of Beverly Hills were reviewed. Intersection turning movement counts and roadway average daily traffic (ADT) counts were collected on March 5 through March 7, 2002 by Wiltec, a subconsultant to Parsons. Driveway counts of the existing land uses were conducted by Parsons on March 12, 2002.
3. **Analysis of Existing Conditions** – Level-of-service calculations were performed at the ten (10) study intersections for the morning and evening peak hours utilizing the Intersection Capacity Utilization (ICU) methodology for signalized intersections and the Highway Capacity Methodology (HCM) for the unsignalized locations.
4. **Existing Land Use Traffic Generation** – The trip generation for the existing land uses that will be displaced by the proposed Project was estimated using driveway counts and the Institute of Transportation Engineers' (ITE) *Trip Generation*, 6th Edition.
5. **Project Traffic Generation** – Estimates of Project-related traffic volumes were made. These estimates were based on the Institute of Transportation Engineers' (ITE) *Trip Generation*, 6th Edition. This volume was compared to the trip generation of the existing land uses to determine the volume of new traffic generated on the roadway system as a result of this Project.

6. **Project Traffic Distribution and Assignment** – Based upon directional distribution developed for the Project site, Project-generated traffic was assigned to the area of transportation system.
7. **Analysis of No-Project (Cumulative Background) Traffic Conditions** – Cumulative Background traffic volumes were developed in two steps. In the first step, a growth factor of one-percent (1%) per year through Project completion year 2005 was applied to existing traffic volumes to account for regional and unspecified local traffic growth in the area. Second, trips were assigned to study intersections and roadway segments based on the trip generation and distribution from specific “related” projects. Specific “related” projects included planned and/or approved projects within a two-mile radius of the proposed Project.
8. **Analysis of With-Project Traffic Conditions** – Project-generated traffic volumes were added to the cumulative background traffic volumes at study intersections and roadways. Comparisons of future conditions with and without the Project were made.
9. **Residential Traffic Impacts** – Potential impacts on residential streets were determined utilizing the City of Beverly Hills’ current guidelines for determining residential traffic impacts.
10. **Congestion Management Program (CMP)** – The potential impacts on the CMP system was analyzed in accordance to CMP guidelines.
11. **Verification of Parking Demand** – The parking supply was verified to determine whether the proposed supply would accommodate the demand for the proposed land uses.
12. **On-Site Circulation and Access** – The Project site plan was reviewed to determine the adequacy of on-site circulation and access.
13. **Recommended Mitigation Measures** – Recommendations to mitigate any significant Project-related impacts and/or improve access and circulation was formulated based upon the results of the above-mentioned analyses.
14. **Alternatives Analysis** – In addition to the No-Project scenario, three other Project alternatives were evaluated. One of the Project alternatives was the previous Triangle Gateway proposed development where a qualitative evaluation was performed. A quantitative analysis was performed for the other two Project alternatives.
15. **Construction Traffic Impacts** – Based upon the construction schedule and the construction traffic/parking management plan developed by the Applicant and provided by the City, a review of potential construction-related traffic and parking impacts was conducted.

2.

EXISTING TRAFFIC CONDITIONS

ROADWAY SYSTEM

The major factor affecting the Project site are the location of the site and the efficiency of the roadway system serving the site. Efficiency of access is a function of travel time, convenience, directness, and available capacity of the routes utilized in accessing the development.

Regional access to the Project area is provided by the San Diego Freeway (I-405) and the Santa Monica Freeway (I-10). The San Diego Freeway is a north-south freeway located approximately three miles west of the Project site with interchanges at Wilshire Boulevard and Santa Monica Boulevard. Approximately two and a half miles south of the Project site is the Santa Monica Freeway, an east-west freeway with interchanges located at Robertson Boulevard and La Cienega Boulevard.

Streets in the immediate Project vicinity that would service the proposed Project include Wilshire Boulevard, Santa Monica Boulevard North, Santa Monica Boulevard South/Burton Way, Crescent Drive, Olympic Boulevard, Clifton Way, Rexford Drive, Canon Drive, Charleville Boulevard, Beverly Drive and a commercial alley.

Following is a description of the roadways serving the Project site:

Wilshire Boulevard – Wilshire Boulevard is an east-west arterial roadway, which runs between Ocean Avenue in Santa Monica to the west and Grand Avenue in downtown Los

Angeles to the east. Within the study area Wilshire Boulevard provides six lanes of travel, which are divided by painted medians and two-way left turn lanes. On-street parking is not permitted on Wilshire Boulevard within the immediate vicinity of the study area. Wilshire Boulevard is on the Congestion Management Program (CMP) road system as a part of the CMP roadway network.

Santa Monica Boulevard – Santa Monica Boulevard is an east-west arterial street, which is a part of Historic Route 66 that extends from Santa Monica to downtown Los Angeles and provides four lanes of travel divided by a painted median within the study area. Santa Monica Boulevard consists of two separate parallel streets in the Project vicinity. The north alignment is Santa Monica Boulevard North while the south alignment is called Little Santa Monica Boulevard or Santa Monica Boulevard South. Santa Monica Boulevard South runs between Sepulveda Boulevard to the west and becomes Burton Way east of Rexford Drive. On-street parking is permitted along limited areas on Santa Monica Boulevard South. Santa Monica Boulevard North is on the CMP road system as a part of the CMP roadway network.

Crescent Drive – Crescent Drive runs in a northwesterly direction within the study area. North of Santa Monica Boulevard, Crescent Drive is a two-lane undivided roadway, which serves a residential area. South of Santa Monica Boulevard, Crescent Drive is a four-lane undivided roadway with a mix of commercial and multi-family residential uses. On-street parking is permitted. Posted speed limit along Crescent Drive is 25 mph.

Olympic Boulevard - Olympic Boulevard is also an east-west arterial roadway which transitions into the Santa Monica Freeway (I-10) and becomes SR-1 to the west and terminates at 4th Street in the City of Montebello to the east. A portion of Olympic Boulevard is one-way in downtown Los Angeles and becomes 9th Street between San Pedro Street and Central Avenue. This arterial provides four to six lanes of travel within the study area. Parking is prohibited during peak periods. The posted speed limit is 35 mph.

Clifton Way – Clifton Way is an east-west roadway, which provides two lanes of undivided travel between Canon Drive and San Vicente Boulevard. On-street parking is permitted along Clifton Way and there is a posted speed limit of 25 mph. West of Crescent Drive, Clifton Way provides access to commercial uses, while east of Crescent Drive, Clifton Way is a residential street.

Rexford Drive – Rexford Drive is a two-lane, undivided roadway that runs between Coldwater Canyon and Pico Boulevard and becomes off set to the west between Pico Boulevard and Monte Mar Drive. On-street parking is permitted on Rexford Drive. Posted speed limit of 25 mph. Rexford Drive serves residential uses in the Project vicinity.

Canon Drive – Canon Drive is a north-south roadway, which provides two lanes of travel north of Santa Monica Boulevard and south of Wilshire Boulevard. In the Business Triangle between Santa Monica Boulevard and Wilshire Boulevard, Canon Drive has

four travel lanes. North of Sunset Boulevard, Canon Drive becomes Benedict Canon Drive and at its southern terminus connects to South Beverly Drive. On-street parking is permitted along both sides of the roadway within the Project vicinity. Posted speed limit is 25 mph within the study area.

Charleville Boulevard – Charleville Boulevard is a two-lane, east-west, undivided roadway facility that runs parallel to Wilshire Boulevard, south of the Project site. Parking is permitted on both sides of the roadway.

Beverly Drive – Beverly Drive is a four-lane, undivided, north-south roadway facility that provides access to commercial areas in the Business Triangle. Parking is permitted on both sides of the roadway.

Commercial Alley – A north-south alley from Clifton Way to Wilshire Boulevard along the west side of the Project site provides back-door access to properties along both Canon Drive and Crescent Drive. All truck loading/unloading activities occur on this one-way southbound alley.

STUDY INTERSECTIONS AND ROADWAY SEGMENTS

The following ten (10) intersections were selected for evaluation based on discussions with the City of Beverly Hills and potential to be impacted by Project-related traffic:

- Crescent Drive - Wilshire Boulevard
- Crescent Drive - Clifton Way
- Crescent Drive - Santa Monica Boulevard South
- Crescent Drive - Santa Monica Boulevard North
- Crescent Drive - Charleville Boulevard
- Rexford Drive - Clifton Way
- Wilshire Boulevard - Rexford Drive
- Wilshire Boulevard - Canon Drive
- Wilshire Boulevard - Beverly Drive
- Wilshire Boulevard - Santa Monica Boulevard North

The following five (5) roadway segments were selected for evaluation based on discussions with the City of Beverly Hills and the potential to be impacted by Project-related traffic:

- Crescent Drive south of Wilshire Boulevard
- Crescent Drive north of Santa Monica Boulevard North
- Foothill Road between Burton Way and Rexford Drive
- Clifton Way between Rexford Drive and Maple Drive
- Rexford Drive south of Clifton Way

EXISTING TRAFFIC VOLUMES

Morning and evening peak-hour traffic volumes were collected on March 6 and 7, 2002 by Wiltec, a subcontractor to Parsons. Due to on-going construction on Wilshire Boulevard at the time the counts were taken, volume adjustments were made to the following intersections based on previous traffic studies:

- Beverly Drive - Wilshire Boulevard
- Canon Drive - Wilshire Boulevard
- Crescent Drive - Wilshire Boulevard
- Rexford Drive - Wilshire Boulevard
- Santa Monica Boulevard North - Wilshire Boulevard

The volume adjustments were made based upon traffic counts conducted through the year and represent typical traffic conditions for Wilshire Boulevard.

Figure 2 illustrates the Existing adjusted morning and evening turning movement volumes at study intersections.

Daily (24-hour) traffic volumes were also collected by Wiltec on March 5, 2002. Figure 3 shows the Existing daily traffic volumes on study roadway segments in the Project vicinity.

Traffic count sheets are provided in Appendix A of this report.

Driveway counts to determine the trip generation of the existing office and retail land uses, which will be replaced by the Project, were collected by Parsons on March 12, 2002.

LEVELS OF SERVICE

"Level of service" is a term which denotes any of an infinite number of combinations of traffic operating conditions that may occur on a given travel lane or at a given intersection when it is subjected to various traffic volumes. Level of service (LOS) is a measure of "quality of flow," and as shown in Tables 1 and 2, there are six levels of service, A through F, which relate to traffic congestion from best to worse, respectively. In general, Level A represents free-flow conditions with no congestion. Conversely, Level F represents severe congestion with stop-and-go conditions. Levels E and F typically are considered to be unsatisfactory.

Corresponding to each intersection level of service shown on Table 1 is a volume-to-capacity (V/C) ratio. Generally speaking, this is the ratio of an intersection's traffic volume (V) to its capacity (C), with capacity defined as the theoretical maximum number of vehicles that can pass through an intersection during a specified period of time. In accordance with the City of Beverly Hills' guidelines, these level-of-service determinations were made using the methodology commonly referred to as Intersection

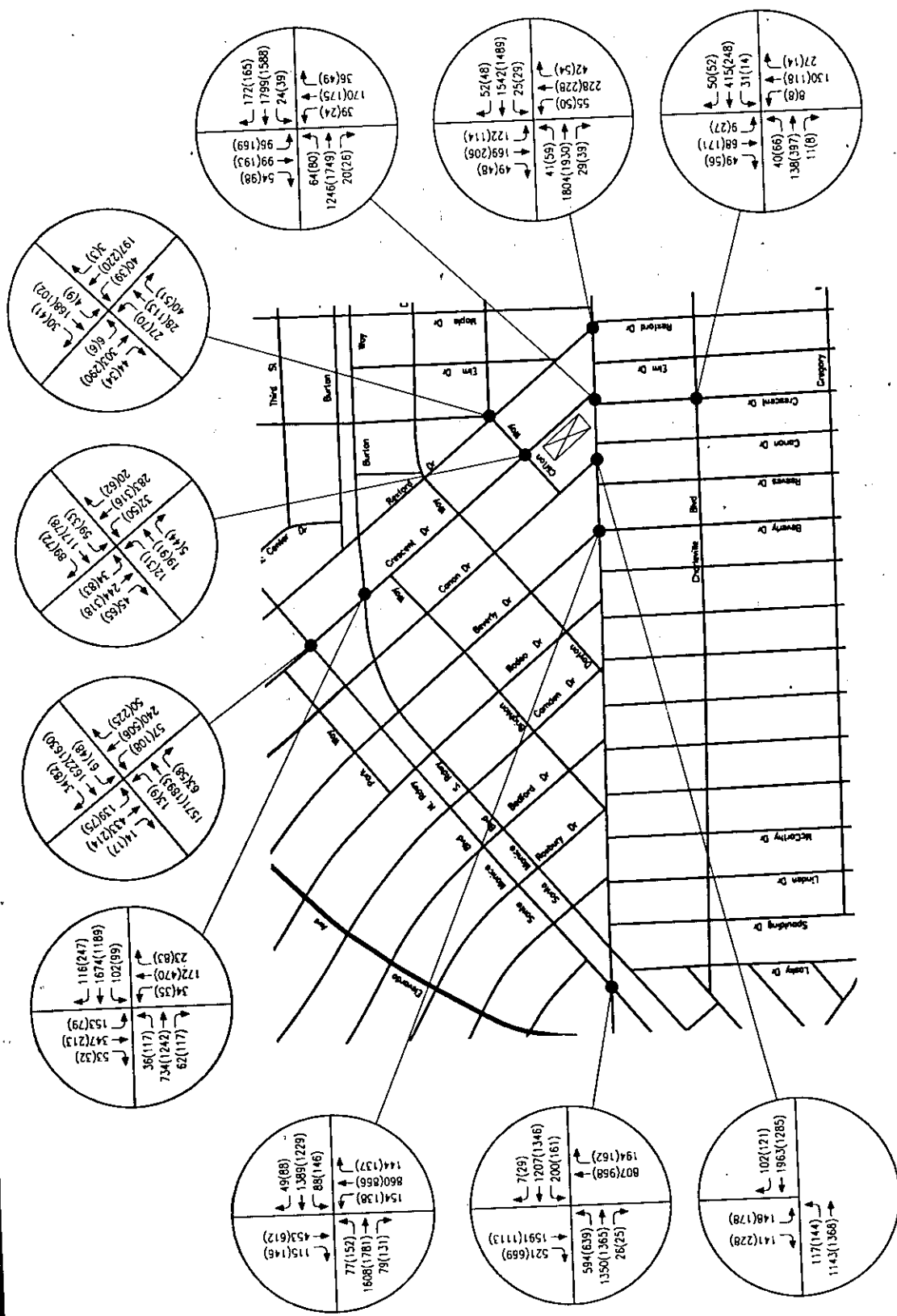
Capacity Utilization (ICU). With this technique, an intersection's ICU value (i.e., a V/C ratio) is computed based upon the intersection's traffic volumes and its traffic-carrying capacity. The capacity of left-turn, through and right-turn lanes was assumed to be 1,600 vehicles per hour per lane (vphpl), while dual-left-turn lanes was assumed to be 2,880 vphpl for both lanes. An ICU of 0.10 was assumed for the yellow clearance interval at each intersection. In addition, an adjustment factor of 0.97 was applied to the outside through-lane volumes along Wilshire Boulevard to account for potential bus blockage.

Table 2 shows the intersection level-of-service definitions using the Highway Capacity Manual (HCM) Methodology. The HCM procedures provide a calculation of vehicle delay for critical intersection movements, as well as the overall intersection operations for an intersection. Within these analyses, two types of unsignalized controls were found: two-way STOP controlled and four-way STOP controlled.

EXISTING LEVELS OF SERVICE

The analysis of existing intersection levels of service (LOS) was based on peak-hour traffic volumes illustrated on Figure 2 and the existing intersection geometrics shown on Figure 4. Tables 3 and 4 summarize the existing levels of service at the study intersection during the weekday morning and evening peak hours. Appendix B provides existing level-of-service worksheets.

As seen on Table 3, the intersection at Santa Monica Boulevard North – Wilshire Boulevard operates at unacceptable levels of service (LOS E or F) during both morning and evening peak hours. In addition, Crescent Drive - Santa Monica Boulevard North operates at LOS F during the evening peak hour. All other intersections shown on Tables 3 and 4 operate at good levels of service (LOS D or better) during peak hours.



LEGEND

XX(XX) = AM(PM) PEAK TRAFFIC VOLUME

Existing (Year 2002) Turning Movement Counts

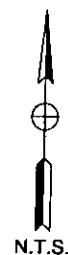
PARSONS TRANSPORTATION GROUP

Crescent EIR, Beverly Hills



LEGEND

XXXX = AVERAGE DAILY TRAFFIC VOLUME
(Rounded to the nearest 100)



Existing Average Daily Traffic Volumes

PARSONS TRANSPORTATION GROUP

Crescent EIR, Beverly Hills

FIGURE

3

TABLE 1
INTERSECTION LEVEL-OF-SERVICE DEFINITIONS ⁽¹⁾

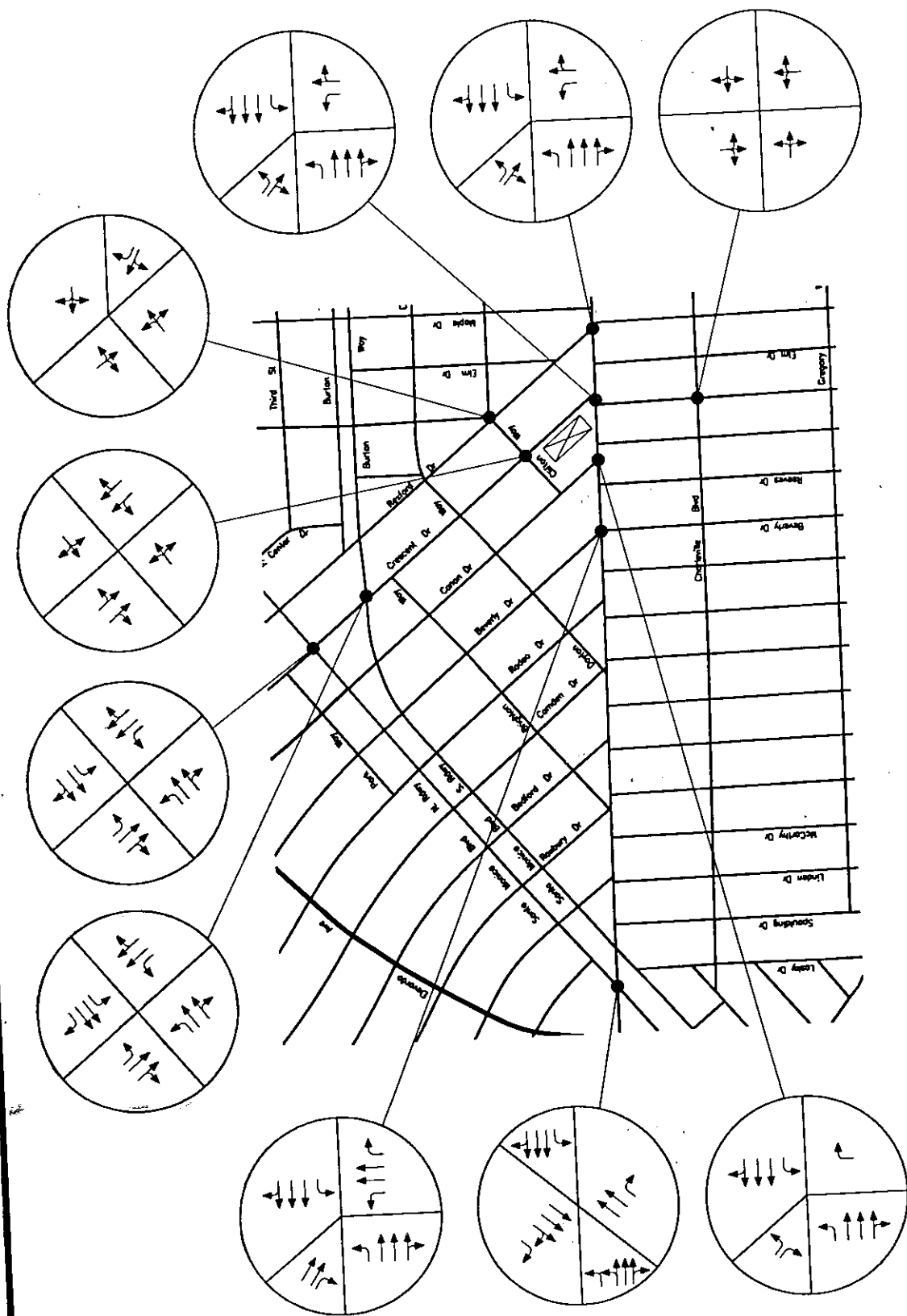
Level of Service	Interpretation	V/C or ICU ⁽²⁾
A	Uncongested operations; all vehicles clear in a single cycle	0.00 - 0.60
B	Uncongested operations; all vehicles clear in a single cycle	0.61 - 0.70
C	Light congestion; occasional backups on critical approaches	0.71 - 0.80
D	Congestion on critical approaches, but intersection functional. Vehicles required to wait through more than one cycle during short peaks. No long-standing lines formed.	0.81 - 0.90
E	Severe congestion with some long-standing lines on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements	0.90 - 1.00
F	Total breakdown with stop-and-go operations	> 1.00

- (1) Transportation Research Circular Number 212, January 1990, Transportation Research Board.
- (2) Volume to Capacity Ratio or Intersection Capacity Utilization.

TABLE 2
INTERSECTION LEVEL-OF-SERVICE DEFINITIONS ⁽¹⁾

Level of Service	Interpretation	Average Delay ⁽²⁾
A	Uncongested operations; all vehicles clear in a single cycle	0.0 - 10.0
B	Uncongested operations; all vehicles clear in a single cycle	10.1 - 15.0
C	Light congestion; occasional backups on critical approaches	15.1 - 25.0
D	Congestion on critical approaches, but intersection functional. Vehicles required to wait through more than one cycle during short peaks. No long-standing lines formed.	25.1 - 35.0
E	Severe congestion with some long-standing lines on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements	35.1 - 50.0
F	Total breakdown with stop-and-go operations	> 50.1

- (1) Highway Capacity Manual, 2000, Transportation Research Board.
 (2) Average delay is expressed in seconds.



Existing Intersection Lane Configuration

TABLE 3
EXISTING LEVELS OF SERVICE - SIGNALIZED

INTERSECTION	AM		PM	
	ICU ⁽¹⁾	LOS ⁽²⁾	ICU ⁽¹⁾	LOS ⁽²⁾
Santa Monica Blvd North @ Wilshire Blvd	1.019	F	1.049	F
Beverly Dr @ Wilshire Blvd	0.779	C	0.871	D
Canon Dr @ Wilshire Blvd	0.700	C	0.628	B
Crescent Dr @ Wilshire Blvd	0.744	C	0.765	C
Rexford Dr @ Wilshire Blvd	0.743	C	0.780	C
Crescent Dr @ Santa Monica Blvd South	0.802	D	0.809	D
Crescent Dr @ Santa Monica Blvd North	0.824	D	1.015	F

(1) Intersection Capacity Utilization
(2) Level of Service

TABLE 4
EXISTING LEVELS OF SERVICE - UNSIGNALIZED

INTERSECTION	AM		PM	
	DELAY	LOS ⁽¹⁾	DELAY	LOS ⁽¹⁾
Rexford Dr @ Clifton Way	11.9	B	12.8	B
Crescent Dr @ Charleville Blvd	14.1	B	17.6	C
Crescent Dr @ Clifton Way	10.7	B	12.4	B

(1) Level of Service

3.

YEAR 2005 NO-PROJECT (CUMULATIVE BACKGROUND) TRAFFIC CONDITIONS

In accordance with discussions with the City of Beverly Hills, future traffic conditions were analyzed in 2005, the Project completion year. This chapter describes the development of year 2005 traffic volume projections and level-of-service analysis for the No-Project (Cumulative Background) scenario.

Year 2005 No-Project traffic conditions refer to the traffic conditions at the time of Project completion (year 2005), assuming that the proposed development at 131-191 North Crescent Drive was not implemented.

YEAR 2005 NO-PROJECT TRAFFIC VOLUMES

No-Project ("baseline") conditions include existing traffic volumes plus traffic from other projects in the area that are likely to be built and occupied in the same time frame as the proposed Project. Included in the No-Project conditions is a growth rate, which accounts for regional growth. Assessing a project's impact to the No-Project condition rather than just existing conditions is a more conservative approach as it fully accounts for traffic conditions, as they could exist at the time the Project is occupied.

Ambient Traffic Growth

As a part of "baseline" traffic conditions, an ambient growth rate was included in the analysis. This growth rate is intended to address potential unidentified projects and/or regional traffic growth that could occur prior to build-out of the Project. In order to

obtain a growth rate, which would be consistent with the existing density of the area and the opportunity for development in the area, there were discussions with the City's Traffic Engineering Department. The City of Beverly Hills indicated that a growth rate of one percent per year represents historical traffic growth in the Project's vicinity.

"Related" Projects

The Cities of Beverly Hills, Los Angeles and West Hollywood provided an extensive list of related projects (35 projects) to be included in these analyses. Generally, these "related" projects are developments that have been approved and would potentially add new traffic in the study area. Not all of the projects listed under "related" projects for the City of Beverly Hills have been approved. However, the City has recognized that these "related" project sites will likely generate traffic in the future and hence these have been included in the No-Project analysis.

The TRAFFIX software was utilized to create a "related" projects traffic analysis model for the City of Beverly Hills and adjacent areas in the Cities of West Hollywood and Los Angeles. The TRAFFIX model allows for a schematic and analytical representation of the City's roadway network, land uses, zones, trip generation within each zone and the trip assignment of vehicular trips generated by each zone onto the network. Land uses and trip generation data for each of the 35 "related" projects were inputted in the TRAFFIX database. In addition, trip distribution for each "related" project was programmed in the TRAFFIX model for assignment of each project's trips on the roadway system and study intersections. Where approved traffic studies for the "related" projects are available, trip generation and distribution were obtained explicitly from said studies. For "related" projects where explicit trip generation and distribution was not available, trip generation was developed using Institute of Transportation Engineers (ITE), *Trip Generation*, 6th Edition. Trip distribution was developed based on areawide trip making characteristics and current traffic patterns.

Table 5 summarizes the morning and evening peak-hour trip generation associated with these "related" projects. As can be seen from Table 5, the "related" projects are expected to generate 1,903 morning peak-hour trips and 4,289 evening peak-hour trips and 42,276 trips on a typical weekday.

Year 2005 No-Project Traffic Volumes

Figure 5 presents the year 2005 No-Project morning and evening peak-hour traffic volumes at the ten study intersections. Figure 6 shows the year 2005 No-Project average daily traffic (ADT) volumes on the study segments.

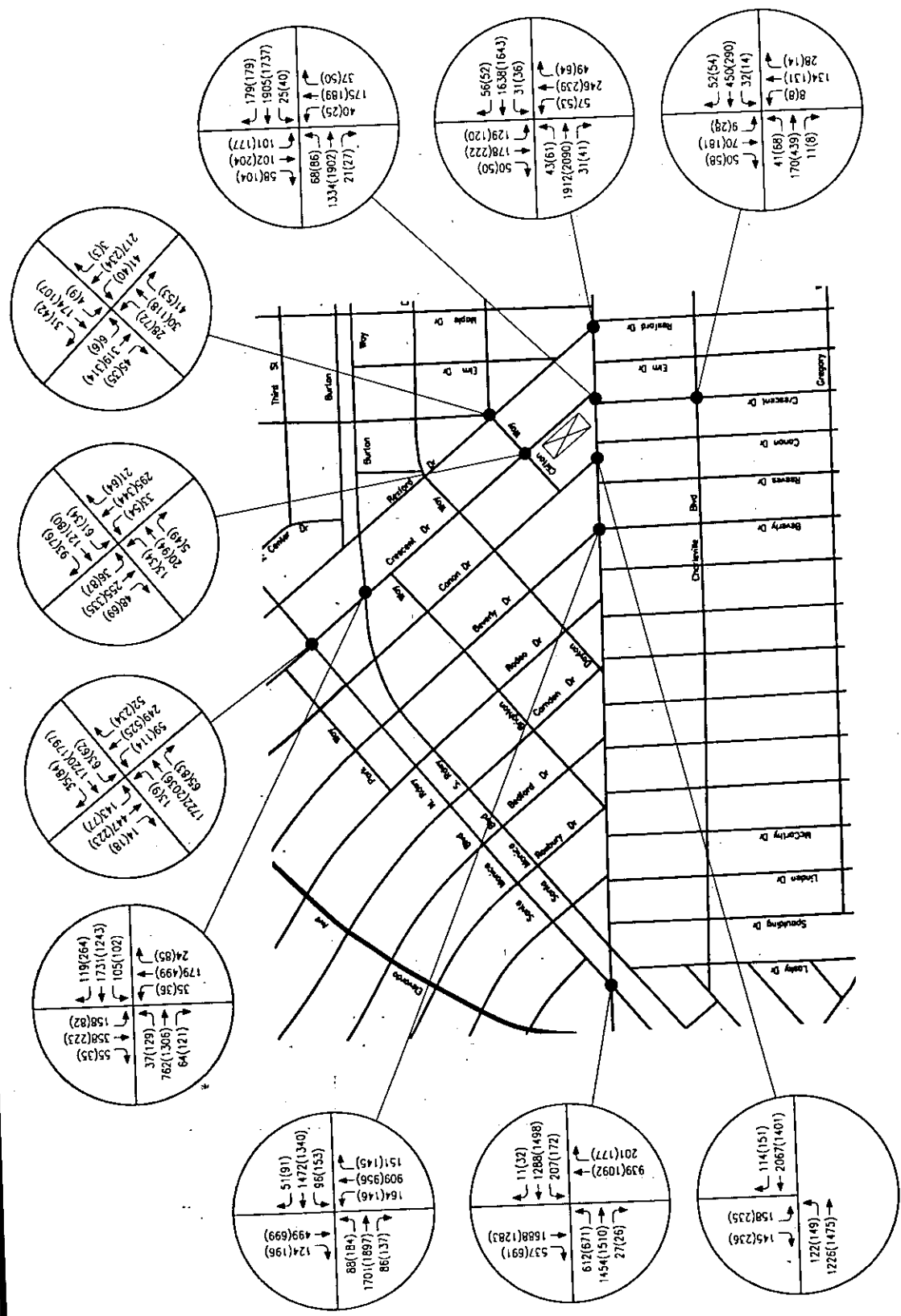
TABLE 5
RELATED PROJECTS WEEKDAY TRIP GENERATION

PROJECT LOCATION	DAILY	AM			PM		
		IN	OUT	TOTAL	IN	OUT	TOTAL
<i>City of Beverly Hills⁽¹⁾</i>							
469 N. Crescent Drive	860	0	0	0	62	12	74
216-220 S. Arnaz Drive	60	1	5	6	4	2	6
460 N. Palm Drive	233	3	17	20	15	7	22
552-558 Hillgreen Drive	65	1	5	6	6	3	9
201 N. Crescent Drive	275*	6	8	14	12	10	22
407 N. Maple Drive	1,910	220	45	265	42	203	245
9000 Olympic Blvd	280	0	0	0	6	8	14
75-101 La Cienega	2,235	105	14	119	86	159	245
233-235 N. Beverly Drive	932	64	9	73	30	109	139
150 Lasky Drive	346	14	9	23	13	12	25
129 S. Linden Drive	131	6	7	13	12	9	21
142 S. Rexford Drive	236	20	18	38	18	21	39
9200 Wilshire Boulevard	1,358	47	30	77	49	40	89
Athens Hotel/T Lot	1,399	58	37	95	55	49	104
9601 Wilshire Boulevard	1,825*	5	5	10	89	57	146
140-144 S. Oakhurst Drive	100	2	7	9	7	3	10
128-129 S. Elm Drive	33	1	2	3	2	1	3
132 S. Maple Drive	137	2	10	12	9	4	13
338 N. Palm Drive	60	1	5	6	4	2	6
137-147 Spalding Drive	166	2	12	14	11	5	16
345 Reeves Drive	92	1	7	8	6	3	9
143-149 N. Arnaz Drive	187	3	13	16	12	6	18
Lot D	3,274	0	0	0	99	186	285
SUBTOTAL	16,194	562	265	827	649	911	1,560
<i>City of Los Angeles</i>							
Beverly Blvd @ Doheny Drive	2,592	165	102	267	165	158	323
145 Robertson Blvd	1,039	32	32	64	35	37	72
9760 Pico Boulevard	660	92	40	132	37	55	92
6120 Pico Boulevard	401	27	26	53	11	15	26
1461 La Cienega Boulevard	745	0	0	0	22	15	37
431 Fairfax Avenue	1,930	86	79	165	86	63	149
5985 Pico Boulevard	1,279	17	13	30	74	76	150
6739 Olympic Boulevard	812	22	22	44	30	30	60
3rd Street @ Fairfax Avenue	14,100	0	0	0	774	774	1,548
9051 Pico Boulevard	333	66	38	104	29	73	102
1016 La Cienega Boulevard	1,637	84	81	165	57	53	110
1016 La Cienega Boulevard	554	35	17	52	30	30	60
SUBTOTAL	26,082	626	450	1,076	1,350	1,379	2,729
TOTAL	42,276	1,188	715	1,903	1,999	2,290	4,289

* Daily traffic was calculated by assuming <daily = peak hour/0.68>

(1) Cumulative projects list given by City of Beverly Hills, March 2002

(2) Cumulative projects list given by City of Los Angeles, March 29, 2002



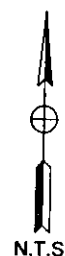
LEGEND
 XX(XX) = AM(PM) PEAK TRAFFIC VOLUME

No-Project (Year 2005) Turning Movement Counts
PARSONS TRANSPORTATION GROUP
 Crescent EIR, Beverly Hills



LEGEND

XXXX = AVERAGE DAILY TRAFFIC VOLUME
(Rounded to the nearest 100)



No-Project (Year 2005) Average Daily Traffic Volumes

PARSONS TRANSPORTATION GROUP

Crescent EIR, Beverly Hills

FIGURE

6

YEAR 2005 NO-PROJECT LEVELS OF SERVICE

The analysis of year 2005 levels of service for the No-Project scenario was based upon the intersection lane configurations summarized on Figure 4 and the weekday morning and evening peak-hour traffic volumes illustrated on Figure 5.

Tables 6 and 7 summarize the year 2005 No-Project levels of service at the ten (10) study intersections during the morning and evening peak hours. As can be expected, the intersection of Santa Monica Boulevard North - Wilshire Boulevard will continue to operate at LOS F during both morning and evening peak hours. Like Existing conditions, Crescent Drive - Santa Monica Boulevard North will operate at LOS F during the evening peak hour. However, the levels of service at the intersection of Beverly Drive - Wilshire Boulevard degrade from LOS D under the Existing evening peak-hour conditions to LOS E under the No-Project evening peak-hour conditions. All other intersections are expected to operate at acceptable levels of service (LOS D or better) under the No-Project scenario. The level-of-service worksheets are included in Appendix C of this report.

TABLE 6
NO-PROJECT LEVELS OF SERVICE - SIGNALIZED

INTERSECTION	AM		PM	
	ICU ⁽¹⁾	LOS ⁽²⁾	ICU ⁽¹⁾	LOS ⁽²⁾
Santa Monica Blvd North @ Wilshire Blvd	1.071	F	1.147	F
Beverly Dr @ Wilshire Blvd	0.820	D	0.933	E
Canon Dr @ Wilshire Blvd	0.734	C	0.667	B
Crescent Dr @ Wilshire Blvd	0.777	C	0.817	D
Rexford Dr @ Wilshire Blvd	0.793	C	0.835	D
Crescent Dr @ Santa Monica Blvd South	0.826	D	0.843	D
Crescent Dr @ Santa Monica Blvd North	0.879	D	1.086	F

(1) Intersection Capacity Utilization
(2) Level of Service

TABLE 7
NO-PROJECT LEVELS OF SERVICE - UNSIGNALIZED

INTERSECTION	AM		PM	
	DELAY	LOS ⁽¹⁾	DELAY	LOS ⁽¹⁾
Rexford Dr @ Clifton Way	12.6	B	13.8	B
Crescent Dr @ Charleville Blvd	16.4	C	23.6	C
Crescent Dr @ Clifton Way	11.0	B	13.1	B

(1) Level of Service

4.

PROJECT TRIP GENERATION, DISTRIBUTION AND ASSIGNMENT

The purpose of this chapter is to discuss the Project-related traffic characteristics. Included in this discussion is the Project generation, distribution and assignment.

PROJECT DESCRIPTION

As discussed previously, the existing surface parking lot and 19,080¹ square feet of existing retail/office space, located at the southwest corner of Crescent Drive – Clifton Way, is proposed to be redeveloped with 88 residential apartments, 40,000 square feet of office/retail space, and a 534-car subterranean parking structure. The Project location is shown on Figure 1.

TRIP GENERATION

The trip generation for this Project was developed using trip generation rates and recommended practices provided by the Institute of Transportation Engineers (ITE) in *Trip Generation*, 6th Edition, 1997. Trip generation was examined for the following three periods:

- Weekday morning peak hour (typically occurring between 7:00a.m. to 9:00a.m.);
- Weekday evening peak hour (typically occurring between 4:00p.m. to 6:00p.m.); and

¹ Of this, 13,200 square feet are currently occupied.

- Weekday 24-hour period.

The total number of trips that would be generated by the proposed Project land uses is shown on Table 8. As seen on Table 8, the Project is expected to generate 1,595 daily trips, 118 morning peak-hour and 205 evening peak-hour trips. However, since the 19,080-square foot commercial building at the northwest corner of Crescent Drive – Wilshire Boulevard is currently occupied with 13,200 square feet of retail and office uses, trips generated by this existing building were subtracted from trips generated by the proposed Project uses to obtain the net new trips that would be generated by the Project. Trips generated by the existing commercial building are shown on Table 9.

Part of the Project is located on the surface parking lot that serves Spago and Coldwell Bank uses on Canon Drive. This surface parking lot will be replaced by the Project and covenant parking will be provided in the Project parking structure as described in Chapter 6. It should be noted that the same amount of traffic will be generated by the parking within the structure for these specific uses as is currently generated by the surface parking lot. Hence, the only new trips generated by the Project will be those resulting from the new residential and commercial development in The Crescent.

The total net new trip generation is shown on Table 10. As seen on Table 10, the Project is expected to generate 1,296 daily net new trips of which 103 occur during the morning peak hour and 179 occur during the evening peak hour.

TRIP DISTRIBUTION

Project trip distribution was developed for this Project based upon a review of the regional land uses, the type of land uses proposed, the surrounding street system, the proximity of freeway access and traffic counts where appropriate. The regional distribution of daily, morning and evening peak-hour Project-generated trips is shown on Figure 7.

The local and site-specific Project traffic distribution was developed considering that all residential ingress/egress will occur on the northerly (residential) driveway on Crescent Drive and all commercial traffic entering and departing the site will utilize the southerly (commercial) driveway on Crescent Drive and the alley driveway. Further, the southerly (commercial) driveway will be limited to right-turn-in, right-turn-out movements only. The inbound and outbound traffic distributions for residential traffic is shown on Figures 8 and 9, respectively. The inbound and outbound traffic distributions for office-related traffic is illustrated on Figures 10 and 11, respectively.

TRAFFIC ASSIGNMENT

Based upon the trip distribution described above, Figure 12 illustrates the assignment of Project trips at the study intersections during typical weekday morning and evening peak hours. Figure 13 shows the assignment of Project trips on the study roadway segments on a daily basis.

TABLE 8
PROPOSED LAND USE TRIP GENERATION

LAND USE	SIZE	DAILY		AM PEAK HOUR			PM PEAK HOUR		
		RATE	TOTAL	RATE	IN	OUT	RATE	IN	OUT
88 Residential Units ⁽¹⁾	88	(4)	662	(5)	8	39	(6)	44	22
10,000 SF Retail ⁽²⁾	10,000	40.67	407	-	-	-	2.59	11	15
30,000 SF Office ⁽³⁾	30,000	(7)	526	(8)	62	9	(9)	19	94
TOTAL			1,595		70	48		75	130
									205

- (1) ITE Trip Generation, 6th Edition, Land Use 220 (Apartments)
(2) ITE Trip Generation, 6th Edition, Land Use 814 (Specialty Retail Center)
(3) ITE Trip Generation, 6th Edition, Land Use 710 (General Office Building)
(4) $T = 5.994(X) + 134.114$; ITE Trip Generation, 6th Edition, Land Use 220 (Apartments)
(5) $T = 0.497(X) + 1.238$; ITE Trip Generation, 6th Edition, Land Use 220 (Apartments)
(6) $T = 0.541(X) + 18.743$; ITE Trip Generation, 6th Edition, Land Use 220 (Apartments)
(7) $Ln(T) = 0.768Ln(X) + 3.654$; ITE Trip Generation, 6th Edition, Land Use 814 (Specialty Retail Center)
(8) $Ln(T) = 0.797Ln(X) + 1.558$; ITE Trip Generation, 6th Edition, Land Use 814 (Specialty Retail Center)
(9) $T = 1.121(X) + 79.295$; ITE Trip Generation, 6th Edition, Land Use 814 (Specialty Retail Center)
(10) Existing surface parking lot will not generate additional traffic as a result of being replaced in The Crescent parking structure

TABLE 9
EXISTING LAND USE TRIP GENERATION

LAND USE	SIZE (sq. ft.)	DAILY		AM PEAK HOUR			PM PEAK HOUR		
		RATE	TOTAL	RATE	IN	OUT	RATE	IN	OUT
ITE									
Specialty Retail Center ⁽¹⁾	5,200	40.67	211	-	-	-	2.59	0	7
General Office Building ⁽²⁾	8,000	11.01	88	1.56	11	1	1.49	2	10
TOTAL	13,200 ⁽³⁾		299		11	1		2	17
Driveway Counts									
Mixed-use building	13,200 ⁽³⁾	-	N/A	-	13	2	-	12	14
									26

- (1) ITE Trip Generation, 6th Edition, Land Use 814 (Specialty Retail Center)
(2) ITE Trip Generation, 6th Edition, Land Use 710 (General Office Building)
(3) 13,200 square feet currently occupied in the 19,080-square foot building.

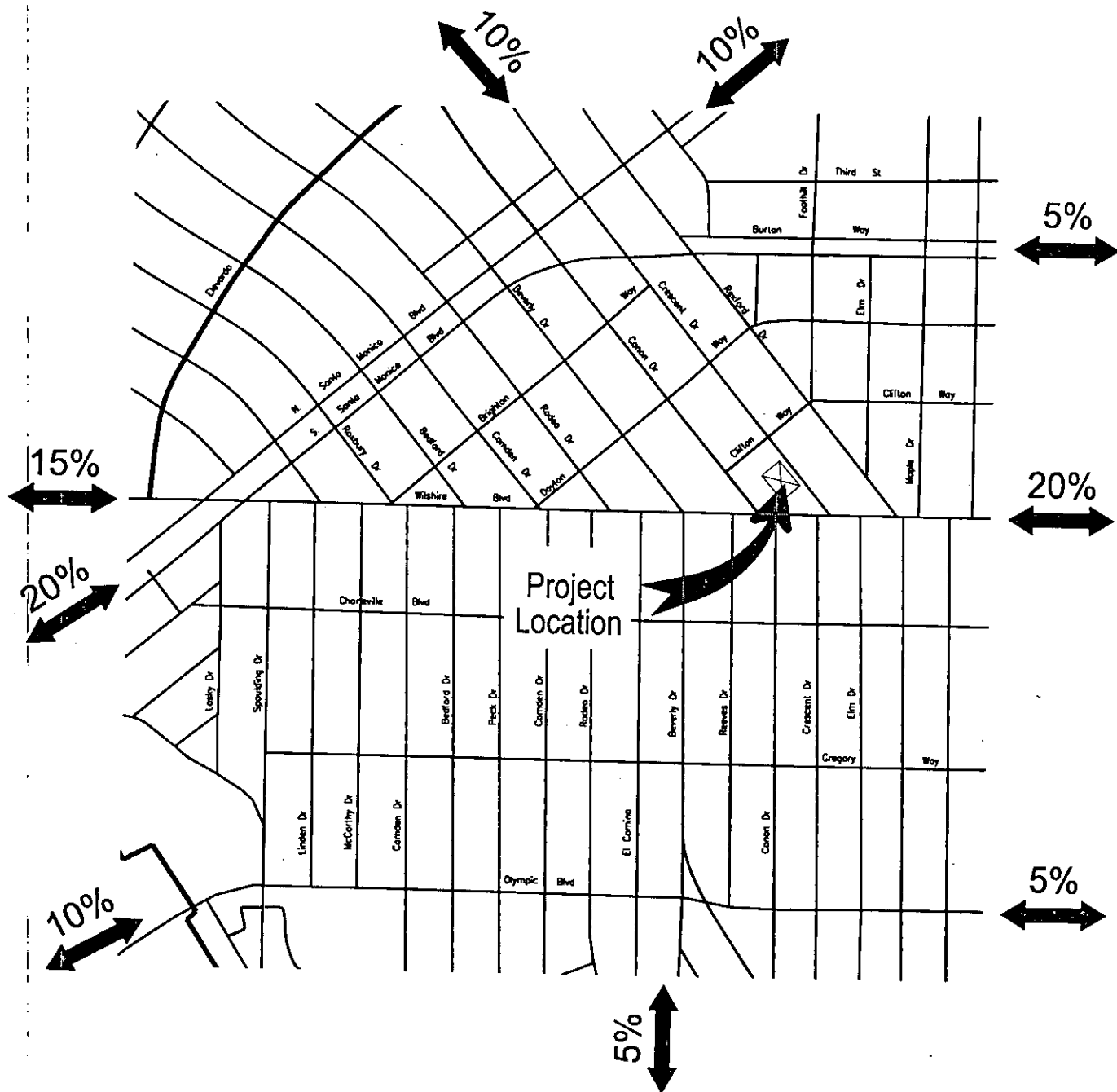
TABLE 10
TOTAL NET TRIP GENERATION

	DAILY	AM PEAK HOUR			PM PEAK HOUR		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Proposed Land Use Trip Generation ⁽¹⁾	1,595	70	48	118	75	130	205
Reduce in trips due to existing land Use trip generation ⁽²⁾	<299> ⁽³⁾	<13>	<2>	<15>	<12>	<14>	<26>
Net New Trip Generation	1,296	57	46	103	63	116	179

(1) Table 8, Proposed Land Use Trip Generation

(2) Table 9, Existing Land Use Trip Generation

(3) Based on *ITE Trip Generation*, 6th Edition



LEGEND

X% = REGIONAL TRAFFIC DISTRIBUTION



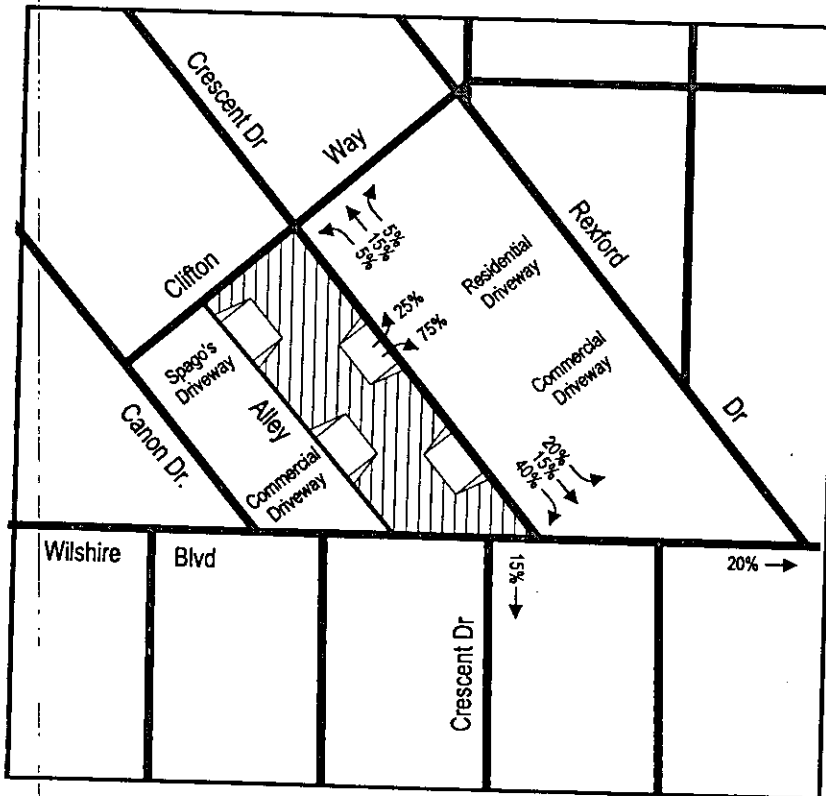
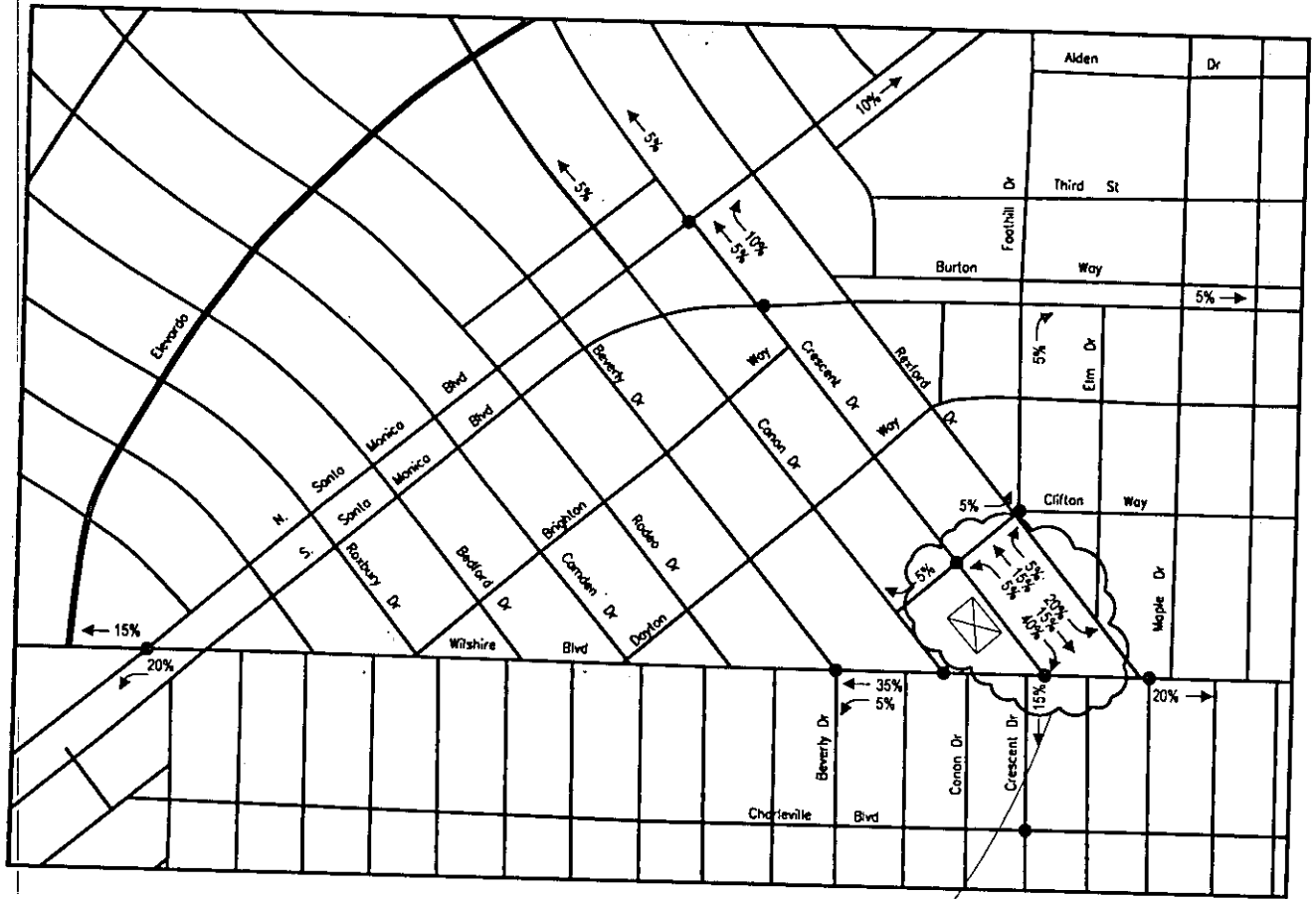
Regional Trip Distribution

PARSONS TRANSPORTATION GROUP

Crescent EIR, Beverly Hills

FIGURE

7

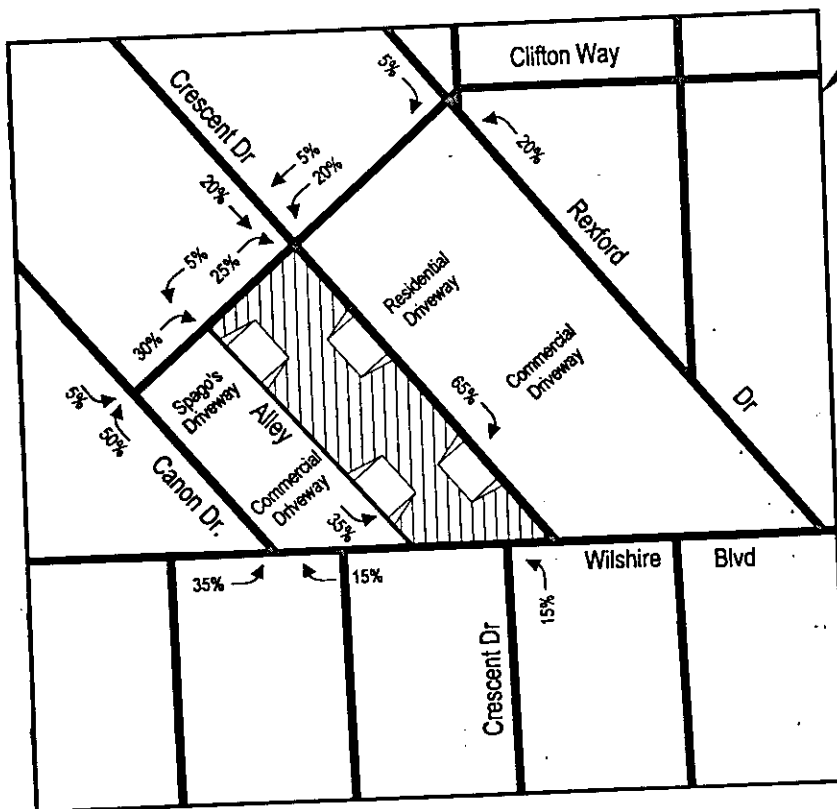
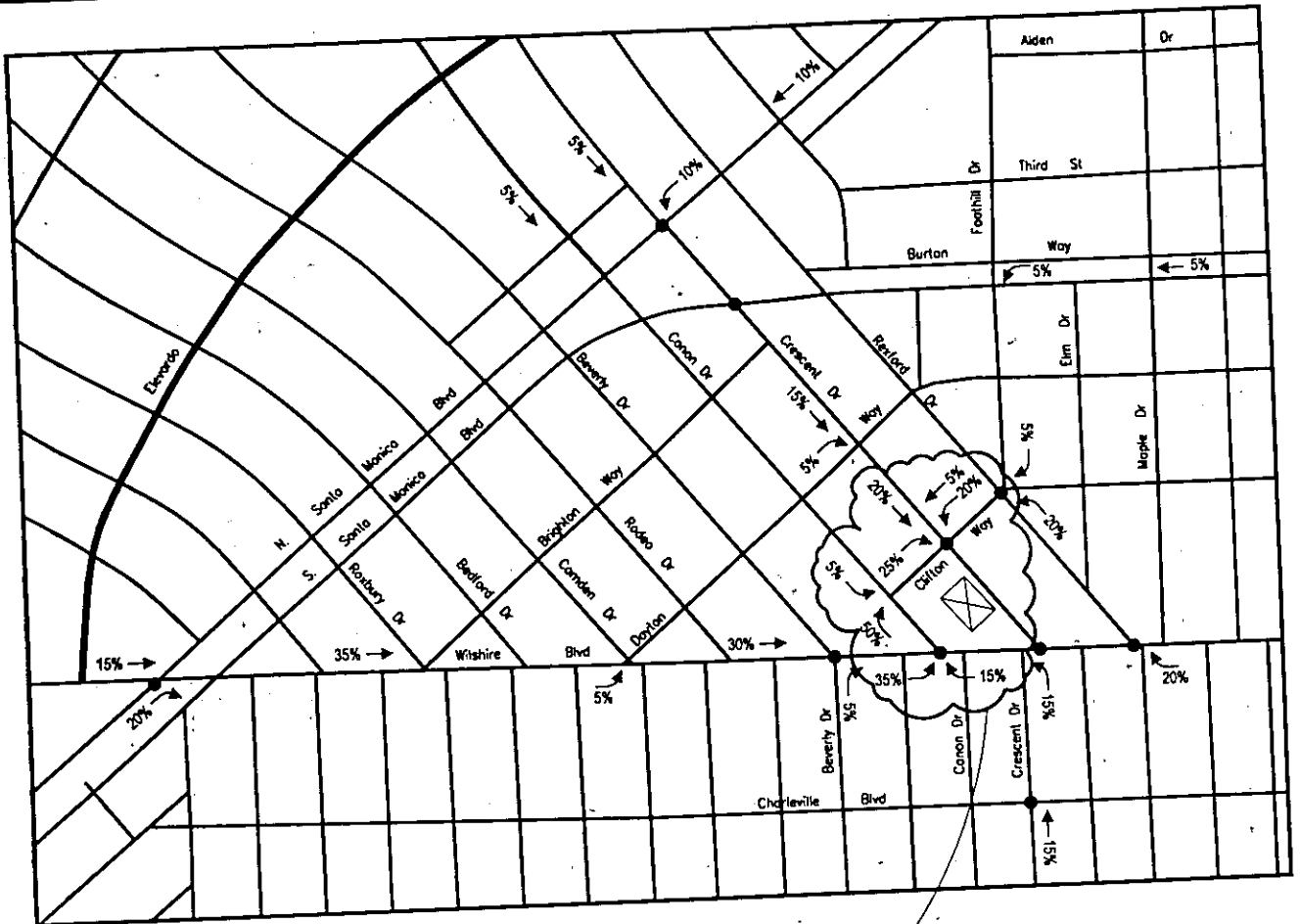


Project Trip Distribution (outbound) - Residential

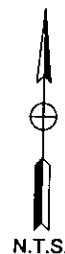
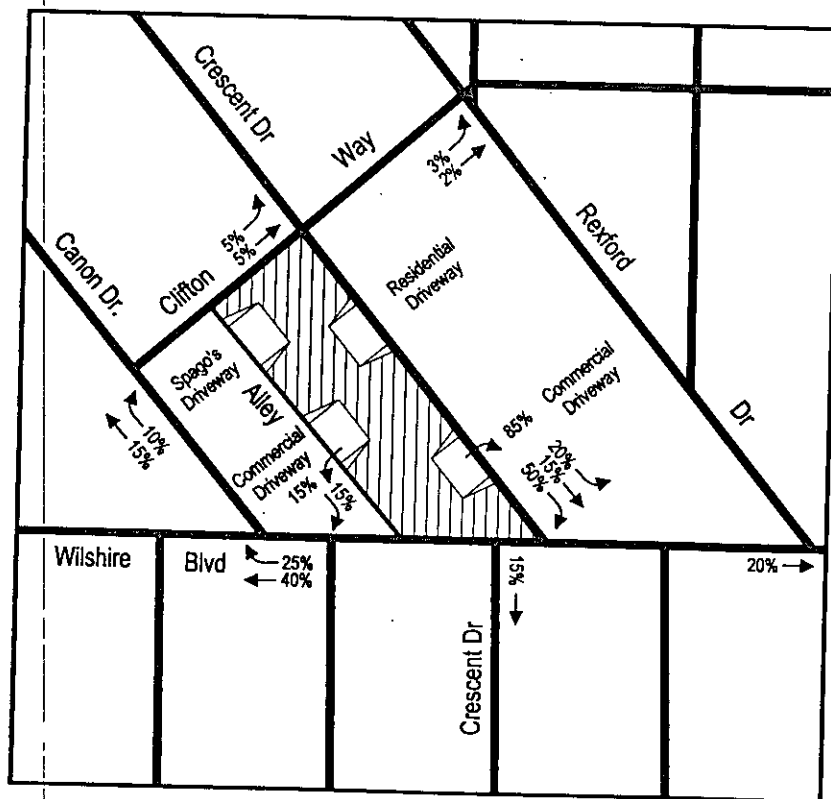
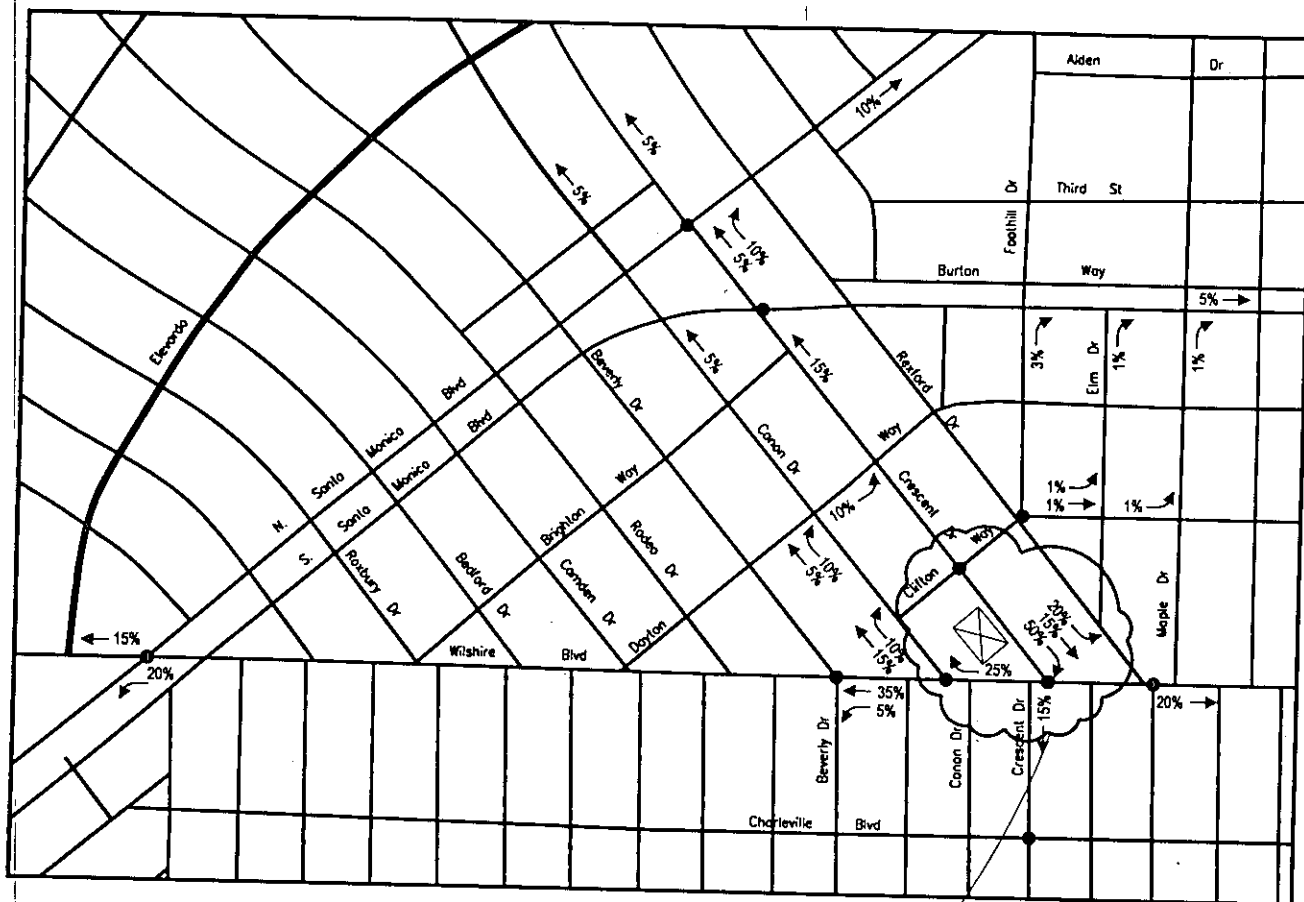
PARSONS TRANSPORTATION GROUP

Crescent EIR, Beverly Hills

FIGURE



Project Trip Distribution (inbound) - Commercial



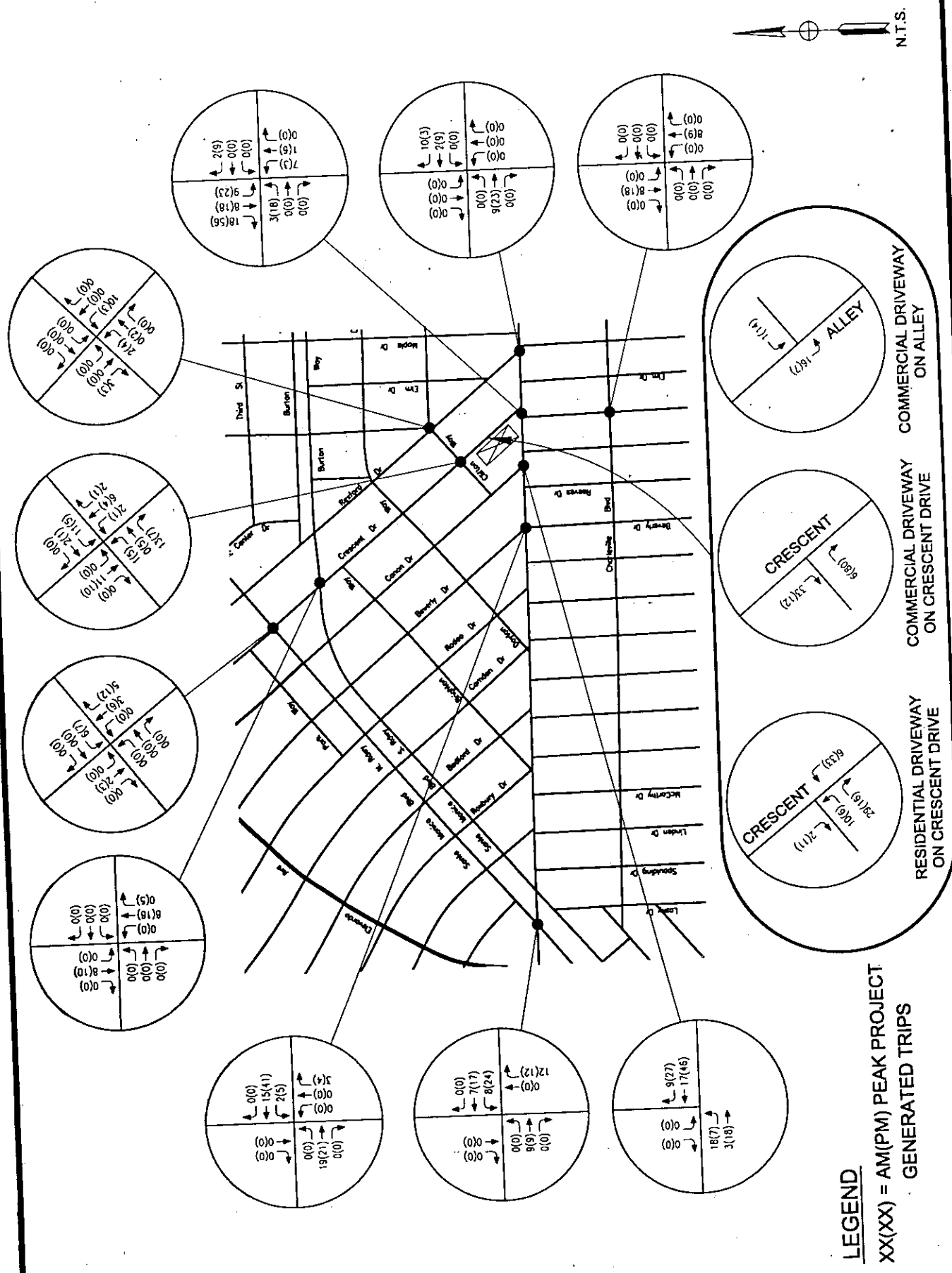
Project Trip Distribution (outbound) - Commercial

PARSONS TRANSPORTATION GROUP

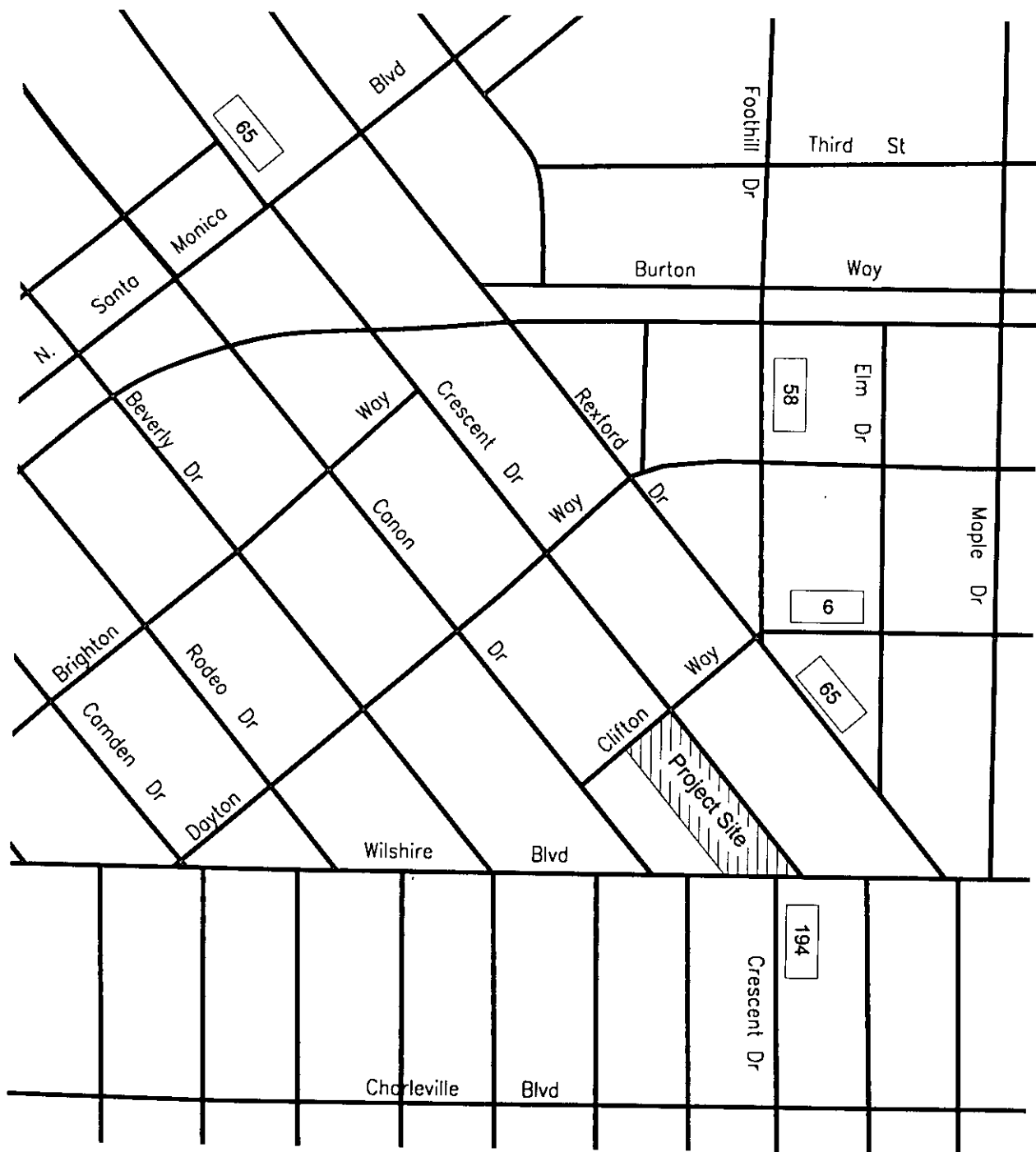
Crescent EIR, Beverly Hills

FIGURE

11

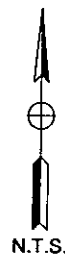


Project Trip Assignment



LEGEND

XXXX = AVERAGE DAILY TRAFFIC VOLUME



Project Roadway Trip Assignment

PARSONS TRANSPORTATION GROUP

Crescent EIR, Beverly Hills

FIGURE

13

5. YEAR 2005 WITH-PROJECT TRAFFIC CONDITIONS

This chapter describes the projected With-Project traffic volumes, level-of-service analysis and Project-related traffic impacts.

WITH-PROJECT TRAFFIC VOLUMES

With-Project traffic volumes include existing traffic volumes, ambient traffic growth, “related” projects traffic volume, and new traffic volumes that would be added to the roadway system due to the implementation of the Project.

Figure 14 shows the projected year 2005 With-Project traffic volumes during the morning and evening peak-hours at study intersections. Figure 15 illustrates the projected year 2005 With-Project traffic volumes on a daily basis on study roadway segments.

WITH-PROJECT LEVELS OF SERVICE

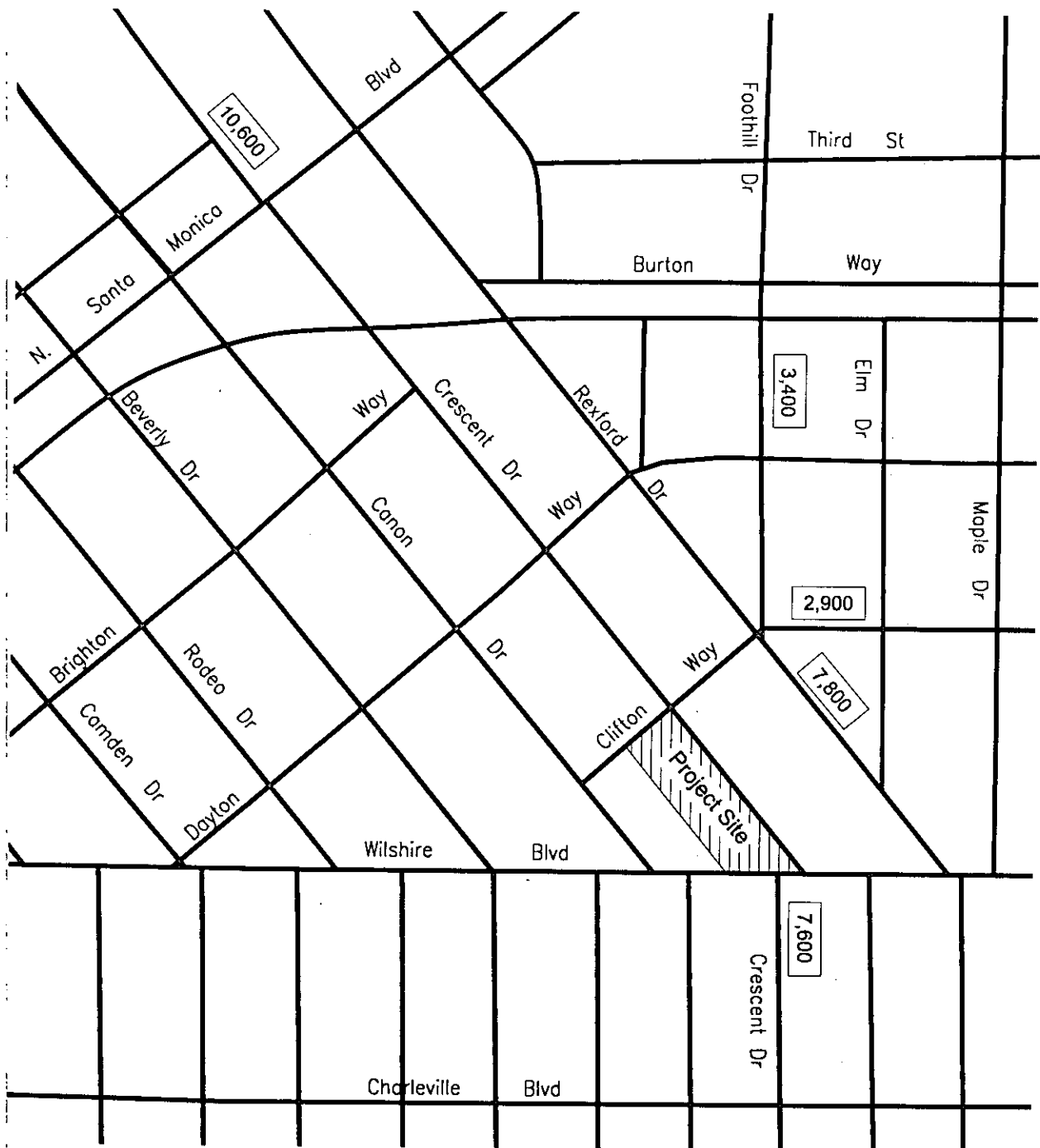
The analysis of year 2005 With-Project levels of service was based upon the intersection geometrics shown on Figure 4 and the weekday morning and evening peak-hour traffic volumes illustrated on Figure 14 for the With-Project traffic conditions. The level-of-service computations are provided in Appendix D of this report.



With-Project (Year 2005) Turning Movement Counts

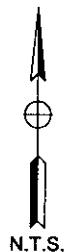
PARSONS TRANSPORTATION GROUP

Crescent EIR, Beverly Hills



LEGEND

XXXX = AVERAGE DAILY TRAFFIC VOLUME
(Rounded to the nearest 100)



With-Project (Year 2005) Average Daily Traffic Volumes

PARSONS TRANSPORTATION GROUP

Crescent EIR, Beverly Hills

FIGURE

15

Tables 11 and 12 summarize year 2005 With-Project levels of service at the ten (10) study intersections during the morning and evening peak hours. As can be seen from Tables 11 and 12, while there are minor changes in intersection capacity utilization and delay, levels of service remain the same compared to No-Project conditions at all locations.

**TABLE 11
WITH-PROJECT LEVELS OF SERVICE - SIGNALIZED**

INTERSECTION	AM		PM	
	ICU ⁽¹⁾	LOS ⁽²⁾	ICU ⁽¹⁾	LOS ⁽²⁾
Santa Monica Blvd North @ Wilshire Blvd	1.073	F	1.152	F
Beverly Dr @ Wilshire Blvd	0.825	D	0.941	E
Canon Dr @ Wilshire Blvd	0.751	C	0.686	B
Crescent Dr @ Wilshire Blvd	0.785	C	0.848	D
Rexford Dr @ Wilshire Blvd	0.795	C	0.840	D
Crescent Dr @ Santa Monica Blvd South	0.829	D	0.851	D
Crescent Dr @ Santa Monica Blvd North	0.887	D	1.096	F

(1) Intersection Capacity Utilization
(2) Level of Service

**TABLE 12
WITH-PROJECT OF SERVICE - UNSIGNALIZED**

INTERSECTION	AM		PM	
	DELAY	LOS ⁽¹⁾	DELAY	LOS ⁽¹⁾
Rexford Dr @ Clifton Way	12.8	B	14.0	B
Crescent Dr @ Charleville Blvd	16.8	C	25.3	C
Crescent Dr @ Clifton Way	11.4	B	13.6	B

(1) Level of Service

INTERSECTION TRAFFIC IMPACT SIGNIFICANCE CRITERIA

The impact of a development project is determined by comparing, at each study intersection, the levels of service during the Project completion year assuming that the Project was implemented (With-Project conditions) versus the levels of service in the same year assuming that the Project was not implemented (No-Project conditions). Based upon City of Beverly Hills' guidelines, a project is considered to have a significant impact if the traffic attributable to the project results in an increase in the ICU or delay value of:

Signalized Intersections:

- 0.040 or more at an intersection that is projected to operate at a level of service D (ICU value greater than 0.81 to 0.90) for the With-Project scenario; or
- 0.020 or more at an intersection that is projected to operate at a level of service E or F (ICU value greater than 0.91) for the With-Project scenario.

Unsignalized Intersections:

- 3.0 seconds or more at an intersection that is projected to operate at level of service E or F;
- 4.0 seconds or more at an intersection that is projected to operate at level of service D; and
- 5.0 seconds or more at an intersection causing it to operate at level of service D.

Following this comparison, the need for site-specific or cumulative local area traffic improvements can be determined.

PROJECT TRAFFIC IMPACTS

Tables 13 and 14 provide a comparison of the Existing, No-Project and With-Project intersection levels of service and the increase in ICU and delay values. Based upon the traffic impact significance criteria established above, the Project is not expected to have significant adverse impacts at any study intersections.

RESIDENTIAL TRAFFIC IMPACTS

Based upon the location of the proposed Project and its trip distribution, traffic generated by the Project will use some residential streets to access the site. The following are five residential roadway segments that could be impacted by Project traffic were analyzed:

- Crescent Drive south of Wilshire Boulevard
- Crescent Drive north of Santa Monica Boulevard North
- Foothill Drive between Burton Way and Rexford Drive
- Clifton Way between Rexford Drive and Maple Drive
- Rexford Drive south of Clifton Way

The Project would have significant impact on a local neighborhood residential street if the traffic attributable to the Project would result in daily traffic increases and/or peak hour traffic increases that would exceed the thresholds shown on Table 15.

TABLE 13
INTERSECTION LEVEL-OF-SERVICE COMPARISON - SIGNALIZED

INTERSECTION	EXISTING						NO-PROJECT						WITH-PROJECT						CHANGE IN ICU ⁽¹⁾		SIGNIFICANT IMPACT
	AM			PM			AM			PM			AM			PM			AM	PM	
	ICU ⁽²⁾	LOS ⁽²⁾	ICU ⁽³⁾	LOS ⁽³⁾	ICU ⁽²⁾	LOS ⁽²⁾	ICU ⁽³⁾	LOS ⁽³⁾	ICU ⁽²⁾	LOS ⁽²⁾	ICU ⁽³⁾	LOS ⁽³⁾	ICU ⁽²⁾	LOS ⁽²⁾	ICU ⁽³⁾	LOS ⁽³⁾					
North Santa Monica Blvd @ Wilshire Blvd	1.019	F	1.049	F	1.071	F	1.147	F	1.073	F	1.152	F	0.002	0.005	NO						
Beverly Dr @ Wilshire Blvd	0.779	C	0.871	D	0.820	D	0.933	E	0.825	D	0.941	E	0.005	0.008	NO						
Canon Dr @ Wilshire Blvd	0.700	B	0.628	B	0.734	C	0.667	B	0.751	C	0.686	B	0.017	0.019	NO						
Crescent Dr @ Wilshire Blvd	0.744	C	0.765	C	0.777	C	0.817	D	0.785	C	0.848	D	0.008	0.031	NO						
Rexford Dr @ Wilshire Blvd	0.743	C	0.780	C	0.793	C	0.835	D	0.795	C	0.840	D	0.002	0.005	NO						
Crescent Dr @ South Santa Monica Blvd	0.802	D	0.809	D	0.826	D	0.843	D	0.829	D	0.851	D	0.003	0.008	NO						
Crescent Dr @ North Santa Monica Blvd	0.824	D	1.015	F	0.879	D	1.086	F	0.887	D	1.096	F	0.008	0.010	NO						

TABLE 14
INTERSECTION LEVEL-OF-SERVICE COMPARISON - UNSIGNALIZED

INTERSECTION	EXISTING						NO-PROJECT						WITH-PROJECT						CHANGE IN DELAY		SIGNIFICANT IMPACT
	AM			PM			AM			PM			AM			PM			AM	PM	
	LOS ⁽²⁾		DELAY	LOS ⁽²⁾		DELAY	LOS ⁽²⁾		DELAY	LOS ⁽²⁾		DELAY	LOS ⁽²⁾		DELAY	LOS ⁽²⁾	DELAY				
	DELAY	LOS ⁽²⁾	DELAY	LOS ⁽²⁾	DELAY	LOS ⁽²⁾	DELAY	LOS ⁽²⁾	DELAY	LOS ⁽²⁾	DELAY	LOS ⁽²⁾	DELAY	LOS ⁽²⁾							
Rexford Dr @ Clifton Way	11.9	B	12.8	B			12.6	B	13.8	B			12.8	B	14.0	B	0.200	0.200	NO		
Crescent Dr @ Charleville Blvd	14.1	B	17.6	C			16.4	C	23.6	C			16.8	C	25.3	C	0.400	1.700	NO		
Crescent Dr @ Clifton Way	10.7	B	12.4	B			11.0	B	13.1	B			11.4	B	13.6	B	0.400	0.500	NO		

(1) Intersection Capacity Utilization
(2) Level of Service

Based on the criteria on Table 15, the Project would not impact the five residential roadway segments. The results are shown on Tables 16 and 17.

TABLE 15
RESIDENTIAL TRAFFIC IMPACT THRESHOLDS

WITH-PROJECT DAILY TRAFFIC VOLUME	PROJECT CONTRIBUTION TO PEAK HOUR TRAFFIC VOLUME	PROJECT CONTRIBUTION TO DAILY TRAFFIC VOLUME
3,750 or Less	25% or More	25% or More
>3,750 to 6,750	12.5% or More	12.5% or More
>6,750	Apply to above criteria to local traffic on the street	Apply to above criteria to local traffic on the street

CONGESTION MANAGEMENT PROGRAM (CMP) ANALYSIS

The following CMP location has the potential to be impacted by Project traffic:

- Santa Monica Boulevard North at Wilshire Boulevard

The Los Angeles County Congestion Management Program states that a significant project impact occurs when the proposed Project increases traffic demand on a CMP facility by two percent of capacity (V/C is greater than or equal to 0.02), causing or worsening LOS F (V/C is greater than 1.00).

As seen on Table 13, the Project results in an increase of less than one percent at this location and hence does not create a significant impact on the intersection of Santa Monica Boulevard North – Wilshire Boulevard.

TABLE 16
PROJECT IMPACTS ON SURROUNDING RESIDENTIAL STREETS

AVERAGE DAILY TRAFFIC VOLUME						
LOCATION	EXISTING	NO-PROJECT	PROJECT TRAFFIC	WITH-PROJECT	PERCENT PROJECT IMPACT	SIGNIFICANT IMPACT
Crescent Drive s/o Wilshire Boulevard	7,228	7,380	194	7,574	2.6%	NO
Crescent Drive n/o Santa Monica Boulevard North	10,476	10,554	65	10,619	0.6%	NO
Foothill Drive between Burton Way and Rexford Drive	3,240	3,336	58	3,394	1.7%	NO
Clifton Way between Rexford Drive and Maple Drive	2,877	2,919	6	2,925	0.2%	NO
Rexford Drive s/o Clifton Way	7,540	7,748	65	7,813	0.8%	NO

TABLE 17
PROJECT IMPACTS ON SURROUNDING RESIDENTIAL STREETS

AM PEAK HOUR TRAFFIC VOLUME

LOCATION	EXISTING	NO-PROJECT	PROJECT TRAFFIC	WITH-PROJECT	PERCENT PROJECT IMPACT	SIGNIFICANT IMPACT
Crescent Drive s/o Wilshire Boulevard	534	534	16	550	2.9%	NO
Crescent Drive n/o Santa Monica Boulevard North	992	995	5	1,000	0.5%	NO
Foothill Drive between Burton Way and Rexford Drive	242	260	5	265	1.9%	NO
Clifton Way between Rexford Drive and Maple Drive	304	306	0	306	0.0%	NO
Rexford Drive s/o Clifton Way	572	593	10	603	1.7%	NO

PM PEAK HOUR TRAFFIC VOLUME

LOCATION	EXISTING	NO-PROJECT	PROJECT TRAFFIC	WITH-PROJECT	PERCENT PROJECT IMPACT	SIGNIFICANT IMPACT
Crescent Drive s/o Wilshire Boulevard	710	724	27	751	3.6%	NO
Crescent Drive n/o Santa Monica Boulevard North	971	979	9	988	0.9%	NO
Foothill Drive between Burton Way and Rexford Drive	289	302	7	309	2.3%	NO
Clifton Way between Rexford Drive and Maple Drive	258	262	2	264	0.8%	NO
Rexford Drive s/o Clifton Way	610	632	3	635	0.5%	NO

6.

**ON-SITE CIRCULATION, ACCESS, PARKING AND
CONSTRUCTION-RELATED IMPACTS**

The purpose of this chapter is to discuss site access, on-site circulation and parking for the proposed The Crescent Project, 131-191 North Crescent Drive.

PARKING

According to the Project description and the cover sheet for the site plan dated May 28, 2002, the Project will contain a total of 534 parking spaces, consisting of 444 full-size, single-vehicle spaces (assigned as 265 commercial and 179 residential), 16 handicapped spaces and an additional 74 tandem spaces (assigned as 34 commercial and 40 residential). All parking will be located within the four-level subterranean parking structure. Of the 534 spaces, 192 replace the current parking covenant, while 342 parking spaces are provided to satisfy City of Beverly Hills' parking code requirement. Of the 192 covenant-replaced parking spaces, 108 parking stalls are provided for Spago Restaurant (parking for which is operated under a valet arrangement). Spago Restaurant parking will be located on the first parking level and accessed from the northerly driveway on the alley.

The balance of 84 covenant-replaced parking spaces, primarily serving the Coldwell Banker office, but also Spago during its peak periods in the evening, will be provided in the parking areas designated for the commercial land uses, along with 115 additional spaces for Project required commercial uses. The commercial parking spaces will be on the second, third and fourth subterranean levels, which will be accessed via the southerly driveways on Crescent Drive and alley.

According to the site plan, a total of 227 parking spaces will be provided for the residential portion of the Project, all of which will be assessed via the northerly driveway on Crescent Drive. Of these, the site plan cover sheet shows that 40 spaces will be tandem and 8 spaces will be assigned for handicapped parking.

As proposed, 74 (34 commercial and 40 residential) of the 534 proposed parking spaces are part of a tandem pair. In other words, 74 spaces have the potential to have a parked vehicle blocked by another parked vehicle. In the case where tandem parking is not assigned to residential units (34 spaces), one of the following mitigation measures should be implemented to prevent blockage:

- Provide attendant service to move cars;
- Assign the 34 commercial tandem parking spaces for employees of the same organization.

The 40 residential tandem pairs should be assigned to tenants and not visitors.

The operation of the parking structure should be outlined further in a Parking Management Plan to be approved by the City of Beverly.

As can be seen from Table 18, the number of parking spaces identified on the site plan cover sheet for the proposed Project satisfies City codes and ITE's *Parking Generation*, 2nd Edition recommendations. The City code requires 136 more parking spaces than typically demanded for such uses.

**TABLE 18
VERIFICATION OF PARKING SUPPLY**

LAND USE	ITE		BEVERLY HILLS PARKING CODE	PARKING SPACES PROVIDED
	WEEKDAY	SATURDAY		
88 condominium units	98	84	227	227
40,000 SF of office/retail	108	40	115	115
Covenant Requirement	192	192	192	192
Total	398	316	534	534

Assuming that no spaces are available in the Spago or residential portions of the garage for other uses, it is expected that there will still be a surplus of 10 spaces or more throughout a typical weekday and 159 spaces or more throughout a typical weekend. Table 19 and 20 shows the hourly parking accumulation of the Project for a typical weekday and Saturday using the concept of shared parking between land uses, as outlined

in Urban Land Institute's (ULI's) *Shared Parking*, 1983. As can be seen, the parking supply meets the parking demands throughout the day. It should be noted that Spago parking demand during peak periods of activity, typically evening hours, could exceed the supply of 108 spaces provided for them. However, parking becomes increasingly available in the commercial/retail parking areas after 5:00p.m. (and all day Saturday). At least 140 additional parking spaces would be available for Spago after 6:00p.m. Hence, availability for parking for Spago during the evening peak hours would be enhanced with the implementation of the Project.

CIRCULATION AND ACCESS

The Project access is via four driveways – two on Crescent Drive and two on the southbound alley running between Canon Drive and Crescent Drive.

The driveways on Crescent Drive have two separate purposes. The northerly driveway will be a fully-directional driveway serving the residential motorcourt and parking facility only. This driveway is located at an acceptable distance from the adjacent intersections and can accommodate the projected traffic volumes without any geometric changes along Crescent Drive. The turning radius of the motorcourt, however, is too small to accommodate larger vehicles (i.e., SUV's and vans) making a right turn from the motorcourt into the parking garage, and left turns from the parking garage onto the motorcourt driveway. Furthermore, the radius of the motorcourt cannot accommodate vehicles making U-turns. The Applicant should modify the design of the motorcourt to the satisfaction of the City to reasonably accommodate all vehicles that would use the parking garage. Consideration should be given to relocating the pedestrian walkway to the south side of the driveway to provide more visibility for both pedestrians and vehicles, and cutting back the pedestrian island (towards Crescent Drive) to provide for unimpeded left turns from the garage. UPS/FedEx and other trucks and/or large vans should be routed to the loading area off the alley.

The southerly driveway will serve the parking areas designated for commercial uses (including covenant-replaced parking spaces). This driveway is proposed to be restricted to right-turn in, right-turn out only movements. This configuration will provide efficient access to and from Crescent Drive with the implementation of the Project. This will result in traffic destined to the Project from the east via Wilshire Boulevard having to use Rexford Drive to southbound Crescent Drive or Crescent Drive north of Clifton Way to the southbound alley to access the site.

The locations of the driveways will result in changes in on-street parking on the west side of Crescent Drive. Ten parking spaces are currently available on-street adjacent to the Project. Once the Project driveways are in place, it appears that up to ten parking spaces can be restriped based on Caltrans' parking dimension criteria. This is a loss/gain of zero on-street spaces. Since these are metered spaces and the Project will have a surplus supply in the parking structure, the effect of loss of on-street parking, if less than ten spaces are striped, will be minimal.

TABLE 19
WEEKDAY PARKING ACCUMULATION ⁽¹⁾

HOUR OF DAY	OFFICE	RETAIL	OFFICE/RETAIL TOTAL	SPAGO'S ⁽²⁾	RESIDENTIAL ⁽²⁾	TOTAL OCCUPIED
6:00 a.m.	5	0	5	108	227	340
7:00 a.m.	34	2	36	108	227	371
8:00 a.m.	106	4	110	108	227	445
9:00 a.m.	156	10	166	108	227	501
10:00 a.m.	168	16	184	108	227	519
11:00 a.m.	168	21	189	108	227	524
12:00 noon	151	23	174	108	227	509
1:00 p.m.	151	24	175	108	227	510
2:00 p.m.	163	23	186	108	227	521
3:00 p.m.	156	23	179	108	227	514
4:00 p.m.	129	21	150	108	227	485
5:00 p.m.	79	19	98	108	227	433
6:00 p.m.	39	20	58	108	227	393
7:00 p.m.	12	21	33	108	227	368
8:00 p.m.	12	21	33	108	227	368
9:00 p.m.	5	15	20	108	227	355
10:00 p.m.	5	8	13	108	227	348
11:00 p.m.	0	3	3	108	227	338
12:00 midnight	0	0	0	108	227	335

(1) Based on ULI's *Shared Parking*
(2) The peak parking accumulation for Spago's and for the residential units would be 108 (per covenant requirements) and 98 (per ITE), respectively in the evenings. However, all parking spaces in the Spago's and residential garages are reserved for these uses only. Hence, this table assumes that all Spago's and residential spaces are occupied at all time of the day.

TABLE 20
SATURDAY PARKING ACCUMULATION ⁽¹⁾

HOUR OF DAY	OFFICE	RETAIL	OFFICE/RETAIL TOTAL	SPAGO'S ⁽²⁾	RESIDENTIAL ⁽²⁾	TOTAL OCCUPIED
6:00 a.m.	0	0	0	108	227	335
7:00 a.m.	0	1	1	108	227	336
8:00 a.m.	0	4	4	108	227	339
9:00 a.m.	0	12	12	108	227	347
10:00 a.m.	0	18	18	108	227	353
11:00 a.m.	0	29	29	108	227	364
12:00 noon	0	34	34	108	227	369
1:00 p.m.	0	38	38	108	227	373
2:00 p.m.	0	40	40	108	227	375
3:00 p.m.	0	40	40	108	227	375
4:00 p.m.	0	36	36	108	227	371
5:00 p.m.	0	30	30	108	227	365
6:00 p.m.	0	26	26	108	227	361
7:00 p.m.	0	24	24	108	227	359
8:00 p.m.	0	22	22	108	227	357
9:00 p.m.	0	16	16	108	227	351
10:00 p.m.	0	15	15	108	227	350
11:00 p.m.	0	5	5	108	227	340
12:00 midnight	0	0	0	108	227	335

(1) Based on ULJ's Shared Parking

(2) The peak parking accumulation for Spago's and for the residential units would be 108 (per covenant requirements) and 98 (per ITE), respectively in the evenings. However, all parking spaces in the Spago's and residential garages are reserved for these uses only. Hence, this table assumes that all Spago's and residential spaces are occupied at all time of the day.

The alley currently provides access to the existing surface parking lot, provides for valet operation associated with Spago Restaurant and for commercial loading/unloading operations to support business on Canon Drive and Crescent Drive.

The proposed northerly driveway on the alley will provide access to the parking area that is designated for Spago's use. It will be utilized by the employees and guests of the Spago Restaurant exclusively.

The proposed southerly driveway from the alley will provide access to the commercial parking area that will be designated for the users of the covenant parking spaces (such as Coldwell Banker) and the proposed Project commercial uses. It will also be key-card operated and will be accessed from the north and egressed to the south via the alley. Vehicles leaving the Project via the alley will access Wilshire Boulevard via a right-turn movement. Gaps in the westbound traffic stream, resulting from the traffic signal operation at the intersection of Wilshire Boulevard at Crescent Drive, will provide opportunity for the southbound alley traffic to enter Wilshire Boulevard during most times.

A loading bay to accommodate loading/unloading of service vehicles (trucks) will be provided at the southerly end of the alley. Scaling from the architectural plans provided by the Applicant, this loading bay will be approximately 28 feet from the alley intersection with Wilshire Boulevard, and will measure 75 feet long by 14 feet wide, with a minimum height clearance of 14 feet in accordance with City code. It appears that trucks would access the loading docks by either turning directly into the loading area from the north and maneuvering back into position, or, if one space is already occupied, by backing into the other loading space. There are potential concerns with the backing of a truck into the southerly loading space under the latter condition as the truck may protrude into the pedestrian path along Wilshire Boulevard. The Applicant has indicated that the largest truck to be accommodated in the loading area will be 25 feet. This is consistent with the land uses that will be served (residential and office with the retail space most likely to be a bank).² In most situations, only one truck is likely to be using the loading area. In the event that two trucks arrive concurrently, signage should be placed directing any truck arriving at the loading area to pull as far south as possible so that the second truck can access the northerly loading space without protruding into the pedestrian walkway.

CONSTRUCTION RELATED IMPACTS

Based on the Applicant's proposal, Project construction will take approximately 18 months based upon a Monday to Saturday, 8:00 a.m. to 6:00 p.m., work week.

Several construction-related traffic impacts must be considered:

- Access to/from site by trucks;
- Access to/from the site by construction workers;

² Moving vans will be infrequent and can be accommodated on-street.

- Impacts on the alley during construction;
- Construction-employee parking needs;
- Potential adverse impacts on on-street parking (both from trucks accessing/egressing the site as well as by potential for construction workers to use this parking); and
- Loss of existing parking for up to 10 months for those using covenant spaces.

The Applicant has, via a May 30, 2002 letter to the City, proposed to demonstrate, to the satisfaction of the City, that adequate provisions have been made for replacement parking, construction parking, site access control, and delivery and haul routes, and that a Construction Traffic and Parking Mitigation Plan will be prepared and submitted to the City prior to the issuing of a grading permit.

7.

ALTERNATIVES ANALYSIS

CEQA requires the evaluation of a No-Project alternative so that the Project can be compared to future conditions in which the Project has not been implemented. It also requires that other build alternatives to be evaluated. In addition to the No-Project alternative, three Project alternatives were evaluated in this study. Table 21 shows a comparison of trip generation of the proposed Project and the three alternatives. Tables 22 and 23 show a comparison of levels of service and potential significant impacts of the proposed Project and each of the three alternatives at the signalized and unsignalized study intersections, respectively. A summary of each alternative as compared to the Project is provided below.

ALTERNATIVE 1

Under this alternative, the previous Triangle Gateway Project³ was evaluated. This project proposed 4,106 square feet of retail uses, 110,918 square feet of office uses and a 36,522 Gelson's Market. This alternative would provide 737 parking spaces in a subterranean structure that would meet the requirements of existing covenant, as would the Project. Alternative 1 trip generation and level of service results were obtained directly from the Environmental Impact Report (EIR) for the Triangle Gateway Project, December 2000.

³ *Triangle Gateway Project*, December 2000, Willdan.

As indicated in the Triangle Gateway EIR and Table 21, this Alternative 1 is expected to generate 5,880 daily trips of which 469 trips would occur during the morning peak hour and 615 trips would occur during the evening peak hour. Compared to the proposed Project, Alternative 1 would generate 4,584 more daily trips, 366 more morning peak-hour trips and 436 more evening peak-hour trips.

As indicated in the Triangle Gateway report and Tables 22 and 23, Alternative 1 would result in significant adverse impacts at the following three intersections:

- Crescent Drive - Wilshire Boulevard
- Canon Drive - Wilshire Boulevard
- Crescent Drive - Santa Monica Boulevard North

Alternative 1 would result in three more significantly impacted intersections than the proposed Project.

ALTERNATIVE 2

Under this alternative, no zoning change would occur. The portion of the site with RCMP zoning would be developed with a 140-dwelling unit senior housing project. A market of approximately 29,000 square feet would occupy half the ground floor. The senior housing project would be 60 feet in height. The portion of the site zoned for commercial uses would be developed with a 30,468 square feet, 45-foot high, three-story office building. This alternative would include parking to meet the requirements of existing covenants, as would the Project.

As shown on Table 21, this Alternative 2 is expected to generate 4,051 daily trips, of which 264 trips occur during the morning peak hour and 389 trips occur during the evening peak hour. Compared to the proposed Project, Alternative 2 would generate 2,755 more daily trips, 161 more morning peak-hour trips and 210 more evening peak-hour trips.

As shown on Tables 22 and 23, this alternative would likely result in significant adverse impact at the following intersection:

- Crescent Drive - Wilshire Boulevard
- Crescent Drive - North Santa Monica Boulevard

Alternative 2 would result in one more significantly impacted intersections than the proposed Project.

ALTERNATIVE 3

Under this alternative, no zoning change would occur. This portion of the site with RCMP zoning would be developed with a 66-unit condominium project. The residential component of the project would be 28 feet in height. If a separate parking structure were

included in lieu of a subterranean parking, the parking structure would be up to 40 feet in height. The portion of the site zoned for commercial development would be a 10,000 square feet of retail use and 20,000 square feet of office use. This alternative would include parking to meet the requirements of existing covenants, as would the Project.

As shown on Table 21, Alternative 3 is expected to generate 1,024 daily trips of which 63 trips would occur during the morning peak hour and 156 trips would occur during the evening peak hour. Compared to the proposed Project, Alternative 3 would generate 272 fewer daily trips, 40 fewer morning peak-hour trips and 23 fewer evening peak-hour trips.

As shown on Tables 22 and 23, Alternative 3 would not result in significant impact at any of the study intersections.

TABLE 21
TOTAL NET TRIP GENERATION

ALTERNATIVES	DAILY	AM PEAK HOUR			PM PEAK HOUR		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Project	1,296	57	46	103	63	116	179
Alternative 1 ⁽¹⁾	5,880	317	152	469	250	365	615
Alternative 2 ⁽¹⁾	4,051	154	120	264	188	201	389
Alternative 3	1,024	44	29	63	52	104	156

(1) Alternative 1 and 2 trip generation was obtained directly from Triangle Gateway Project EIR, December 2000

TABLE 22
PROJECT AND ALTERNATIVES ANALYSIS
INTERSECTION LEVEL-OF-SERVICE COMPARISON - SIGNALIZED

INTERSECTION	LEVEL-OF-SERVICE						PROJECT (ICU) IMPACT			
	AM			PM			CHANGE IN ICU	IMPACT?	CHANGE IN ICU	IMPACT?
	ICU	LOS	ICU	LOS	ICU	LOS				
North Santa Monica Blvd @ Wilshire Blvd										
Proposed Project	1,073	F	1,152	F			0.002	NO	0.005	NO
Alternative 1 ⁽¹⁾	1,020	F	1,270	F			0.010	NO	0.010	NO
Alternative 2	1,072	F	1,150	F			0.001	NO	0.003	NO
Alternative 3	1,072	F	1,152	F			0.001	NO	0.005	NO
Beatty Dr @ Wilshire Blvd										
Proposed Project	0.825	D	0.941	E			0.005	NO	0.008	NO
Alternative 1 ⁽¹⁾	N/A	N/A	N/A	N/A			N/A	N/A	N/A	N/A
Alternative 2	0.813	D	0.952	E			0.013	NO	0.019	NO
Alternative 3	0.827	D	0.948	E			0.007	NO	0.015	NO
Cannon Dr @ Wilshire Blvd										
Proposed Project	0.751	C	0.686	B			0.017	NO	0.019	NO
Alternative 1 ⁽¹⁾	0.820	D	0.800	C			0.070	YES		
Alternative 2	0.745	C	0.684	B			0.011	NO	0.017	NO
Alternative 3	0.741	C	0.686	B			0.007	NO	0.019	NO
Crescent Dr @ Wilshire Blvd										
Proposed Project	0.785	C	0.848	D			0.008	NO	0.031	NO
Alternative 1 ⁽¹⁾	0.860	D	1.010	F			0.070	YES	0.140	YES
Alternative 2	0.822	D	0.894	D			0.045	YES	0.077	YES
Alternative 3	0.785	C	0.846	D			0.008	NO	0.029	NO
Raeford Dr @ Wilshire Blvd										
Proposed Project	0.795	C	0.840	D			0.002	NO	0.005	NO
Alternative 1 ⁽¹⁾	N/A	N/A	N/A	N/A			N/A	N/A	N/A	N/A
Alternative 2	0.797	C	0.842	D			0.004	NO	0.007	NO
Alternative 3	0.795	C	0.840	D			0.002	NO	0.005	NO
Crescent Dr @ South Santa Monica Blvd										
Proposed Project	0.829	D	0.851	D			0.003	NO	0.008	NO
Alternative 1 ⁽¹⁾	0.880	D	0.870	D			0.010	NO	0.010	NO
Alternative 2	0.813	D	0.855	D			0.007	NO	0.012	NO
Alternative 3	0.828	D	0.849	D			0.002	NO	0.006	NO
Crescent Dr @ North Santa Monica Blvd										
Proposed Project	0.887	D	1.096	F			0.008	NO	0.010	NO
Alternative 1 ⁽¹⁾	0.950	E	1.180	F			0.040	YES	0.030	YES
Alternative 2	0.899	D	1.111	F			0.020	YES	0.025	YES
Alternative 3	0.887	D	1.095	F			0.008	NO	0.009	NO

(1) Alternative 1 level of service results were obtained directly from Triangle Gateway Project (IHK, December 2000), and were compared to a different baseline condition.
N/A - Not Analyzed

TABLE-23

**PROJECT AND ALTERNATIVES ANALYSIS
INTERSECTION LEVEL-OF-SERVICE COMPARISON - UNSIGNALIZED**

INTERSECTION	LEVEL-OF-SERVICE						PROJECT (DELAY) IMPACT		
	AM		PM		LOS	DELAY	AM		PM
	DELAY	LOS	LOS	DELAY			CHANGE IN DELAY	IMPACT?	CHANGE IN DELAY
<u>Rexford Dr @ Clifton Way</u>									
Proposed Project	12.8	B	B	14.0	B		0.200	NO	0.200
Alternative 1 ⁽¹⁾	N/A	B	B	N/A	B		N/A	N/A	N/A
Alternative 2	13.3	B	B	14.9	B		0.700	NO	1.100
Alternative 3	12.8	B	B	14.0	B		0.200	NO	0.200
<u>Crescent Dr @ Charleville Blvd</u>									
Proposed Project	16.8	C	C	25.3	C		0.400	NO	1.700
Alternative 1 ⁽¹⁾	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A
Alternative 2	17.1	C	C	26.5	D		0.700	NO	2.900
Alternative 3	16.5	C	C	24.1	C		0.100	NO	0.500
<u>Crescent Dr @ Clifton Way</u>									
Proposed Project	11.4	B	B	13.6	B		0.400	NO	0.500
Alternative 1 ⁽¹⁾	N/A	B	B	N/A	C		N/A	N/A	N/A
Alternative 2	12.2	B	B	15.1	B		1.200	NO	2.000
Alternative 3	11.5	B	B	13.8	B		0.500	NO	0.700

(1) Alternative 1 level of service results were obtained directly from Triangle Gateway Project EIR, December 2000, and were compared to a different baseline condition.
N/A = Not Analyzed

8.

SUMMARY AND CONCLUSIONS

This report presents the results of the traffic impact analysis conducted for The Crescent, 131-191 North Crescent Drive, in the City of Beverly Hills. Currently, the site is occupied with a two-story office/retail building of approximately 19,000 square feet and a commercial public parking lot that also fulfills a parking covenant with a nearby office and Spago Restaurant.

Level-of-service analyses conducted for the Existing, No-Project and With-Project conditions indicate, that based on City of Beverly Hills' thresholds of significance, study intersections and roadway segments will not be significantly impacted by the Project.

The schematic site plan provided for this analysis indicates that code-required parking will be provided for the Project, in addition to 192-covenant-replaced parking spaces. Based on a shared parking analysis of uses, there will be a surplus of parking on both a weekday and a weekend.

Some concerns with the operation of parking, loading dock access and potential construction impacts were noted. In order to alleviate these concerns, the following mitigation measures are recommended:

- Provide a detailed Parking Management Plan for approval by City of Beverly Hills;

- Provide a detailed Construction Traffic and Parking Management Plan for approval by City of Beverly Hills;
- Allow public to use some parking spaces in the commercial side of the parking structure; and
- Place signage directing trucks to pull in as far south as possible when using loading dock.

With the implementation of these measures to the satisfaction of the City of Beverly Hills, the traffic and parking impacts associated with this Project will not be significant.

APPENDIX A
TRAFFIC VOLUME COUNTS

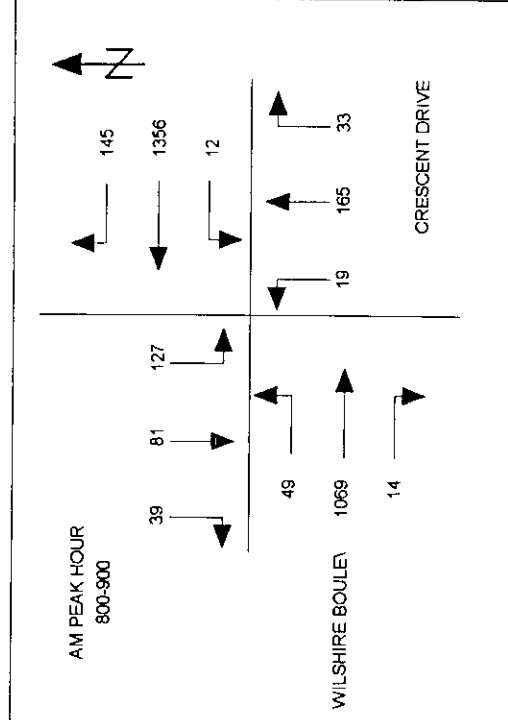
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: PARSONS TRANSPORTATION GROUP
 PROJECT: BEVERLY HILLS TRAFFIC COUNTS
 DATE: THURSDAY, MARCH 7, 2002
 PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
 INTERSECTION: N/S CRESCENT DRIVE
 EW WILSHIRE BOULEVARD

15 MIN COUNTS

PERIOD	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
7:00-7:15	3	10	8	26	263	2	1	8	3	5	140	7	476
7:15-7:30	1	10	10	28	328	1	1	15	2	1	161	6	564
7:30-7:45	6	11	20	26	339	3	5	20	5	6	203	1	645
7:45-8:00	13	14	18	26	372	0	11	33	9	4	255	5	760
8:00-8:15	3	7	31	23	348	2	10	31	2	4	275	11	747
8:15-8:30	11	16	43	36	336	6	6	37	4	1	263	15	774
8:30-8:45	14	28	21	41	345	1	5	43	5	3	273	11	790
8:45-9:00	11	30	32	45	327	3	12	54	8	6	258	12	798
HOUR TOTALS													

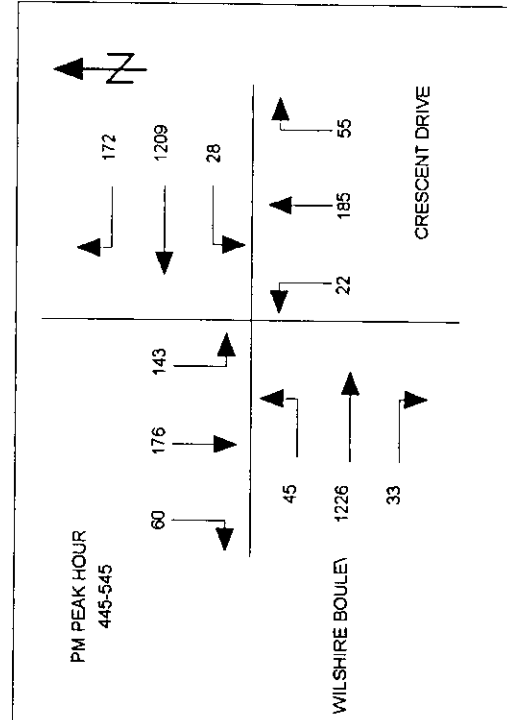
TIME	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
7:00-8:00	23	45	56	106	1302	6	18	76	19	16	758	19	2445
7:15-8:15	23	42	79	103	1387	6	27	99	18	15	894	23	2716
7:30-8:30	33	48	112	111	1395	11	32	121	20	15	996	32	2926
7:45-8:45	41	65	113	126	1401	9	32	144	20	12	1066	42	3071
8:00-9:00	39	81	127	145	1356	12	33	165	19	14	1069	49	3109



15 MIN COUNTS

PERIOD	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
4:00-4:15	10	38	34	32	299	1	12	48	8	7	347	16	852
4:15-4:30	20	33	40	28	291	3	11	39	7	0	315	10	797
4:30-4:45	16	41	35	27	285	3	13	38	8	3	313	14	796
4:45-5:00	19	52	43	36	301	3	16	51	8	13	304	8	854
5:00-5:15	14	55	32	54	300	7	8	47	5	3	332	12	869
5:15-5:30	11	34	32	35	318	6	13	40	4	8	278	13	792
5:30-5:45	16	35	36	47	290	12	18	47	5	9	312	12	839
5:45-6:00	20	43	31	29	325	4	6	43	3	6	307	13	830
HOUR TOTALS													

TIME	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
4:00-5:00	65	164	152	123	1176	10	52	176	31	23	1279	48	3299
4:15-5:15	69	181	150	145	1177	16	48	175	28	19	1264	44	3316
4:30-5:30	60	162	142	152	1204	19	50	176	25	27	1227	47	3311
4:45-5:45	60	176	143	172	1209	28	55	185	22	33	1226	45	3354
5:00-6:00	61	167	131	165	1233	29	45	177	17	26	1229	50	3330

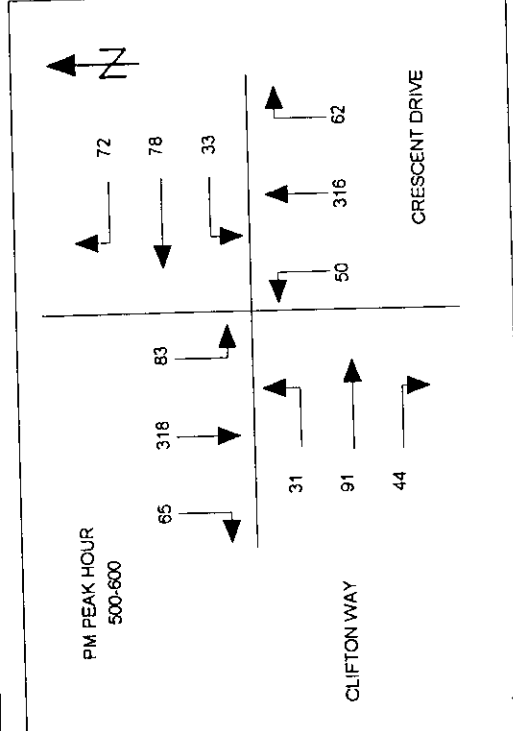
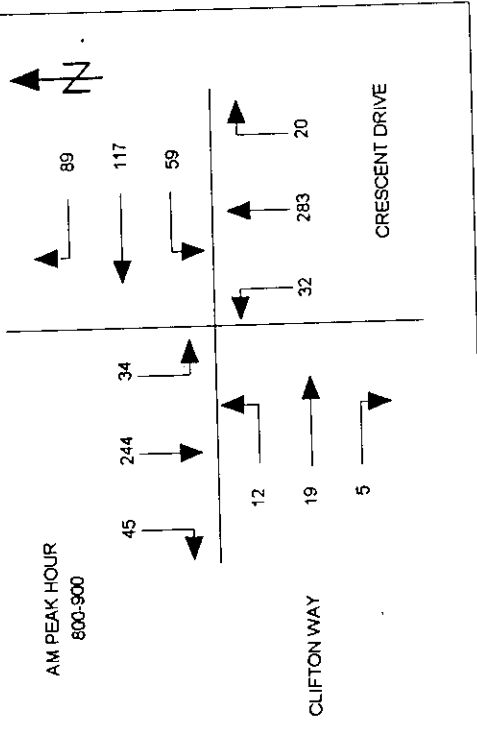


INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: PARSONS TRANSPORTATION GROUP
 PROJECT: BEVERLY HILLS TRAFFIC COUNTS
 DATE: THURSDAY, MARCH 7, 2002
 PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
 INTERSECTION: N/S CRESCENT DRIVE
 EW CLIFTON WAY

7:00 AM TO 9:00 AM												
PERIOD	1	2	3	4	5	6	7	8	9	10	11	12
SBRT	SBTH	SBTH	SBTH	WBTH	WBTH	WBTH	NBTH	NBTH	NBLT	EBRT	EBTH	EBLT
TOTAL												
7:00-7:15	2	19	5	1	5	7	1	31	5	0	5	1
7:15-7:30	3	19	5	7	6	3	4	39	5	1	1	0
7:30-7:45	5	31	8	10	16	3	5	40	6	3	2	4
7:45-8:00	11	43	7	13	28	12	2	45	7	1	1	1
8:00-8:15	8	58	5	17	22	5	5	56	4	0	3	3
8:15-8:30	10	72	8	26	23	13	5	68	8	2	5	3
8:30-8:45	16	51	8	22	31	22	7	77	10	0	4	1
8:45-9:00	11	63	13	24	41	19	3	82	10	3	7	5

4:00 PM TO 6:00 PM												
PERIOD	1	2	3	4	5	6	7	8	9	10	11	12
SBRT	SBTH	SBTH	SBTH	WBTH	WBTH	WBTH	NBTH	NBTH	NBLT	EBRT	EBTH	EBLT
TOTAL												
4:00-4:15	20	68	21	16	16	10	14	69	19	6	12	8
4:15-4:30	15	82	20	17	23	6	13	62	9	8	15	6
4:30-4:45	9	73	19	23	14	11	13	58	13	9	28	8
4:45-5:00	9	90	19	20	12	11	13	78	9	10	15	6
5:00-5:15	23	81	21	15	20	11	16	80	15	9	18	11
5:15-5:30	14	79	20	12	21	7	12	74	8	10	24	3
5:30-5:45	18	86	26	26	15	6	19	83	16	11	29	9
5:45-6:00	10	70	16	19	22	9	15	79	11	14	20	8



7:00 AM TO 9:00 AM												
PERIOD	1	2	3	4	5	6	7	8	9	10	11	12
SBRT	SBTH	SBTH	SBTH	WBTH	WBTH	WBTH	NBTH	NBTH	NBLT	EBRT	EBTH	EBLT
TOTAL												
7:00-7:15	2	19	5	1	5	7	1	31	5	0	5	1
7:15-7:30	3	19	5	7	6	3	4	39	5	1	1	0
7:30-7:45	5	31	8	10	16	3	5	40	6	3	2	4
7:45-8:00	11	43	7	13	28	12	2	45	7	1	1	1
8:00-8:15	8	58	5	17	22	5	5	56	4	0	3	3
8:15-8:30	10	72	8	26	23	13	5	68	8	2	5	3
8:30-8:45	16	51	8	22	31	22	7	77	10	0	4	1
8:45-9:00	11	63	13	24	41	19	3	82	10	3	7	5

4:00 PM TO 6:00 PM												
PERIOD	1	2	3	4	5	6	7	8	9	10	11	12
SBRT	SBTH	SBTH	SBTH	WBTH	WBTH	WBTH	NBTH	NBTH	NBLT	EBRT	EBTH	EBLT
TOTAL												
4:00-4:15	20	68	21	16	16	10	14	69	19	6	12	8
4:15-4:30	15	82	20	17	23	6	13	62	9	8	15	6
4:30-4:45	9	73	19	23	14	11	13	58	13	9	28	8
4:45-5:00	9	90	19	20	12	11	13	78	9	10	15	6
5:00-5:15	23	81	21	15	20	11	16	80	15	9	18	11
5:15-5:30	14	79	20	12	21	7	12	74	8	10	24	3
5:30-5:45	18	86	26	26	15	6	19	83	16	11	29	9
5:45-6:00	10	70	16	19	22	9	15	79	11	14	20	8

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: PARSONS TRANSPORTATION GROUP

PROJECT: BEVERLY HILLS TRAFFIC COUNTS

DATE: THURSDAY, MARCH 7, 2002

PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM

INTERSECTION: N/S CRESCENT DRIVE

E/W SANTA MONICA BL. SOUTH

15 MIN COUNTS

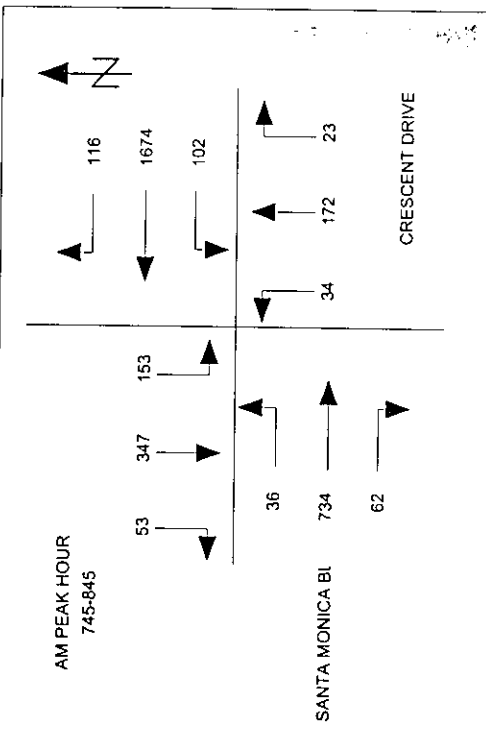
7:00 AM TO 9:00 AM

PERIOD	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
700-715	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	
715-730	4	15	12	19	202	8	3	10	5	10	64	7	359
730-745	7	34	23	21	234	14	5	11	7	14	87	15	472
745-800	12	55	26	61	341	18	3	29	8	12	105	5	675
800-815	16	92	36	34	415	23	5	50	5	13	190	9	888
815-830	12	98	31	24	421	22	4	38	8	16	172	14	860
830-845	14	66	42	30	423	28	8	51	10	17	171	6	866
845-900	11	91	44	28	415	29	6	33	11	16	201	7	892
800-900	10	89	39	80	376	20	3	35	10	27	164	9	862
HOUR TOTALS													

15 MIN COUNTS

4:00 PM TO 6:00 PM

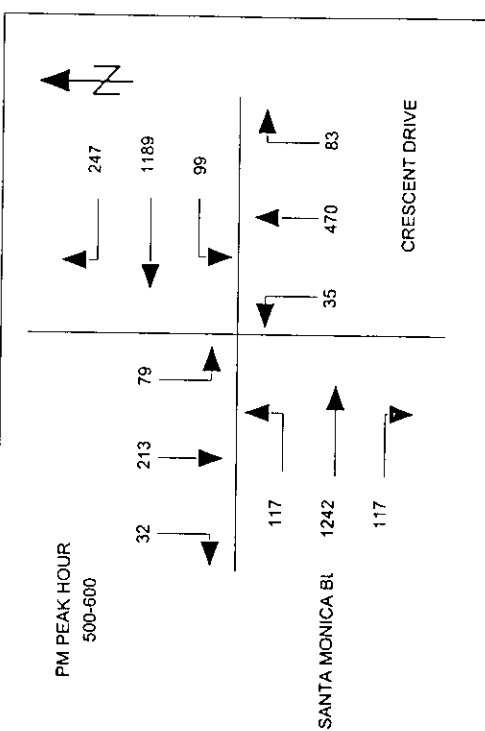
PERIOD	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
700-800	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	
715-815	39	196	97	135	1192	63	16	100	25	49	446	36	2394
730-830	47	279	116	140	1411	77	17	128	28	55	554	43	2895
745-845	54	311	135	149	1600	91	20	168	31	58	638	34	3289
800-900	53	347	153	116	1674	102	23	172	34	62	734	36	3506
800-900	47	344	156	162	1635	99	21	157	39	76	708	36	3480
HOUR TOTALS													



15 MIN COUNTS

4:00 PM TO 6:00 PM

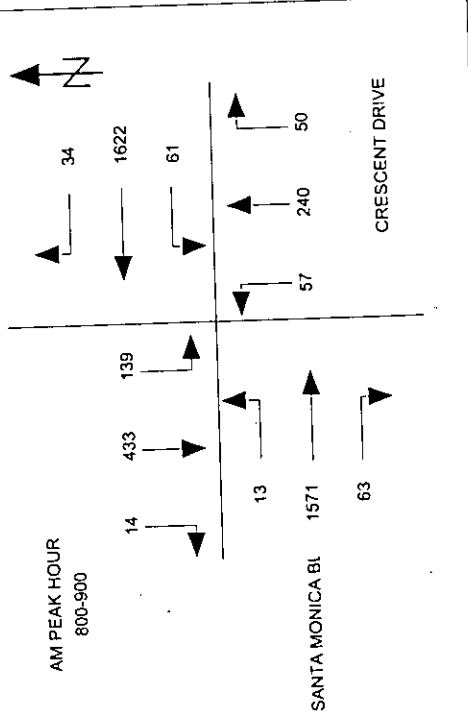
PERIOD	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
400-415	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	
415-430	11	55	22	45	280	24	15	100	18	21	276	20	887
430-445	10	74	30	51	257	26	14	102	12	34	283	37	930
445-500	7	64	22	44	269	24	20	103	9	33	301	27	923
500-515	6	66	22	50	295	27	37	108	12	23	298	28	972
515-530	10	44	21	59	281	20	23	111	8	24	304	27	932
530-545	10	64	17	75	253	26	23	128	6	34	281	33	950
545-600	5	44	21	50	324	21	18	107	9	34	358	30	1021
545-600	7	61	20	63	331	32	19	124	12	25	299	27	1020
HOUR TOTALS													



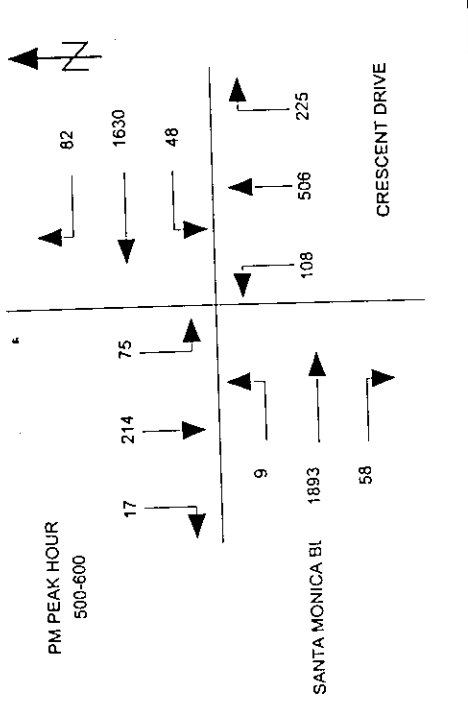
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: PARSONS TRANSPORTATION GROUP
 PROJECT: BEVERLY HILLS TRAFFIC COUNTS
 DATE: THURSDAY, MARCH 7, 2002
 PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
 INTERSECTION: N/S CRESCENT DRIVE
 EW SANTA MONICA BL. NORTH

7:00 AM TO 9:00 AM													
15 MIN COUNTS													
	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	1	34	24	6	421	12	8	35	11	13	216	1	782
715-730	3	44	22	6	482	11	5	31	7	10	218	0	839
730-745	8	60	34	10	484	12	8	62	16	12	235	6	947
745-800	11	99	29	11	446	15	13	59	17	11	324	4	1039
800-815	3	125	38	8	403	13	17	68	9	16	401	1	1102
815-830	1	100	36	9	419	19	11	69	14	14	395	9	1096
830-845	4	116	35	6	399	14	10	42	18	17	375	0	1036
845-900	6	92	30	11	401	15	12	61	16	16	400	3	1063
HOUR TOTALS													
	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
TIME	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	23	237	109	33	1833	50	34	187	51	46	993	11	3607
715-815	25	328	123	35	1815	51	43	220	49	49	1178	11	3927
730-830	23	384	137	38	1752	59	49	258	56	53	1355	20	4184
745-845	19	440	138	34	1667	61	51	238	58	58	1495	14	4273
800-900	14	433	139	34	1622	61	50	240	57	63	1571	13	4297



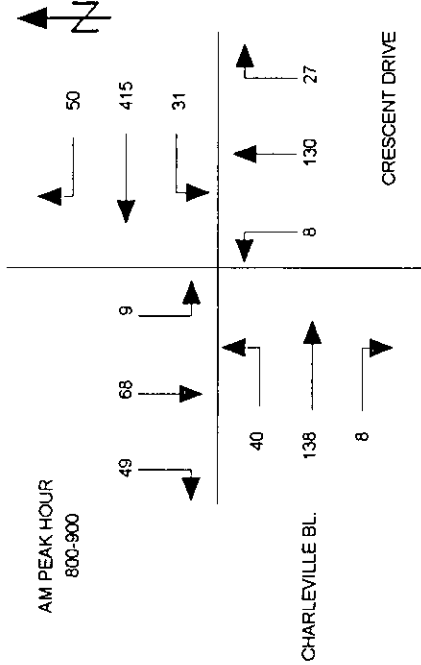
4:00 PM TO 6:00 PM													
15 MIN COUNTS													
PERIOD	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	
400-415	2	58	16	16	313	16	48	106	33	19	437	3	1067
415-430	4	57	19	15	327	15	44	101	20	21	410	3	1036
430-445	5	57	19	25	340	16	47	123	14	13	439	3	1101
445-500	9	60	31	17	377	13	47	122	16	18	474	8	1192
500-515	6	58	19	15	381	16	57	143	32	16	506	4	1253
515-530	3	48	18	17	398	13	64	123	28	11	476	4	1203
530-545	6	55	20	21	416	8	54	111	22	14	425	1	1153
545-600	2	53	18	29	435	11	50	129	26	17	486	0	1255
HOUR TOTALS													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	
400-500	20	232	85	73	1357	60	186	452	83	71	1760	17	4396
415-515	24	232	88	72	1425	60	195	489	82	68	1829	18	4582
430-530	23	223	87	74	1496	58	215	511	90	58	1895	19	4749
445-545	24	221	88	70	1572	50	222	499	98	59	1881	17	4801
500-600	17	214	75	82	1630	48	225	506	108	58	1893	9	4865



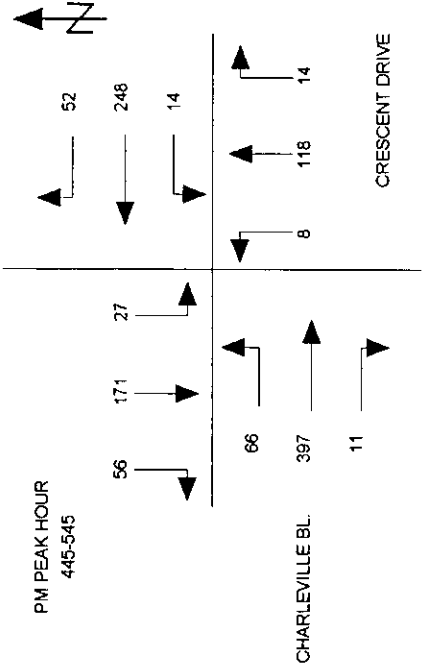
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: PARSONS TRANSPORTATION GROUP
 PROJECT: BEVERLY HILLS TRAFFIC COUNTS
 DATE: THURSDAY, MARCH 7, 2002
 PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
 INTERSECTION: N/S CRESCENT DRIVE
 E/W CHARLEVILLE BL.

15 MIN COUNTS											
7:00 AM TO 9:00 AM											
PERIOD	1	2	3	4	5	6	7	8	9	10	11
SBRT	SBTH	SBTH	SBTH	WBRT	WBTH	WBTH	NBRT	NBTH	NBLT	EBRT	EBTH
700-715	5	6	3	3	8	0	0	7	0	1	9
715-730	4	5	2	2	23	4	1	16	1	1	7
730-745	4	10	4	2	72	5	3	20	4	2	14
745-800	10	18	6	14	99	5	5	20	3	1	43
800-815	4	17	1	9	92	7	7	26	0	3	12
815-830	12	19	7	10	106	10	11	29	2	4	36
830-845	17	16	1	16	106	10	4	37	2	0	26
845-900	16	16	0	15	111	4	5	38	4	1	34
TOTALS											
TIME	1	2	3	4	5	6	7	8	9	10	11
SBRT	SBTH	SBTH	SBTH	WBRT	WBTH	WBTH	NBRT	NBTH	NBLT	EBRT	EBTH
700-800	23	39	15	21	202	14	9	63	8	5	73
715-815	22	50	13	27	286	21	16	82	8	7	106
730-830	30	64	18	35	369	27	26	95	9	10	135
745-845	43	70	15	49	403	32	27	112	7	8	147
800-900	49	68	9	50	415	31	27	130	8	8	138



15 MIN COUNTS											
4:00 PM TO 6:00 PM											
PERIOD	1	2	3	4	5	6	7	8	9	10	11
SBRT	SBTH	SBTH	SBTH	WBRT	WBTH	WBTH	NBRT	NBTH	NBLT	EBRT	EBTH
400-415	10	35	6	13	61	3	3	33	2	2	79
415-430	10	33	4	19	58	3	6	23	1	2	77
430-445	14	37	2	12	66	1	6	25	3	2	78
445-500	14	38	9	13	67	5	6	35	1	4	92
500-515	19	49	4	10	64	2	1	35	1	3	98
515-530	11	43	7	12	69	5	2	23	3	2	98
530-545	12	41	7	17	48	2	5	25	3	2	109
545-600	16	45	10	10	69	7	4	22	0	4	84
TOTALS											
TIME	1	2	3	4	5	6	7	8	9	10	11
SBRT	SBTH	SBTH	SBTH	WBRT	WBTH	WBTH	NBRT	NBTH	NBLT	EBRT	EBTH
400-500	48	143	21	57	252	12	21	116	7	10	326
415-515	57	157	19	54	255	11	19	118	6	11	345
430-530	58	167	22	47	266	13	15	118	8	11	366
445-545	56	171	27	52	248	14	14	118	8	11	397
500-600	58	178	28	49	250	16	12	105	7	11	389

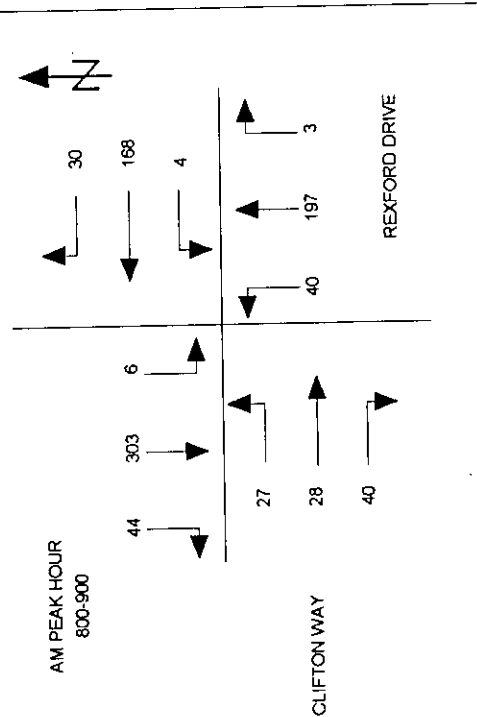


INTERSECTION TURNING MOVEMENT COUNT SUMMARY

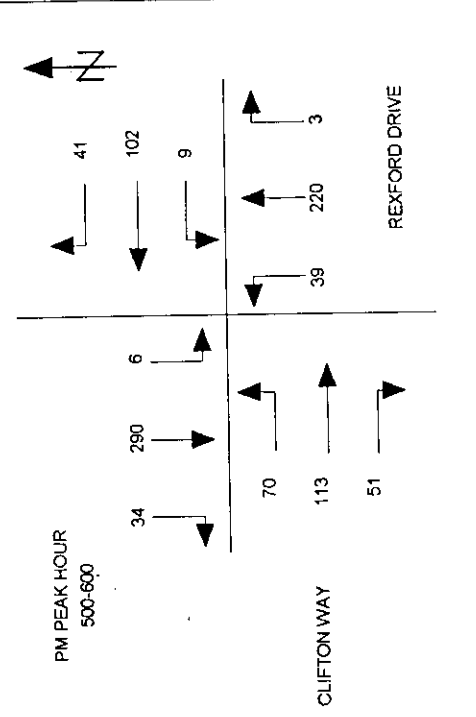
CLIENT: PARSONS TRANSPORTATION GROUP
 PROJECT: BEVERLY HILLS TRAFFIC COUNTS
 DATE: THURSDAY, MARCH 7, 2002
 PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
 INTERSECTION: N/S REXFORD DRIVE
 EW CLIFTON WAY

15 MIN COUNTS											
7:00 AM TO 9:00 AM											
PERIOD	1	2	3	4	5	6	7	8	9	10	11
SBRT	SBTH	SBTH	SBTH	WBRT	WBTH	WBTH	NBRT	NBTH	NBLT	EBRT	EBLT
TOTAL	1	2	3	4	5	6	7	8	9	10	11
7:00-7:15	7	26	0	2	3	0	0	16	0	2	4
7:15-7:30	4	21	1	0	5	0	0	34	2	3	3
7:30-7:45	7	41	2	5	17	0	1	33	2	6	4
7:45-8:00	14	54	3	9	31	2	0	47	4	5	2
8:00-8:15	6	61	3	5	28	1	1	56	5	11	3
8:15-8:30	11	62	1	15	41	2	0	57	11	12	5
8:30-8:45	11	80	0	3	41	0	0	37	16	10	11
8:45-9:00	16	100	2	7	58	1	2	47	8	7	9

15 MIN COUNTS											
4:00 PM TO 6:00 PM											
PERIOD	1	2	3	4	5	6	7	8	9	10	11
SBRT	SBTH	SBTH	SBTH	WBRT	WBTH	WBTH	NBRT	NBTH	NBLT	EBRT	EBLT
TOTAL	1	2	3	4	5	6	7	8	9	10	11
4:00-4:15	32	142	6	16	56	2	1	130	8	16	13
4:15-4:30	31	177	9	19	81	3	2	170	13	25	12
4:30-4:45	38	218	9	34	117	5	2	193	22	34	14
4:45-5:00	42	257	7	32	141	5	1	197	36	38	21
5:00-5:15	44	303	6	30	168	4	3	197	40	40	28



15 MIN COUNTS											
4:00 PM TO 6:00 PM											
PERIOD	1	2	3	4	5	6	7	8	9	10	11
SBRT	SBTH	SBTH	SBTH	WBRT	WBTH	WBTH	NBRT	NBTH	NBLT	EBRT	EBLT
TOTAL	1	2	3	4	5	6	7	8	9	10	11
4:00-4:15	12	76	0	12	19	4	0	59	10	11	25
4:15-4:30	14	71	5	11	22	2	0	56	8	11	15
4:30-4:45	10	73	0	12	27	3	1	69	6	9	23
4:45-5:00	10	66	2	14	24	8	1	51	7	9	13
5:00-5:15	10	76	2	13	26	3	1	57	9	16	22
5:15-5:30	10	70	0	11	20	1	0	52	7	9	33
5:30-5:45	3	70	3	9	32	1	2	58	14	17	31
5:45-6:00	11	74	1	8	24	4	0	53	9	9	27



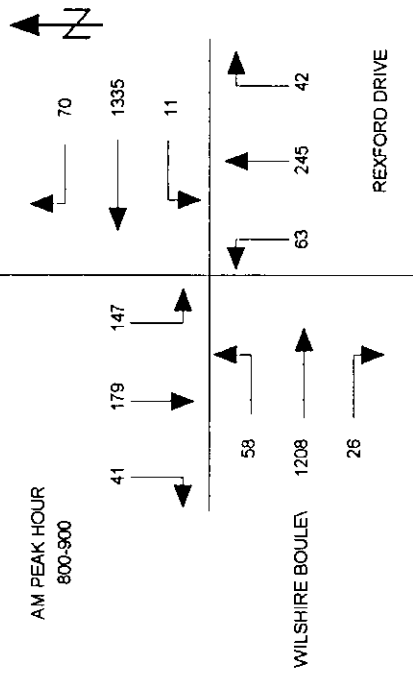
15 MIN COUNTS											
4:00 PM TO 6:00 PM											
PERIOD	1	2	3	4	5	6	7	8	9	10	11
SBRT	SBTH	SBTH	SBTH	WBRT	WBTH	WBTH	NBRT	NBTH	NBLT	EBRT	EBLT
TOTAL	1	2	3	4	5	6	7	8	9	10	11
4:00-4:15	46	286	7	49	92	17	2	235	31	40	76
4:15-4:30	44	286	9	50	99	16	3	233	30	45	73
4:30-4:45	40	285	4	50	97	15	3	229	29	43	91
4:45-5:00	33	282	7	47	102	13	4	218	37	51	99
5:00-6:00	34	290	6	41	102	9	3	220	39	51	113

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: PARSONS TRANSPORTATION GROUP
 PROJECT: BEVERLY HILLS TRAFFIC COUNTS
 DATE: THURSDAY, MARCH 7, 2002
 PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
 INTERSECTION: N/S REXFORD DRIVE
 EW WILSHIRE BOULEVARD

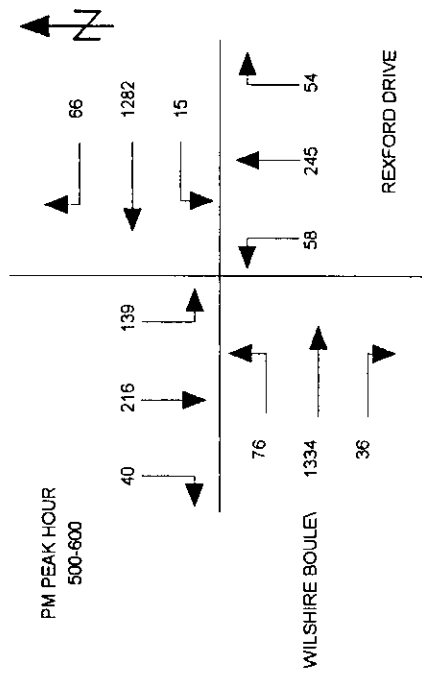
15 MIN COUNTS												
7:00 AM TO 9:00 AM												
PERIOD	1	2	3	4	5	6	7	8	9	10	11	12
	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
TOTAL												
7:00-7:15	4	8	17	6	262	1	3	15	5	1	169	3
7:15-7:30	6	14	9	10	311	0	6	21	8	0	156	0
7:30-7:45	11	29	16	10	363	0	2	31	8	5	216	2
7:45-8:00	12	29	20	19	389	2	10	45	14	2	261	5
8:00-8:15	9	43	40	19	338	2	7	63	13	7	330	9
8:15-8:30	12	43	30	21	320	1	11	57	15	5	303	16
8:30-8:45	14	45	35	17	353	4	9	39	11	5	301	10
8:45-9:00	6	48	42	13	324	4	15	86	24	9	274	23
HOUR TOTALS												
TIME	1	2	3	4	5	6	7	8	9	10	11	12
	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
TOTAL												
7:00-8:00	33	80	62	45	1325	3	21	112	35	8	802	10
7:15-8:15	38	115	85	58	1401	4	25	160	43	14	963	16
7:30-8:30	44	144	106	69	1410	5	30	196	50	19	1110	32
7:45-8:45	47	160	125	76	1400	9	37	204	53	19	1195	40
8:00-9:00	41	179	147	70	1335	11	42	245	63	26	1208	58

AM PEAK HOUR 800-900		70		1335		11		41		179		147		63		245		42	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←		←	
↑		↑		←		←		←		←		←		←		←			



15 MIN COUNTS												
4:00 PM TO 6:00 PM												
PERIOD	1	2	3	4	5	6	7	8	9	10	11	12
	SBRT	SBTH	SBLT	WBRT	WBTH	WBTL	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
TOTAL												
4:00-4:15	8	52	34	16	324	3	22	79	12	10	385	10
4:15-4:30	12	44	26	11	285	0	11	60	11	9	373	14
4:30-4:45	12	53	33	21	309	2	12	57	12	8	346	19
4:45-5:00	11	42	26	15	293	1	16	68	8	8	334	19
5:00-5:15	8	58	52	12	322	0	11	72	14	9	344	10
5:15-5:30	12	52	23	16	308	10	9	53	15	5	340	14
5:30-5:45	11	52	31	19	312	3	18	62	17	13	288	42
5:45-6:00	9	54	33	19	340	2	16	58	12	9	362	10
HOUR TOTALS												
TIME	1	2	3	4	5	6	7	8	9	10	11	12
	SBRT	SBTH	SBLT	WBRT	WBTH	WBTL	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
TOTAL												
4:00-5:00	43	191	119	63	1211	6	61	264	43	35	1438	62
4:15-5:15	43	197	137	59	1209	3	50	257	45	34	1397	62
4:30-5:30	43	205	134	64	1232	13	48	250	49	30	1364	62
4:45-5:45	42	204	132	62	1235	14	54	255	54	35	1306	85
5:00-6:00	40	216	139	66	1282	15	54	245	58	36	1334	76

PM PEAK HOUR 500-600		66		1282		15		40		215		139		58		245		54	
WILSHIRE BOULEV		76		1334		36													
REXFORD DRIVE																			



CLIENT: PARSONS TRANSPORTATION GROUP
PROJECT: BEVERLY HILLS TRAFFIC COUNTS
DATE: THURSDAY, MARCH 7, 2002
PERIODS: 7:00 AM TO 9:00 AM AND 4
INTERSECTION: N/S CANON DRIVE
EW WILSHIRE BOULEVARD

Diagram illustrating traffic flow and counts at the intersection of Wilshire Boulevard and Canon Drive.

Wilshire Boulevard (Horizontal Road):

- Northbound (Top):**
 - Left Lane: 88
 - Through Lane: 995
 - Right Lane: 24
- Southbound (Bottom):**
 - Left Lane: 142 (with a handwritten '12' and a slash over it)
 - Through Lane: 139

Canon Drive (Vertical Road):

- Eastbound (Right):**
 - Left Lane: 0
 - Through Lane: 0
 - Right Lane: 17
- Westbound (Left):**
 - Through Lane: 1298
 - Right Lane: 20

Additional Information:

- AM Peak Hour:** 800-900
- North Arrow:** Indicated by an arrow pointing towards the top-left of the diagram.

PM PEAK HOUR
400-500

1351
0

239

167

107

1181

31

189

1108

54

2

0

53

WILSHIRE BOULEVARD

CANON DRIVE

N

CLIENT: PARSONS TRANSPORTATION GROUP
PROJECT: BEVERLY HILLS TRAFFIC COUNTS
DATE: THURSDAY, MARCH 7, 2002
PERIODS: 7:00 AM TO 9:00 AM AND 4
INTERSECTION: N/S BEVERLY DRIVE AND WILSHIRE BOULEVARD E/W

AM PEAK HOUR
800-900

107 520 0

66 1126 133

72 938 75

122 685 145

WILSHIRE BOULEVARD

BEVERLY DRIVE

PM PEAK HOUR
445-545

138 679 1

147 111 127

105 966 191

108 691 138

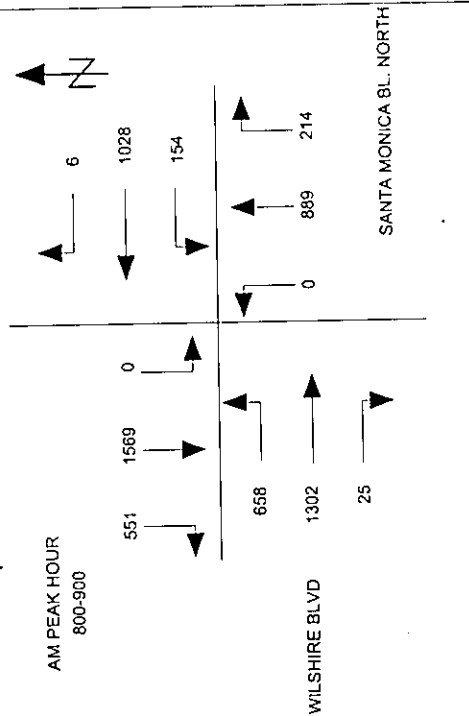
WILSHIRE BOULEVARD

BEVERLY DRIVE

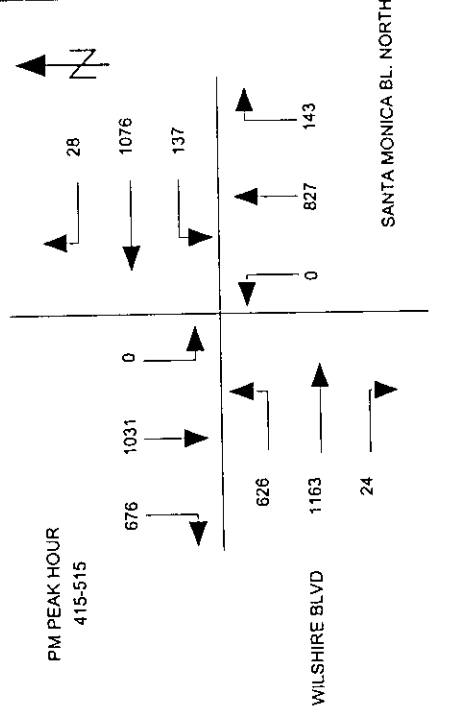
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: PARSONS TRANSPORTATION GROUP
 PROJECT: BEVERLY HILLS TRAFFIC COUNTS
 DATE: THURSDAY, MARCH 7, 2002
 PERIODS: 7:00 AM TO 9:00 AM AND 4:00 PM TO 6:00 PM
 INTERSECTION: N/S SANTA MONICA BL. NORTH
 E/W WILSHIRE BLVD

7:00 AM TO 9:00 AM												
15 MIN COUNTS												
PERIOD	1	2	3	4	5	6	7	8	9	10	11	12
	SBRT	SBTH	SBLT	WBRT	WBTH	WBTL	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
TOTAL												
700-715	159	239	3	0	203	24	23	111	0	1	168	63
715-730	161	272	0	4	229	33	27	124	0	2	183	87
730-745	191	385	1	1	295	29	32	163	0	0	251	134
745-800	138	345	0	1	266	24	40	168	0	4	305	114
800-815	115	364	0	1	243	23	53	198	0	5	335	153
815-830	156	417	0	1	272	28	50	217	0	9	318	165
830-845	164	394	0	0	253	48	52	233	0	6	317	180
845-900	116	394	0	4	260	55	59	241	0	5	332	160
800-900	551	1569	0	6	1028	154	214	889	0	25	1302	658
700-900	649	1241	4	6	993	110	122	566	0	7	907	398
715-815	605	1366	1	7	1033	109	152	653	0	11	1074	488
730-830	600	1511	1	4	1076	104	175	746	0	18	1209	566
745-845	573	1520	0	3	1034	123	195	816	0	24	1275	612
800-900	551	1569	0	6	1028	154	214	889	0	25	1302	658



4:00 PM TO 6:00 PM												
15 MIN COUNTS												
PERIOD	1	2	3	4	5	6	7	8	9	10	11	12
	SBRT	SBTH	SBLT	WBRT	WBTH	WBTL	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
TOTAL												
400-415	133	280	0	14	256	39	30	224	0	8	308	133
415-430	168	288	0	9	264	35	31	206	0	5	293	154
430-445	164	256	0	4	255	30	42	215	0	6	297	145
445-500	158	236	0	5	269	45	37	205	0	8	287	168
500-515	186	251	0	10	288	27	33	201	0	5	286	159
515-530	182	254	0	3	246	26	50	190	0	7	243	177
530-545	157	276	0	1	294	40	34	181	0	8	267	160
545-600	174	299	0	8	241	24	47	186	0	10	297	178
400-600	623	1060	0	32	1044	149	140	850	0	27	1185	600
415-515	676	1031	0	28	1076	137	143	827	0	24	1163	626
430-530	690	997	0	22	1058	128	162	811	0	26	1113	649
445-545	683	1017	0	19	1097	138	154	777	0	28	1083	664
500-600	699	1080	0	22	1069	117	164	758	0	30	1093	674
400-600	623	1060	0	32	1044	149	140	850	0	27	1185	600
415-515	676	1031	0	28	1076	137	143	827	0	24	1163	626
430-530	690	997	0	22	1058	128	162	811	0	26	1113	649
445-545	683	1017	0	19	1097	138	154	777	0	28	1083	664
500-600	699	1080	0	22	1069	117	164	758	0	30	1093	674



24-HOUR ADT COUNT SUMMARY

CLIENT: PARSONS TRANSPORTATION
 PROJECT: THE CRESCENT EIR
 LOCATION: CRESCENT DRIVE SOUTH OF
 SANTA MONICA BOULEVARD NORTH
 DATE: TUESDAY MARCH 5, 2002

DIRECTION:	TOTAL				HOUR TOTALS
TIME	00-15	15-30	30-45	45-60	
00:00	10	3	3	2	18
01:00	0	0	5	5	10
02:00	2	4	1	1	8
03:00	1	3	3	1	8
04:00	1	2	2	4	9
05:00	5	5	8	18	36
06:00	24	35	48	79	186
07:00	79	100	200	245	624
08:00	219	276	229	268	992
09:00	180	209	206	181	776
10:00	153	123	146	141	563
11:00	139	149	151	156	595
12:00	143	163	156	123	585
13:00	165	151	150	185	651
14:00	155	200	204	201	760
15:00	221	244	218	230	913
16:00	266	201	255	249	971
17:00	253	220	240	222	935
18:00	235	234	156	194	819
19:00	136	133	99	89	457
20:00	76	62	52	54	244
21:00	40	47	42	33	162
22:00	41	33	22	21	119
23:00	14	11	4	6	35
TOTAL					10476
AM PEAK HOUR					
VOLUME					
PM PEAK HOUR					
VOLUME					

DIRECTION:	O				HOUR TOTALS
TIME	00-15	15-30	30-45	45-60	
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	0	0	0	0	0
06:00	0	0	0	0	0
07:00	0	0	0	0	0
08:00	0	0	0	0	0
09:00	0	0	0	0	0
10:00	0	0	0	0	0
11:00	0	0	0	0	0
12:00	0	0	0	0	0
13:00	0	0	0	0	0
14:00	0	0	0	0	0
15:00	0	0	0	0	0
16:00	0	0	0	0	0
17:00	0	0	0	0	0
18:00	0	0	0	0	0
19:00	0	0	0	0	0
20:00	0	0	0	0	0
21:00	0	0	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
TOTAL					0
AM PEAK HOUR					
VOLUME					
PM PEAK HOUR					
VOLUME					

TOTAL BI-DIRECTIONAL VOLUME

10476

WILTEC

Phone: (626) 564-1944

Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: PARSONS TRANSPORTATION
 PROJECT: THE CRESCENT EIR
 LOCATION: CRESCENT DRIVE SOUTH OF
 WILSHIRE BOULEVARD
 DATE: TUESDAY MARCH 5, 2002

DIRECTION:		TOTAL			
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	5	1	4	7	17
01:00	1	3	0	0	4
02:00	5	2	0	4	11
03:00	0	1	3	8	12
04:00	0	0	2	1	3
05:00	2	11	2	12	27
06:00	11	24	23	20	78
07:00	43	38	79	75	235
08:00	98	121	125	140	484
09:00	132	165	109	128	534
10:00	100	130	103	130	463
11:00	110	108	122	136	476
12:00	136	115	117	140	508
13:00	147	133	141	130	551
14:00	143	134	159	149	585
15:00	159	164	125	156	604
16:00	153	138	171	171	633
17:00	186	172	186	166	710
18:00	148	162	141	119	570
19:00	77	96	69	40	282
20:00	63	51	53	35	202
21:00	26	35	48	30	139
22:00	33	24	20	1	78
23:00	5	6	5	6	22
				TOTAL	7228
AM PEAK HOUR				0830-0930	
VOLUME				562	
PM PEAK HOUR				1645-1745	
VOLUME				715	

DIRECTION:		O				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS	
00:00	0	0	0	0	0	
01:00	0	0	0	0	0	
02:00	0	0	0	0	0	
03:00	0	0	0	0	0	
04:00	0	0	0	0	0	
05:00	0	0	0	0	0	
06:00	0	0	0	0	0	
07:00	0	0	0	0	0	
08:00	0	0	0	0	0	
09:00	0	0	0	0	0	
10:00	0	0	0	0	0	
11:00	0	0	0	0	0	
12:00	0	0	0	0	0	
13:00	0	0	0	0	0	
14:00	0	0	0	0	0	
15:00	0	0	0	0	0	
16:00	0	0	0	0	0	
17:00	0	0	0	0	0	
18:00	0	0	0	0	0	
19:00	0	0	0	0	0	
20:00	0	0	0	0	0	
21:00	0	0	0	0	0	
22:00	0	0	0	0	0	
23:00	0	0	0	0	0	
				TOTAL	0	
AM PEAK HOUR			0730-0830			
VOLUME			0			
PM PEAK HOUR			1200-1300			
VOLUME			0			

TOTAL BI-DIRECTIONAL VOLUME

7228

24-HOUR ADT COUNT SUMMARY

CLIENT: PARSONS TRANSPORTATION
 PROJECT: THE CRESCENT EIR
 LOCATION: CLIFTON WAY BETWEEN REXFORD DRIVE
 AND MAPLE DRIVE
 DATE: TUESDAY MARCH 5, 2002

DIRECTION:	TOTAL				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	0	0	0	0	0
01:00	0	1	1	0	2
02:00	1	0	0	0	1
03:00	0	0	0	0	0
04:00	0	1	0	0	1
05:00	0	1	1	0	2
06:00	2	3	2	8	15
07:00	15	20	55	43	133
08:00	70	70	82	82	304
09:00	69	58	44	35	206
10:00	47	40	47	38	172
11:00	53	49	58	64	224
12:00	52	77	46	74	249
13:00	70	64	49	42	225
14:00	67	61	63	59	250
15:00	47	77	72	62	258
16:00	55	73	61	69	258
17:00	72	64	58	64	258
18:00	57	55	33	29	174
19:00	23	20	11	15	69
20:00	14	5	6	5	30
21:00	6	6	5	6	23
22:00	5	3	3	4	15
23:00	2	0	0	4	6
TOTAL					2875
AM PEAK HOUR	0800-0900				
VOLUME	304				
PM PEAK HOUR	1615-1715				
VOLUME	275				

DIRECTION:	O				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	0	0	0	0	0
06:00	0	0	0	0	0
07:00	0	0	0	0	0
08:00	0	0	0	0	0
09:00	0	0	0	0	0
10:00	0	0	0	0	0
11:00	0	0	0	0	0
12:00	0	0	0	0	0
13:00	0	0	0	0	0
14:00	0	0	0	0	0
15:00	0	0	0	0	0
16:00	0	0	0	0	0
17:00	0	0	0	0	0
18:00	0	0	0	0	0
19:00	0	0	0	0	0
20:00	0	0	0	0	0
21:00	0	0	2	0	2
22:00	0	0	0	0	0
23:00	0	0	0	0	0
TOTAL					2
AM PEAK HOUR	0730-0830				
VOLUME	0				
PM PEAK HOUR	1200-1300				
VOLUME	2				

TOTAL BI-DIRECTIONAL VOLUME

2877

WILTEC

Phone: (626) 564-1944

Fax: (626) 564-0969

24-HOUR ADT COUNT SUMMARY

CLIENT: PARSONS TRANSPORTATION
 PROJECT: THE CRESCENT EIR
 LOCATION: FOOTHILL ROAD BETWEEN BURTON WAY
 AND REXFORD DRIVE
 DATE: TUESDAY MARCH 5, 2002

DIRECTION:	TOTAL				HOUR TOTALS
TIME	00-15	15-30	30-45	45-60	
00:00	2	0	1	0	3
01:00	2	1	1	1	5
02:00	3	0	0	0	3
03:00	0	0	3	0	3
04:00	1	0	2	1	4
05:00	2	0	3	4	9
06:00	5	4	14	22	45
07:00	22	34	46	51	153
08:00	50	64	60	68	242
09:00	70	59	48	48	225
10:00	53	48	41	88	230
11:00	64	78	81	61	284
12:00	54	61	62	63	240
13:00	67	49	67	53	236
14:00	37	46	83	68	234
15:00	66	65	65	69	265
16:00	58	61	81	84	284
17:00	76	67	78	68	289
18:00	76	67	46	38	227
19:00	28	30	22	24	104
20:00	28	14	11	14	67
21:00	24	15	11	10	60
22:00	5	6	5	6	22
23:00	0	2	2	2	6
TOTAL					3240
AM PEAK HOUR					
VOLUME					
PM PEAK HOUR					
VOLUME					

DIRECTION:	O				HOUR TOTALS
TIME	00-15	15-30	30-45	45-60	
00:00	0	0	0	0	0
01:00	0	0	0	0	0
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	0	0
05:00	0	0	0	0	0
06:00	0	0	0	0	0
07:00	0	0	0	0	0
08:00	0	0	0	0	0
09:00	0	0	0	0	0
10:00	0	0	0	0	0
11:00	0	0	0	0	0
12:00	0	0	0	0	0
13:00	0	0	0	0	0
14:00	0	0	0	0	0
15:00	0	0	0	0	0
16:00	0	0	0	0	0
17:00	0	0	0	0	0
18:00	0	0	0	0	0
19:00	0	0	0	0	0
20:00	0	0	0	0	0
21:00	0	0	0	0	0
22:00	0	0	0	0	0
23:00	0	0	0	0	0
TOTAL					0
AM PEAK HOUR					
VOLUME					
PM PEAK HOUR					
VOLUME					

TOTAL BI-DIRECTIONAL VOLUME

3240

APPENDIX B
EXISTING LOS WORKSHEETS

Level Of Service Computation Report

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

Intersection #1 N. Santa Monica @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 1.019
 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	0	1

Volume Module:

Base Vol:	0	807	194	0	1591	521	594	1350	26	200	1207	7
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	807	194	0	1591	521	594	1350	26	200	1207	7
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	807	194	0	1591	521	594	1350	26	200	1207	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	807	194	0	1591	521	594	1350	26	200	1207	7
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	807	194	0	1591	521	594	1350	26	200	1207	7

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	0.99	1.00	1.00	0.99	1.00
Lanes:	0.00	2.00	1.00	0.00	3.00	1.00	2.00	1.96	0.04	1.00	2.00	1.00
Final Sat.:	0	3200	1600	0	4800	1600	2880	3108	60	1600	3168	1600

Capacity Analysis Module:

Vol/Sat:	0.00	0.25	0.12	0.00	0.33	0.33	0.21	0.43	0.43	0.13	0.38	0.00
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #3 Beverly @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.779
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 62 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			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	0	2	1	0	2	1	0	2

Volume Module:

Base Vol:	154	860	144	0	453	115	77	1608	79	88	1389	49
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:	154	860	144	0	453	115	77	1608	79	88	1389	49
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:	154	860	144	0	453	115	77	1608	79	88	1389	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	860	144	0	453	115	77	1608	79	88	1389	49
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.:	154	860	144	0	453	115	77	1608	79	88	1389	49

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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	2.00	1.00	0.00	2.00	1.00	1.00	2.86	0.14	1.00	2.90	0.10
Final Sat.:	1600	3200	1600	0	3200	1600	1600	4529	225	1600	4590	164

Capacity Analysis Module:

Vol/Sat:	0.10	0.27	0.09	0.00	0.14	0.07	0.05	0.36	0.35	0.06	0.30	0.30
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #4 Canon @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.700
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 50 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0	1	0	3	0	0	0

Volume Module:

Base Vol:	0	0	0	148	0	141	117	1143	0	0	1963	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:	0	0	0	148	0	141	117	1143	0	0	1963	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:	0	0	0	148	0	141	117	1143	0	0	1963	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	148	0	141	117	1143	0	0	1963	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.:	0	0	0	148	0	141	117	1143	0	0	1963	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	0.99	1.00	1.00	0.99	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.85	0.15
Final Sat.:	0	0	0	1600	0	1600	1600	4752	0	0	4517	237

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.09	0.00	0.09	0.07	0.24	0.00	0.00	0.43	0.43
Crit Moves:				****				****				****

Level Of Service Computation Report

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

Intersection #5 Crescent @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.744
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 56 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	0	1	0	0	1	0	2	1	0	1	0

Volume Module:

Base Vol:	39	170	36	96	99	54	64	1246	20	24	1799	172
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	39	170	36	96	99	54	64	1246	20	24	1799	172
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:	39	170	36	96	99	54	64	1246	20	24	1799	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	170	36	96	99	54	64	1246	20	24	1799	172
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.:	39	170	36	96	99	54	64	1246	20	24	1799	172

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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	0.83	0.17	1.00	0.65	0.35	1.00	2.95	0.05	1.00	2.74	0.26
Final Sat.:	1600	1320	280	1600	1035	565	1600	4677	76	1600	4337	419

Capacity Analysis Module:

Vol/Sat:	0.02	0.13	0.13	0.06	0.10	0.10	0.04	0.27	0.26	0.02	0.41	0.41
Crit Moves:	****			****			****			****		

```

-----
                        Level Of Service Computation Report
                    ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
*****
Intersection #6 Rexford @ Wilshire
*****
Cycle (sec):          100                Critical Vol./Cap. (X):          0.743
Loss Time (sec):      10 (Y+R = 4 sec) Average Delay (sec/veh):          xxxxxx
Optimal Cycle:        56                Level Of Service:                C
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:        Protected      Protected      Protected      Protected
Rights:          Include      Include      Include      Include
Min. Green:      0  0  0      0  0  0      0  0  0      0  0  0
Lanes:          1  0  0  1  0      1  0  0  1  0      1  0  2  1  0      1  0  2  1  0
-----|-----|-----|-----|
Volume Module:
Base Vol:        55  228  42  122  169  49  41 1804  29  25 1542  52
Growth Adj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:      55  228  42  122  169  49  41 1804  29  25 1542  52
User Adj:        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
PHF Volume:      55  228  42  122  169  49  41 1804  29  25 1542  52
Reduct Vol:      0  0  0  0  0  0  0  0  0  0  0  0
Reduced Vol:     55  228  42  122  169  49  41 1804  29  25 1542  52
PCE Adj:         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
Final Vol.:      55  228  42  122  169  49  41 1804  29  25 1542  52
-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:        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
Lanes:          1.00 0.84 0.16 1.00 0.78 0.22 1.00 2.95 0.05 1.00 2.90 0.10
Final Sat.:      1600 1351 249 1600 1240 360 1600 4724 76 1600 4643 157
-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:         0.03 0.17 0.17 0.08 0.14 0.14 0.03 0.38 0.38 0.02 0.33 0.33
Crit Moves:      ****          ****          ****          ****
*****

```

Level Of Service Computation Report

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

Intersection #12 S. Santa Monica @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.802

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

Optimal Cycle: 67 Level Of Service: D

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	1	1	0	1	0	1	1	0	1	0	2	0	1
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Volume Module:												
----------------	--	--	--	--	--	--	--	--	--	--	--	--

Base Vol:	34	172	23	153	347	53	36	734	62	102	1674	116
-----------	----	-----	----	-----	-----	----	----	-----	----	-----	------	-----

Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
-------------	------	------	------	------	------	------	------	------	------	------	------	------

Initial Bse:	34	172	23	153	347	53	36	734	62	102	1674	116
--------------	----	-----	----	-----	-----	----	----	-----	----	-----	------	-----

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:	34	172	23	153	347	53	36	734	62	102	1674	116
-------------	----	-----	----	-----	-----	----	----	-----	----	-----	------	-----

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

Reduced Vol:	34	172	23	153	347	53	36	734	62	102	1674	116
--------------	----	-----	----	-----	-----	----	----	-----	----	-----	------	-----

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.:	34	172	23	153	347	53	36	734	62	102	1674	116
-------------	----	-----	----	-----	-----	----	----	-----	----	-----	------	-----

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	1.76	0.24	1.00	1.74	0.26	1.00	1.84	0.16	1.00	2.00	1.00
--------	------	------	------	------	------	------	------	------	------	------	------	------

Final Sat.:	1600	2823	377	1600	2776	424	1600	2951	249	1600	3200	1600
-------------	------	------	-----	------	------	-----	------	------	-----	------	------	------

Capacity Analysis Module:												
---------------------------	--	--	--	--	--	--	--	--	--	--	--	--

Vol/Sat:	0.02	0.06	0.06	0.10	0.13	0.13	0.02	0.25	0.25	0.06	0.52	0.07
----------	------	------	------	------	------	------	------	------	------	------	------	------

Crit Moves:	****			****			****			****		
-------------	------	--	--	------	--	--	------	--	--	------	--	--

*****	*****											
-------	-------	--	--	--	--	--	--	--	--	--	--	--

Level Of Service Computation Report

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

Intersection #13 N. Santa Monica @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.824
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 72 Level Of Service: D

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	1	1	0	1	1	0	1	0	1	1	0

Volume Module:

Base Vol:	57	240	50	139	433	14	13	1571	63	61	1622	34
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:	57	240	50	139	433	14	13	1571	63	61	1622	34
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:	57	240	50	139	433	14	13	1571	63	61	1622	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	57	240	50	139	433	14	13	1571	63	61	1622	34
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.:	57	240	50	139	433	14	13	1571	63	61	1622	34

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	1.66	0.34	1.00	1.94	0.06	1.00	1.92	0.08	1.00	1.96	0.04
Final Sat.:	1600	2648	552	1600	3100	100	1600	3077	123	1600	3134	66

Capacity Analysis Module:

Vol/Sat:	0.04	0.09	0.09	0.09	0.14	0.14	0.01	0.51	0.51	0.04	0.52	0.52
Crit Moves:	****			****			****			****		

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

Intersection #10 Clifton @ Rexford

Cycle (sec): 100 Critical Vol./Cap. (X): 0.519
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 11.9
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	1	0	0	0	1	0	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	40	197	3	6	303	44	27	28	40	4	168	30
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:	40	197	3	6	303	44	27	28	40	4	168	30
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:	40	197	3	6	303	44	27	28	40	4	168	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	197	3	6	303	44	27	28	40	4	168	30
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.:	40	197	3	6	303	44	27	28	40	4	168	30

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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:	0.17	0.83	1.00	0.02	0.86	0.12	0.28	0.29	0.43	0.02	0.83	0.15
Final Sat.:	101	495	686	12	584	85	163	169	242	12	503	90

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.40	0.40	0.00	0.52	0.52	0.52	0.17	0.17	0.17	0.33	0.33	0.33
Crit Moves:	****			****			****			****		
Delay/Veh:	12.0	12.0	7.7	13.1	13.1	13.1	9.5	9.5	9.5	10.9	10.9	10.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.0	12.0	7.7	13.1	13.1	13.1	9.5	9.5	9.5	10.9	10.9	10.9
LOS by Move:	B	B	A	B	B	B	A	A	A	B	B	B
ApproachDel:	11.9			13.1			9.5			10.9		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.9			13.1			9.5			10.9		
LOS by Appr:	B			B			A			B		

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

Intersection #7 Charleville @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.695
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 14.1
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	8	130	27	9	68	49	40	138	8	31	415	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	130	27	9	68	49	40	138	8	31	415	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	130	27	9	68	49	40	138	8	31	415	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	130	27	9	68	49	40	138	8	31	415	50
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.:	8	130	27	9	68	49	40	138	8	31	415	50

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.05	0.79	0.16	0.07	0.54	0.39	0.22	0.74	0.04	0.06	0.84	0.10
Final Sat.:	28	451	94	41	306	221	135	464	27	45	597	72

Capacity Analysis Module:

Vol/Sat:	0.29	0.29	0.29	0.22	0.22	0.22	0.30	0.30	0.30	0.70	0.70	0.70
Crit Moves:	****			****			****			****		
Delay/Veh:	10.7	10.7	10.7	10.0	10.0	10.0	10.5	10.5	10.5	17.7	17.7	17.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.7	10.7	10.7	10.0	10.0	10.0	10.5	10.5	10.5	17.7	17.7	17.7
LOS by Move:	B	B	B	B	B	B	B	B	B	C	C	C
ApproachDel:	10.7			10.0			10.5			17.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.7			10.0			10.5			17.7		
LOS by Appr:	B			B			B			C		

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Clifton @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.413
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 10.7
 Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	0	0	0	1	0	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	32	283	20	34	244	45	12	19	5	59	117	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:	32	283	20	34	244	45	12	19	5	59	117	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:	32	283	20	34	244	45	12	19	5	59	117	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	283	20	34	244	45	12	19	5	59	117	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	32	283	20	34	244	45	12	19	5	59	117	89

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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:	0.19	1.69	0.12	0.21	1.51	0.28	0.33	0.53	0.14	0.22	0.44	0.34
Final Sat.:	114	1028	74	125	921	174	183	290	76	143	283	215

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.28	0.28	0.27	0.27	0.26	0.26	0.07	0.07	0.07	0.41	0.41	0.41
Crit Moves:	****			****			****			****		
Delay/Veh:	10.6	10.5	10.3	10.6	10.3	10.0	9.3	9.3	9.3	11.7	11.7	11.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.6	10.5	10.3	10.6	10.3	10.0	9.3	9.3	9.3	11.7	11.7	11.7
LOS by Move:	B	B	B	B	B	B	A	A	A	B	B	B
ApproachDel:	10.5			10.3			9.3			11.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.5			10.3			9.3			11.7		
LOS by Appr:	B			B			A			B		

Level Of Service Computation Report

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

Intersection #1 N. Santa Monica @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 1.049
 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

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	968	162	0	1113	669	639	1365	25	161	1346	29
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	968	162	0	1113	669	639	1365	25	161	1346	29
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	968	162	0	1113	669	639	1365	25	161	1346	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	968	162	0	1113	669	639	1365	25	161	1346	29
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	968	162	0	1113	669	639	1365	25	161	1346	29

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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	0.99	1.00	1.00	0.99	1.00
Lanes:	0.00	2.00	1.00	0.00	2.50	1.50	2.00	1.96	0.04	1.00	2.00	1.00
Final Sat.:	0	3200	1600	0	3997	2403	2880	3111	58	1600	3168	1600

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.30	0.10	0.00	0.28	0.28	0.22	0.44	0.43	0.10	0.42	0.02
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #3 Beverly @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.871
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 87 Level Of Service: D

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Permitted					Permitted					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	2	0	1	0	0	2	0	1	1	0	2	1	0	1	0	2	1	0

Volume Module:

Base Vol:	138	866	137	0	612	146	152	1781	131	146	1229	88
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	866	137	0	612	146	152	1781	131	146	1229	88
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	866	137	0	612	146	152	1781	131	146	1229	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	138	866	137	0	612	146	152	1781	131	146	1229	88
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	866	137	0	612	146	152	1781	131	146	1229	88

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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	2.00	1.00	0.00	2.00	1.00	1.00	2.79	0.21	1.00	2.80	0.20
Final Sat.:	1600	3200	1600	0	3200	1600	1600	4426	329	1600	4434	321

Capacity Analysis Module:

Vol/Sat:	0.09	0.27	0.09	0.00	0.19	0.09	0.10	0.40	0.40	0.09	0.28	0.27
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #4 Canon @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.628
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 42 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0	1	0	3	0	0	0

Volume Module:

Base Vol:	0	0	0	178	0	228	144	1368	0	0	1285	121
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	178	0	228	144	1368	0	0	1285	121
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	178	0	228	144	1368	0	0	1285	121
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	178	0	228	144	1368	0	0	1285	121
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	0	0	178	0	228	144	1368	0	0	1285	121

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	0.99	1.00	1.00	0.99	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.74	0.26
Final Sat.:	0	0	0	1600	0	1600	1600	4752	0	0	4343	413

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.11	0.00	0.14	0.09	0.29	0.00	0.00	0.30	0.29
Crit Moves:						****	****				****	

Level Of Service Computation Report

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

Intersection #5 Crescent @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.765
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 60 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	2	1	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	24	175	49	169	193	98	80	1749	26	39	1588	165
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	24	175	49	169	193	98	80	1749	26	39	1588	165
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:	24	175	49	169	193	98	80	1749	26	39	1588	165
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	175	49	169	193	98	80	1749	26	39	1588	165
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.:	24	175	49	169	193	98	80	1749	26	39	1588	165

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	0.78	0.22	1.00	0.66	0.34	1.00	2.96	0.04	1.00	2.72	0.28
Final Sat.:	1600	1250	350	1600	1061	539	1600	4682	70	1600	4305	452

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.02	0.14	0.14	0.11	0.18	0.18	0.05	0.37	0.37	0.02	0.37	0.37
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #6 Rexford @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.780
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 62 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	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	0	1	0	0	1	0	2	1	0	1	0

Volume Module:

Base Vol:	50	228	54	114	206	48	59	1930	39	29	1489	48
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:	50	228	54	114	206	48	59	1930	39	29	1489	48
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:	50	228	54	114	206	48	59	1930	39	29	1489	48
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	228	54	114	206	48	59	1930	39	29	1489	48
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.:	50	228	54	114	206	48	59	1930	39	29	1489	48

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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	0.81	0.19	1.00	0.81	0.19	1.00	2.94	0.06	1.00	2.91	0.09
Final Sat.:	1600	1294	306	1600	1298	302	1600	4658	95	1600	4604	150

Capacity Analysis Module:

Vol/Sat:	0.03	0.18	0.18	0.07	0.16	0.16	0.04	0.41	0.41	0.02	0.32	0.32
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #12 S. Santa Monica @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.809
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 69 Level Of Service: D

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	1	1	0	1	1	0	1	0	1	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	35	470	83	79	213	32	117	1242	117	99	1189	247
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	35	470	83	79	213	32	117	1242	117	99	1189	247
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:	35	470	83	79	213	32	117	1242	117	99	1189	247
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	470	83	79	213	32	117	1242	117	99	1189	247
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.:	35	470	83	79	213	32	117	1242	117	99	1189	247

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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	1.70	0.30	1.00	1.74	0.26	1.00	1.83	0.17	1.00	2.00	1.00
Final Sat.:	1600	2720	480	1600	2782	418	1600	2925	275	1600	3200	1600

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.02	0.17	0.17	0.05	0.08	0.08	0.07	0.42	0.42	0.06	0.37	0.15
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #13 N. Santa Monica @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 1.015

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	1	1	0	1	1	0	1	0	1	1	0

Volume Module:

Base Vol:	108	506	225	75	214	17	9	1893	58	48	1630	82
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:	108	506	225	75	214	17	9	1893	58	48	1630	82
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:	108	506	225	75	214	17	9	1893	58	48	1630	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	108	506	225	75	214	17	9	1893	58	48	1630	82
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.:	108	506	225	75	214	17	9	1893	58	48	1630	82

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	1.38	0.62	1.00	1.85	0.15	1.00	1.94	0.06	1.00	1.90	0.10
Final Sat.:	1600	2215	985	1600	2965	235	1600	3105	95	1600	3047	153

Capacity Analysis Module:

Vol/Sat:	0.07	0.23	0.23	0.05	0.07	0.07	0.01	0.61	0.61	0.03	0.54	0.54
Crit Moves:	****			****			****			****		

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

Intersection #10 Clifton @ Rexford

Cycle (sec): 100 Critical Vol./Cap. (X): 0.526
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 12.8
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	1	0	0	0	1	0	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	39	220	3	6	290	34	70	113	51	9	102	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:	39	220	3	6	290	34	70	113	51	9	102	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:	39	220	3	6	290	34	70	113	51	9	102	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	220	3	6	290	34	70	113	51	9	102	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	39	220	3	6	290	34	70	113	51	9	102	41

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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:	0.15	0.85	1.00	0.02	0.88	0.10	0.30	0.48	0.22	0.06	0.67	0.27
Final Sat.:	85	478	640	11	552	65	174	281	127	33	374	150

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.46	0.46	0.00	0.53	0.53	0.53	0.40	0.40	0.40	0.27	0.27	0.27
Crit Moves:	****			****			****			****		
Delay/Veh:	13.4	13.4	8.0	13.9	13.9	13.9	12.1	12.1	12.1	10.7	10.7	10.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.4	13.4	8.0	13.9	13.9	13.9	12.1	12.1	12.1	10.7	10.7	10.7
LOS by Move:	B	B	A	B	B	B	B	B	B	B	B	B
ApproachDel:	13.4			13.9			12.1			10.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	13.4			13.9			12.1			10.7		
LOS by Appr:	B			B			B			B		

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

Intersection #7 Charleville @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.762
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 17.6
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
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	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	8	118	14	27	171	56	66	397	8	14	248	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	118	14	27	171	56	66	397	8	14	248	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	118	14	27	171	56	66	397	8	14	248	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	118	14	27	171	56	66	397	8	14	248	52
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.:	8	118	14	27	171	56	66	397	8	14	248	52

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.06	0.84	0.10	0.11	0.67	0.22	0.14	0.84	0.02	0.04	0.79	0.17
Final Sat.:	27	399	47	56	357	117	87	521	10	26	460	97

Capacity Analysis Module:

Vol/Sat:	0.30	0.30	0.30	0.48	0.48	0.48	0.76	0.76	0.76	0.54	0.54	0.54
Crit Moves:	****			****			****			****		
Delay/Veh:	11.7	11.7	11.7	13.9	13.9	13.9	23.2	23.2	23.2	14.7	14.7	14.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.7	11.7	11.7	13.9	13.9	13.9	23.2	23.2	23.2	14.7	14.7	14.7
LOS by Move:	B	B	B	B	B	B	C	C	C	B	B	B
ApproachDel:	11.7			13.9			23.2			14.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.7			13.9			23.2			14.7		
LOS by Appr:	B			B			C			B		

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Clifton @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.422
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 12.4
 Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	0	0	0	1	0	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	50	316	62	83	318	65	31	91	44	33	78	72
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:	50	316	62	83	318	65	31	91	44	33	78	72
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:	50	316	62	83	318	65	31	91	44	33	78	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	316	62	83	318	65	31	91	44	33	78	72
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.:	50	316	62	83	318	65	31	91	44	33	78	72

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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:	0.23	1.48	0.29	0.36	1.36	0.28	0.19	0.55	0.26	0.18	0.43	0.39
Final Sat.:	129	834	168	197	778	163	99	292	141	98	232	214

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.39	0.38	0.37	0.42	0.41	0.40	0.31	0.31	0.31	0.34	0.34	0.34
Crit Moves:	****			****			****			****		
Delay/Veh:	12.8	12.4	12.0	13.3	12.8	12.3	11.7	11.7	11.7	11.9	11.9	11.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.8	12.4	12.0	13.3	12.8	12.3	11.7	11.7	11.7	11.9	11.9	11.9
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
ApproachDel:	12.4			12.8			11.7			11.9		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	12.4			12.8			11.7			11.9		
LOS by Appr:	B			B			B			B		

APPENDIX C
NO-PROJECT LOS WORKSHEETS

Level Of Service Computation Report

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

Intersection #1 N. Santa Monica @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 1.071
 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	2	0	1	1

Volume Module:

Base Vol:	0	939	201	0	1688	537	612	1454	27	207	1288	11
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	939	201	0	1688	537	612	1454	27	207	1288	11
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	939	201	0	1688	537	612	1454	27	207	1288	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	939	201	0	1688	537	612	1454	27	207	1288	11
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	939	201	0	1688	537	612	1454	27	207	1288	11

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	0.99	1.00	1.00	0.99	1.00
Lanes:	0.00	2.00	1.00	0.00	3.00	1.00	2.00	1.96	0.04	1.00	2.00	1.00
Final Sat.:	0	3200	1600	0	4800	1600	2880	3110	58	1600	3168	1600

Capacity Analysis Module:

Vol/Sat:	0.00	0.29	0.13	0.00	0.35	0.34	0.21	0.47	0.46	0.13	0.41	0.01
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #3 Beverly @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.820
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 71 Level Of Service: D

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Permitted					Permitted					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	2	0	1	0	0	2	0	1	1	0	2	1	0	1	0	2	1	0

Volume Module:

Base Vol:	164	909	151	0	499	124	88	1701	86	96	1472	51
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:	164	909	151	0	499	124	88	1701	86	96	1472	51
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:	164	909	151	0	499	124	88	1701	86	96	1472	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	164	909	151	0	499	124	88	1701	86	96	1472	51
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.:	164	909	151	0	499	124	88	1701	86	96	1472	51

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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	2.00	1.00	0.00	2.00	1.00	1.00	2.86	0.14	1.00	2.90	0.10
Final Sat.:	1600	3200	1600	0	3200	1600	1600	4523	231	1600	4593	161

Capacity Analysis Module:

Vol/Sat:	0.10	0.28	0.09	0.00	0.16	0.08	0.06	0.38	0.37	0.06	0.32	0.32
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #4 Canon @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.734
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 55 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	0	0	0	1	0	3	0	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	0	0	0	158	0	145	122	1226	0	0	2067	114
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	158	0	145	122	1226	0	0	2067	114
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	158	0	145	122	1226	0	0	2067	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	158	0	145	122	1226	0	0	2067	114
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	0	0	158	0	145	122	1226	0	0	2067	114

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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	0.99	1.00	1.00	0.99	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.84	0.16
Final Sat.:	0	0	0	1600	0	1600	1600	4752	0	0	4504	251

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.09	0.08	0.26	0.00	0.00	0.46	0.45
Crit Moves:				****				****				****

```

-----
                        Level Of Service Computation Report
                    ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
*****
Intersection #5 Crescent @ Wilshire
*****
Cycle (sec):          100                Critical Vol./Cap. (X):          0.777
Loss Time (sec):      10 (Y+R = 4 sec) Average Delay (sec/veh):        xxxxxx
Optimal Cycle:        62                Level Of Service:              C
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----
Control:      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  0  1  0      1  0  0  1  0      1  0  2  1  0      1  0  2  1  0
-----
Volume Module:
Base Vol:      40  175  37  101  102  58  68 1334  21  25 1905  179
Growth Adj:    1.00 1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:    40  175  37  101  102  58  68 1334  21  25 1905  179
User Adj:      1.00 1.00  1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:      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:    40  175  37  101  102  58  68 1334  21  25 1905  179
Reduct Vol:    0  0  0      0  0  0      0  0  0      0  0  0
Reduced Vol:   40  175  37  101  102  58  68 1334  21  25 1905  179
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.:   40  175  37  101  102  58  68 1334  21  25 1905  179
-----
Saturation Flow Module:
Sat/Lane:      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 0.99 1.00 1.00 0.99 1.00
Lanes:         1.00 0.83  0.17 1.00 0.64  0.36 1.00 2.95 0.05 1.00 2.74 0.26
Final Sat.:   1600 1321  279 1600 1020  580 1600 4678  74 1600 4344  412
-----
Capacity Analysis Module:
Vol/Sat:      0.03 0.13  0.13 0.06 0.10  0.10 0.04 0.29  0.28 0.02 0.44  0.43
Crit Moves:    ****      ****      ****      ****
*****

```

Level Of Service Computation Report

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

Intersection #6 Rexford @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.793
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 65 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	0	1	0	0	1	0	2	1	0	1	0

Volume Module:

Base Vol:	57	246	49	129	178	50	43	1912	31	31	1638	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	57	246	49	129	178	50	43	1912	31	31	1638	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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:	57	246	49	129	178	50	43	1912	31	31	1638	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	57	246	49	129	178	50	43	1912	31	31	1638	56
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.:	57	246	49	129	178	50	43	1912	31	31	1638	56

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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	0.83	0.17	1.00	0.78	0.22	1.00	2.95	0.05	1.00	2.90	0.10
Final Sat.:	1600	1334	266	1600	1249	351	1600	4676	77	1600	4595	159

Capacity Analysis Module:

Vol/Sat:	0.04	0.18	0.18	0.08	0.14	0.14	0.03	0.41	0.40	0.02	0.36	0.35
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #12 S. Santa Monica @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.826
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 73 Level Of Service: D

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	1	1	0	1	0	1	0	1	0	1

Volume Module:

Base Vol:	35	179	24	158	358	55	37	762	64	105	1731	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	35	179	24	158	358	55	37	762	64	105	1731	119
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:	35	179	24	158	358	55	37	762	64	105	1731	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	179	24	158	358	55	37	762	64	105	1731	119
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.:	35	179	24	158	358	55	37	762	64	105	1731	119

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	1.76	0.24	1.00	1.73	0.27	1.00	1.85	0.15	1.00	2.00	1.00
Final Sat.:	1600	2822	378	1600	2774	426	1600	2952	248	1600	3200	1600

Capacity Analysis Module:

Vol/Sat:	0.02	0.06	0.06	0.10	0.13	0.13	0.02	0.26	0.26	0.07	0.54	0.07
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #13 N. Santa Monica @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.879
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 90 Level Of Service: D

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	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0

Volume Module:

Base Vol:	59	249	52	143	447	14	13	1722	65	63	1720	35
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:	59	249	52	143	447	14	13	1722	65	63	1720	35
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:	59	249	52	143	447	14	13	1722	65	63	1720	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	59	249	52	143	447	14	13	1722	65	63	1720	35
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.:	59	249	52	143	447	14	13	1722	65	63	1720	35

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	1.65	0.35	1.00	1.94	0.06	1.00	1.93	0.07	1.00	1.96	0.04
Final Sat.:	1600	2647	553	1600	3103	97	1600	3084	116	1600	3136	64

Capacity Analysis Module:

Vol/Sat:	0.04	0.09	0.09	0.09	0.14	0.14	0.01	0.56	0.56	0.04	0.55	0.55
Crit Moves:	****			****			****			****		

```

-----
Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)
*****
Intersection #10 Clifton @ Rexford
*****
Cycle (sec):      100      Critical Vol./Cap. (X):      0.554
Loss Time (sec):   10 (Y+R = 4 sec) Average Delay (sec/veh):      12.6
Optimal Cycle:     0      Level Of Service:      B
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----
Control:      Stop Sign      Stop Sign      Stop Sign      Stop Sign
Rights:      Include      Include      Include      Include
Min. Green:    0  0  0      0  0  0      0  0  0      0  0  0
Lanes:      0  1  0  0  1      0  0  1  0  0      0  0  1  0  0      0  0  1  0  0
-----
Volume Module:
Base Vol:      41  217      3      6  319      45      28  30      41      4  174      31
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:    41  217      3      6  319      45      28  30      41      4  174      31
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:     41  217      3      6  319      45      28  30      41      4  174      31
Reduct Vol:     0  0  0      0  0  0      0  0  0      0  0  0
Reduced Vol:    41  217      3      6  319      45      28  30      41      4  174      31
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.:     41  217      3      6  319      45      28  30      41      4  174      31
-----
Saturation Flow Module:
Adjustment:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:         0.16 0.84 1.00 0.02 0.86 0.12 0.28 0.30 0.42 0.02 0.83 0.15
Final Sat.:    93  495      675      11  576      81      157  168      230      11  491      87
-----
Capacity Analysis Module:
Vol/Sat:      0.44 0.44 0.00 0.55 0.55 0.55 0.18 0.18 0.18 0.35 0.35 0.35
Crit Moves:      ****      ****      ****
Delay/Veh:     12.7 12.7  7.8 14.0 14.0 14.0  9.8  9.8  9.8 11.3 11.3 11.3
Delay Adj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:    12.7 12.7  7.8 14.0 14.0 14.0  9.8  9.8  9.8 11.3 11.3 11.3
LOS by Move:    B  B  A  B  B  B  A  A  A  B  B  B
ApproachDel:    12.7      14.0      9.8      11.3
Delay Adj:      1.00      1.00      1.00
ApprAdjDel:     12.7      14.0      9.8      11.3
LOS by Appr:    B  B  A  B
*****

```

```

-----
Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)
*****
Intersection #7 Charleville @ Crescent
*****
Cycle (sec):      100      Critical Vol./Cap. (X):      0.764
Loss Time (sec):  10 (Y+R = 4 sec) Average Delay (sec/veh): 16.4
Optimal Cycle:    0      Level Of Service:      C
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----
Control:      Stop Sign      Stop Sign      Stop Sign      Stop Sign
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 0 1! 0 0      0 0 1! 0 0      0 0 1! 0 0
-----
Volume Module:
Base Vol:      8 134 28      9 70 50      41 170 11      32 450 52
Growth Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:    8 134 28      9 70 50      41 170 11      32 450 52
User Adj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:     8 134 28      9 70 50      41 170 11      32 450 52
Reduct Vol:     0 0 0      0 0 0      0 0 0      0 0 0
Reduced Vol:    8 134 28      9 70 50      41 170 11      32 450 52
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.:     8 134 28      9 70 50      41 170 11      32 450 52
-----
Saturation Flow Module:
Adjustment:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes:         0.05 0.79 0.16 0.07 0.54 0.39 0.18 0.77 0.05 0.06 0.84 0.10
Final Sat.:    26 430 90      38 293 209 113 469 30 42 589 68
-----
Capacity Analysis Module:
Vol/Sat:      0.31 0.31 0.31 0.24 0.24 0.24 0.36 0.36 0.36 0.76 0.76 0.76
Crit Moves:      ****      ****      ****
Delay/Veh:    11.2 11.2 11.2 10.4 10.4 10.4 11.3 11.3 11.3 21.6 21.6 21.6
Delay Adj:     1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:   11.2 11.2 11.2 10.4 10.4 10.4 11.3 11.3 11.3 21.6 21.6 21.6
LOS by Move:   B B B B B B B B B C C C
ApproachDel:   11.2      10.4      11.3      21.6
Delay Adj:     1.00      1.00      1.00      1.00
ApprAdjDel:    11.2      10.4      11.3      21.6
LOS by Appr:   B B B B C
*****

```

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

Intersection #11 Clifton @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.435
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 11.0
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	0	0	0	1	0	0	1

Volume Module:

Base Vol.:	33	295	21	36	255	48	13	20	5	61	121	93
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	33	295	21	36	255	48	13	20	5	61	121	93
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:	33	295	21	36	255	48	13	20	5	61	121	93
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	33	295	21	36	255	48	13	20	5	61	121	93
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.:	33	295	21	36	255	48	13	20	5	61	121	93

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.19	1.69	0.12	0.21	1.51	0.28	0.34	0.53	0.13	0.22	0.44	0.34
Final Sat.:	112	1015	73	125	907	175	184	283	71	140	278	214

Capacity Analysis Module:

Vol/Sat:	0.30	0.29	0.29	0.29	0.28	0.27	0.07	0.07	0.07	0.43	0.43	0.43
Crit Moves:	****			****			****			****		
Delay/Veh:	10.9	10.7	10.6	10.9	10.6	10.3	9.4	9.4	9.4	12.2	12.2	12.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.9	10.7	10.6	10.9	10.6	10.3	9.4	9.4	9.4	12.2	12.2	12.2
LOS by Move:	B	B	B	B	B	B	A	A	A	B	B	B
ApproachDel:	10.7			10.6			9.4			12.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.7			10.6			9.4			12.2		
LOS by Appr:	B			B			A			B		

Level Of Service Computation Report

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

Intersection #1 N. Santa Monica @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 1.147
 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	0	0	2	1	1	2	0	1	1	0	1	0	2	0	1

Volume Module:

Base Vol:	0	1092	177	0	1283	691	671	1510	26	172	1498	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1092	177	0	1283	691	671	1510	26	172	1498	32
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	1092	177	0	1283	691	671	1510	26	172	1498	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1092	177	0	1283	691	671	1510	26	172	1498	32
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	1092	177	0	1283	691	671	1510	26	172	1498	32

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	0.99	1.00	1.00	0.99	1.00
Lanes:	0.00	2.00	1.00	0.00	2.60	1.40	2.00	1.97	0.03	1.00	2.00	1.00
Final Sat.:	0	3200	1600	0	4160	2240	2880	3114	54	1600	3168	1600

Capacity Analysis Module:

Vol/Sat:	0.00	0.34	0.11	0.00	0.31	0.31	0.23	0.48	0.48	0.11	0.47	0.02
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #3 Beverly @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.933

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

Optimal Cycle: 120 Level Of Service: E

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Permitted					Permitted					Protected					Protected				
Rights:	Include					Include					Include					Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Lanes:	1	0	2	0	1	0	0	2	0	1	1	0	2	1	0	1	0	2	1	0

Volume Module:

Base Vol:	146	956	145	0	699	196	184	1897	137	153	1340	91
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:	146	956	145	0	699	196	184	1897	137	153	1340	91
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:	146	956	145	0	699	196	184	1897	137	153	1340	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	956	145	0	699	196	184	1897	137	153	1340	91
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.:	146	956	145	0	699	196	184	1897	137	153	1340	91

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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	2.00	1.00	0.00	2.00	1.00	1.00	2.80	0.20	1.00	2.81	0.19
Final Sat.:	1600	3200	1600	0	3200	1600	1600	4432	323	1600	4450	305

Capacity Analysis Module:

Vol/Sat:	0.09	0.30	0.09	0.00	0.22	0.12	0.12	0.43	0.42	0.10	0.30	0.30
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #4 Canon @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.667
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 46 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	3	0	0	0

Volume Module:

Base Vol:	0	0	0	235	0	236	149	1475	0	0	1401	151
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	235	0	236	149	1475	0	0	1401	151
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	235	0	236	149	1475	0	0	1401	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	235	0	236	149	1475	0	0	1401	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	0	0	0	235	0	236	149	1475	0	0	1401	151

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	0.99	1.00	1.00	0.99	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.71	0.29
Final Sat.:	0	0	0	1600	0	1600	1600	4752	0	0	4290	467

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.15	0.00	0.15	0.09	0.31	0.00	0.00	0.33	0.32
Crit Moves:	*****											

Level Of Service Computation Report

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

Intersection #5 Crescent @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.817
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 71 Level Of Service: D

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	0	1	0	0	1	0	2	1	0	0

Volume Module:

Base Vol:	25	189	50	177	204	104	86	1902	27	40	1737	179
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	25	189	50	177	204	104	86	1902	27	40	1737	179
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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:	25	189	50	177	204	104	86	1902	27	40	1737	179
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	189	50	177	204	104	86	1902	27	40	1737	179
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.:	25	189	50	177	204	104	86	1902	27	40	1737	179

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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	0.79	0.21	1.00	0.66	0.34	1.00	2.96	0.04	1.00	2.72	0.28
Final Sat.:	1600	1265	335	1600	1060	540	1600	4685	67	1600	4308	448

Capacity Analysis Module:

Vol/Sat:	0.02	0.15	0.15	0.11	0.19	0.19	0.05	0.41	0.40	0.03	0.40	0.40
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #6 Rexford @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.835
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 76 Level Of Service: D

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	0	1	0	0	1	0	2	1	0	1	0

Volume Module:

Base Vol:	53	239	64	120	222	50	61	2090	41	36	1643	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	53	239	64	120	222	50	61	2090	41	36	1643	52
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:	53	239	64	120	222	50	61	2090	41	36	1643	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	239	64	120	222	50	61	2090	41	36	1643	52
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.:	53	239	64	120	222	50	61	2090	41	36	1643	52

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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	0.79	0.21	1.00	0.82	0.18	1.00	2.94	0.06	1.00	2.91	0.09
Final Sat.:	1600	1262	338	1600	1306	294	1600	4661	92	1600	4606	147

Capacity Analysis Module:

Vol/Sat:	0.03	0.19	0.19	0.08	0.17	0.17	0.04	0.45	0.44	0.02	0.36	0.35
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #12 S. Santa Monica @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.843
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 78 Level Of Service: D

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	1	1	0	1	1	0	1	1	0	2

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	36	499	85	82	223	35	129	1306	121	102	1243	264
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:	36	499	85	82	223	35	129	1306	121	102	1243	264
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:	36	499	85	82	223	35	129	1306	121	102	1243	264
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	499	85	82	223	35	129	1306	121	102	1243	264
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.:	36	499	85	82	223	35	129	1306	121	102	1243	264

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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	1.71	0.29	1.00	1.73	0.27	1.00	1.83	0.17	1.00	2.00	1.00
Final Sat.:	1600	2734	466	1600	2766	434	1600	2929	271	1600	3200	1600

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.02	0.18	0.18	0.05	0.08	0.08	0.08	0.45	0.45	0.06	0.39	0.17
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #13 N. Santa Monica @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 1.086
 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	1	1	0	1	1	0	1	0	1	1	0

Volume Module:

Base Vol:	114	525	234	77	223	18	9	2036	83	62	1797	84
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:	114	525	234	77	223	18	9	2036	83	62	1797	84
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:	114	525	234	77	223	18	9	2036	83	62	1797	84
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	114	525	234	77	223	18	9	2036	83	62	1797	84
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.:	114	525	234	77	223	18	9	2036	83	62	1797	84

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	1.38	0.62	1.00	1.85	0.15	1.00	1.92	0.08	1.00	1.91	0.09
Final Sat.:	1600	2213	987	1600	2961	239	1600	3075	125	1600	3057	143

Capacity Analysis Module:

Vol/Sat:	0.07	0.24	0.24	0.05	0.08	0.08	0.01	0.66	0.66	0.04	0.59	0.59
Crit Moves:	****			****				****		****		

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Clifton @ Rexford

Cycle (sec): 100 Critical Vol./Cap. (X): 0.577
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 13.8
 Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	1	0	0	0	1	0	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	40	234	3	6	314	35	72	118	53	9	107	42
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:	40	234	3	6	314	35	72	118	53	9	107	42
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:	40	234	3	6	314	35	72	118	53	9	107	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	234	3	6	314	35	72	118	53	9	107	42
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.:	40	234	3	6	314	35	72	118	53	9	107	42

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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:	0.15	0.85	1.00	0.02	0.88	0.10	0.30	0.48	0.22	0.06	0.68	0.26
Final Sat.:	80	471	625	10	544	61	167	274	123	31	363	143

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.50	0.50	0.00	0.58	0.58	0.58	0.43	0.43	0.43	0.29	0.29	0.29
Crit Moves:	****			****			****			****		
Delay/Veh:	14.4	14.4	8.2	15.3	15.3	15.3	12.7	12.7	12.7	11.1	11.1	11.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.4	14.4	8.2	15.3	15.3	15.3	12.7	12.7	12.7	11.1	11.1	11.1
LOS by Move:	B	B	A	C	C	C	B	B	B	B	B	B
ApproachDel:	14.3			15.3			12.7			11.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	14.3			15.3			12.7			11.1		
LOS by Appr:	B			C			B			B		

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #7 Charleville @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.869
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 23.6
 Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
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	0	1! 0	0	0	1! 0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	8	131	14	28	181	58	68	439	8	14	290	54
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	131	14	28	181	58	68	439	8	14	290	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	131	14	28	181	58	68	439	8	14	290	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	131	14	28	181	58	68	439	8	14	290	54
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.:	8	131	14	28	181	58	68	439	8	14	290	54

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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:	0.05	0.86	0.09	0.10	0.68	0.22	0.13	0.85	0.02	0.04	0.81	0.15
Final Sat.:	24	389	42	53	340	109	78	505	9	22	449	84

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.34	0.34	0.34	0.53	0.53	0.53	0.87	0.87	0.87	0.65	0.65	0.65
Crit Moves:	****			****			****			****		
Delay/Veh:	13.0	13.0	13.0	15.8	15.8	15.8	34.3	34.3	34.3	18.4	18.4	18.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.0	13.0	13.0	15.8	15.8	15.8	34.3	34.3	34.3	18.4	18.4	18.4
LOS by Move:	B	B	B	C	C	C	D	D	D	C	C	C
ApproachDel:	13.0			15.8			34.3			18.4		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	13.0			15.8			34.3			18.4		
LOS by Appr:	B			C			D			C		

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Clifton @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.455
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 13.1
 Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	0	0	0	1	0	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	54	344	64	87	335	69	34	94	49	34	80	76
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:	54	344	64	87	335	69	34	94	49	34	80	76
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:	54	344	64	87	335	69	34	94	49	34	80	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	344	64	87	335	69	34	94	49	34	80	76
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.:	54	344	64	87	335	69	34	94	49	34	80	76

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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:	0.23	1.49	0.28	0.35	1.37	0.28	0.19	0.53	0.28	0.18	0.42	0.40
Final Sat.:	126	824	157	191	760	161	100	276	144	95	223	212

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.43	0.42	0.41	0.45	0.44	0.43	0.34	0.34	0.34	0.36	0.36	0.36
Crit Moves:	****			****			****			****		
Delay/Veh:	13.6	13.2	12.8	14.2	13.6	13.1	12.3	12.3	12.3	12.4	12.4	12.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.6	13.2	12.8	14.2	13.6	13.1	12.3	12.3	12.3	12.4	12.4	12.4
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
ApproachDel:	13.2			13.6			12.3			12.4		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	13.2			13.6			12.3			12.4		
LOS by Appr:	B			B			B			B		

APPENDIX D
WITH-PROJECT LOS WORKSHEETS

Level Of Service Computation Report

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

Intersection #1 N. Santa Monica @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 1.073
 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 0 0 2 1 1 2 0 1 1 0 1 0 2 0 1

Volume Module:

Base Vol:	0	939	213	0	1688	537	612	1463	27	215	1295	11
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	939	213	0	1688	537	612	1463	27	215	1295	11
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	939	213	0	1688	537	612	1463	27	215	1295	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	939	213	0	1688	537	612	1463	27	215	1295	11
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	939	213	0	1688	537	612	1463	27	215	1295	11

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	0.99	1.00	1.00	0.99	1.00
Lanes:	0.00	2.00	1.00	0.00	3.00	1.00	2.00	1.96	0.04	1.00	2.00	1.00
Final Sat.:	0	3200	1600	0	4800	1600	2880	3111	58	1600	3168	1600

Capacity Analysis Module:

Vol/Sat:	0.00	0.29	0.13	0.00	0.35	0.34	0.21	0.47	0.47	0.13	0.41	0.01
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #3 Beverly @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.825
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 73 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	0	0	2	0	1	0	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	164	909	154	0	499	124	88	1720	86	98	1487	51
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:	164	909	154	0	499	124	88	1720	86	98	1487	51
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:	164	909	154	0	499	124	88	1720	86	98	1487	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	164	909	154	0	499	124	88	1720	86	98	1487	51
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.:	164	909	154	0	499	124	88	1720	86	98	1487	51

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	2.00	1.00	0.00	2.00	1.00	1.00	2.86	0.14	1.00	2.90	0.10
Final Sat.:	1600	3200	1600	0	3200	1600	1600	4526	229	1600	4594	159

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.10	0.28	0.10	0.00	0.16	0.08	0.06	0.38	0.38	0.06	0.32	0.32
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****

```

-----
                        Level Of Service Computation Report
                    ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
*****
Intersection #4 Canon @ Wilshire
*****
Cycle (sec):.          100                      Critical Vol./Cap. (X):          0.751
Loss Time (sec):       10 (Y+R = 4 sec) Average Delay (sec/veh):          xxxxxx
Optimal Cycle:         57                      Level Of Service:          C
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----
Control:      Protected      Protected      Protected      Protected
Rights:      Include      Include      Include      Include
Min. Green:    0 0 0 0 0      0 0 0 0 0      0 0 0 0 0      0 0 0 0 0
Lanes:        0 0 0 0 0      1 0 0 0 1      1 0 3 0 0      0 0 2 1 0
-----
Volume Module:
Base Vol:      0 0 0 0 158 0 145 140 1229 0 0 2084 123
Growth Adj:    1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse:    0 0 0 0 158 0 145 140 1229 0 0 2084 123
User Adj:      1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj:       1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:    0 0 0 0 158 0 145 140 1229 0 0 2084 123
Reduct Vol:    0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol:   0 0 0 0 158 0 145 140 1229 0 0 2084 123
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 0 0 0 158 0 145 140 1229 0 0 2084 123
-----
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 0.99 1.00 1.00 0.99 1.00
Lanes:        0.00 0.00 0.00 1.00 0.00 1.00 1.00 3.00 0.00 0.00 2.83 0.17
Final Sat.:    0 0 0 1600 0 1600 1600 4752 0 0 4487 268
-----
Capacity Analysis Module:
Vol/Sat:       0.00 0.00 0.00 0.10 0.00 0.09 0.09 0.26 0.00 0.00 0.46 0.46
Crit Moves:    ****                      ****                      ****
*****

```

Level Of Service Computation Report

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

Intersection #5 Crescent @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.785
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (Sec/veh): xxxxxx.
 Optimal Cycle: 64 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	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	0	1	0	0	1	0	2	1	0	1

Volume Module:

Base Vol:	47	176	37	110	110	76	71	1334	21	25	1905	181
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:	47	176	37	110	110	76	71	1334	21	25	1905	181
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:	47	176	37	110	110	76	71	1334	21	25	1905	181
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	176	37	110	110	76	71	1334	21	25	1905	181
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.:	47	176	37	110	110	76	71	1334	21	25	1905	181

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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	0.83	0.17	1.00	0.59	0.41	1.00	2.95	0.05	1.00	2.74	0.26
Final Sat.:	1600	1322	278	1600	946	654	1600	4678	74	1600	4340	416

Capacity Analysis Module:

Vol/Sat:	0.03	0.13	0.13	0.07	0.12	0.12	0.04	0.29	0.28	0.02	0.44	0.43
Crit Moves:	****			****			****				****	

Level Of Service Computation Report

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

Intersection #6 Rexford @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.795
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 66 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Protected			Protected			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	0	1	0	0	1	0	2	1	0	1	0

Volume Module:

Base Vol:	57	246	49	129	178	50	43	1921	31	31	1640	66
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:	57	246	49	129	178	50	43	1921	31	31	1640	66
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:	57	246	49	129	178	50	43	1921	31	31	1640	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	57	246	49	129	178	50	43	1921	31	31	1640	66
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.:	57	246	49	129	178	50	43	1921	31	31	1640	66

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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	0.83	0.17	1.00	0.78	0.22	1.00	2.95	0.05	1.00	2.88	0.12
Final Sat.:	1600	1334	266	1600	1249	351	1600	4677	76	1600	4568	186

Capacity Analysis Module:

Vol/Sat:	0.04	0.18	0.18	0.08	0.14	0.14	0.03	0.41	0.41	0.02	0.36	0.36
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #12 S. Santa Monica @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.829
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 74 Level Of Service: D

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

Volume Module:	North Bound					South Bound					East Bound					West Bound				
Base Vol:	35	187	24	158	366	55	37	762	64	105	1731	119								
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
Initial Bse:	35	187	24	158	366	55	37	762	64	105	1731	119								
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:	35	187	24	158	366	55	37	762	64	105	1731	119								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
Reduced Vol:	35	187	24	158	366	55	37	762	64	105	1731	119								
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.:	35	187	24	158	366	55	37	762	64	105	1731	119								

Saturation Flow Module:	North Bound					South Bound					East Bound					West Bound				
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	1.77	0.23	1.00	1.74	0.26	1.00	1.85	0.15	1.00	2.00	1.00								
Final Sat.:	1600	2836	364	1600	2782	418	1600	2952	248	1600	3200	1600								

Capacity Analysis Module:	North Bound					South Bound					East Bound					West Bound				
Vol/Sat:	0.02	0.07	0.07	0.10	0.13	0.13	0.02	0.26	0.26	0.07	0.54	0.07								
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****								

Level Of Service Computation Report

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

Intersection #13 N. Santa Monica @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.887

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

Optimal Cycle: 94 Level Of Service: D

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	1	1	0	1	1	0	1	0	1	1	0

Volume Module:

Base Vol:	59	252	57	143	449	14	13	1722	65	69	1720	35
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:	59	252	57	143	449	14	13	1722	65	69	1720	35
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:	59	252	57	143	449	14	13	1722	65	69	1720	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	59	252	57	143	449	14	13	1722	65	69	1720	35
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.:	59	252	57	143	449	14	13	1722	65	69	1720	35

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	1.63	0.37	1.00	1.94	0.06	1.00	1.93	0.07	1.00	1.96	0.04
Final Sat.:	1600	2610	590	1600	3103	97	1600	3084	116	1600	3136	64

Capacity Analysis Module:

Vol/Sat:	0.04	0.10	0.10	0.09	0.14	0.14	0.01	0.56	0.56	0.04	0.55	0.55
Crit Moves:	****			****			****			****		

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

Intersection #10 Clifton @ Rexford

Cycle (sec): 100 Critical Vol./Cap. (X): 0.561
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 12.8
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	1	0	0	0	1	0	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	51	217	3	6	319	48	30	30	41	4	174	31
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:	51	217	3	6	319	48	30	30	41	4	174	31
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:	51	217	3	6	319	48	30	30	41	4	174	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	217	3	6	319	48	30	30	41	4	174	31
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.:	51	217	3	6	319	48	30	30	41	4	174	31

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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:	0.19	0.81	1.00	0.02	0.85	0.13	0.30	0.30	0.40	0.02	0.83	0.15
Final Sat.:	111	474	673	11	569	86	163	163	223	11	486	87

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.46	0.46	0.00	0.56	0.56	0.56	0.18	0.18	0.18	0.36	0.36	0.36
Crit Moves:	****			****			****			****		
Delay/Veh:	13.1	13.1	7.8	14.2	14.2	14.2	9.9	9.9	9.9	11.4	11.4	11.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.1	13.1	7.8	14.2	14.2	14.2	9.9	9.9	9.9	11.4	11.4	11.4
LOS by Move:	B	B	A	B	B	B	A	A	A	B	B	B
ApproachDel:	13.1			14.2						11.4		
Delay Adj:	1.00			1.00						1.00		
ApprAdjDel:	13.1			14.2						11.4		
LOS by Appr:	B			B			A			B		

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

Intersection #7 Charleville @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.773
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 16.8
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
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	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	8	142	28	9	78	50	41	170	11	32	450	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	142	28	9	78	50	41	170	11	32	450	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	142	28	9	78	50	41	170	11	32	450	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	142	28	9	78	50	41	170	11	32	450	52
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.:	8	142	28	9	78	50	41	170	11	32	450	52

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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:	0.04	0.80	0.16	0.07	0.57	0.36	0.18	0.77	0.05	0.06	0.84	0.10
Final Sat.:	24	432	85	35	306	196	111	462	30	41	582	67

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.33	0.33	0.33	0.26	0.26	0.26	0.37	0.37	0.37	0.77	0.77	0.77
Crit Moves:	****			****			****			****		
Delay/Veh:	11.4	11.4	11.4	10.7	10.7	10.7	11.5	11.5	11.5	22.3	22.3	22.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.4	11.4	11.4	10.7	10.7	10.7	11.5	11.5	11.5	22.3	22.3	22.3
LOS by Move:	B	B	B	B	B	B	B	B	B	C	C	C
ApproachDel:	11.4			10.7			11.5			22.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.4			10.7			11.5			22.3		
LOS by Appr:	B			B			B			C		

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

Intersection #11 Clifton @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.464
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 11.4
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement:												
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	1	0	0	0	1	0	0	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	35	301	23	36	266	48	14	20	18	72	123	93
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	35	301	23	36	266	48	14	20	18	72	123	93
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:	35	301	23	36	266	48	14	20	18	72	123	93
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	301	23	36	266	48	14	20	18	72	123	93
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.:	35	301	23	36	266	48	14	20	18	72	123	93

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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:	0.19	1.68	0.13	0.21	1.52	0.27	0.27	0.38	0.35	0.25	0.43	0.32
Final Sat.:	113	986	76	119	897	166	145	208	187	155	265	201

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.31	0.31	0.30	0.30	0.30	0.29	0.10	0.10	0.10	0.46	0.46	0.46
Crit Moves:	****			****			****			****		
Delay/Veh:	11.2	11.1	10.9	11.2	10.9	10.6	9.5	9.5	9.5	12.8	12.8	12.8
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.2	11.1	10.9	11.2	10.9	10.6	9.5	9.5	9.5	12.8	12.8	12.8
LOS by Move:	B	B	B	B	B	B	A	A	A	B	B	B
ApproachDel:	11.1			10.9			9.5			12.8		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.1			10.9			9.5			12.8		
LOS by Appr:	B			B			A			B		

Level Of Service Computation Report

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

Intersection #1 N. Santa Monica @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 1.152
 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	0	0	1	1	0	1

Volume Module:

Base Vol:	0	1092	189	0	1283	691	671	1519	26	196	1515	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1092	189	0	1283	691	671	1519	26	196	1515	32
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	1092	189	0	1283	691	671	1519	26	196	1515	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1092	189	0	1283	691	671	1519	26	196	1515	32
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	1092	189	0	1283	691	671	1519	26	196	1515	32

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	0.99	1.00	1.00	0.99	1.00
Lanes:	0.00	2.00	1.00	0.00	2.60	1.40	2.00	1.97	0.03	1.00	2.00	1.00
Final Sat.:	0	3200	1600	0	4160	2240	2880	3115	54	1600	3168	1600

Capacity Analysis Module:

Vol/Sat:	0.00	0.34	0.12	0.00	0.31	0.31	0.23	0.49	0.48	0.12	0.48	0.02
Crit Moves:	****			****			****					****

```

-----
Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
*****
Intersection #3 Beverly @ Wilshire
*****
Cycle (sec):      100      Critical Vol./Cap. (X):      0.941
Loss Time (sec):  10 (Y+R = 4 sec) Average Delay (sec/veh):  xxxxxx
Optimal Cycle:    126      Level Of Service:      E
*****
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----
Control:      Permitted      Permitted      Protected      Protected
Rights:      Include      Include      Include      Include
Min. Green:    0      0      0      0      0      0      0      0      0      0
Lanes:      1 0 2 0 1      0 0 2 0 1      1 0 2 1 0      1 0 2 1 0
-----
Volume Module:
Base Vol:      146 956 149      0 699 196      184 1918 137      158 1381 91
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:    146 956 149      0 699 196      184 1918 137      158 1381 91
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:    146 956 149      0 699 196      184 1918 137      158 1381 91
Reduct Vol:    0      0      0      0      0      0      0      0      0
Reduced Vol:    146 956 149      0 699 196      184 1918 137      158 1381 91
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.:    146 956 149      0 699 196      184 1918 137      158 1381 91
-----
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 0.99 1.00      1.00 0.99 1.00
Lanes:      1.00 2.00 1.00      0.00 2.00 1.00      1.00 2.80 0.20      1.00 2.81 0.19
Final Sat.:    1600 3200 1600      0 3200 1600      1600 4435 320      1600 4458 297
-----
Capacity Analysis Module:
Vol/Sat:      0.09 0.30 0.09      0.00 0.22 0.12      0.12 0.43 0.43      0.10 0.31 0.31
Crit Moves:    ****
*****

```

Level Of Service Computation Report

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

Intersection #4 Canon @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.686
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 48 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	0	1	0	0	1	0	3	0	0	0

Volume Module:

Base Vol:	0	0	0	235	0	236	156	1493	0	0	1447	178
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	235	0	236	156	1493	0	0	1447	178
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	235	0	236	156	1493	0	0	1447	178
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	235	0	236	156	1493	0	0	1447	178
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	0	0	235	0	236	156	1493	0	0	1447	178

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	0.99	1.00	1.00	0.99	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	3.00	0.00	0.00	2.67	0.33
Final Sat.:	0	0	0	1600	0	1600	1600	4752	0	0	4231	526

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.15	0.00	0.15	0.10	0.31	0.00	0.00	0.34	0.34
Crit Moves:				****			****			****		

Level Of Service Computation Report

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

Intersection #5 Crescent @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.848
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 79 Level Of Service: D

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	0	1	0	0	1	0	2	1	0	1

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	28	195	50	200	222	160	104	1902	27	40	1737	188
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:	28	195	50	200	222	160	104	1902	27	40	1737	188
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:	28	195	50	200	222	160	104	1902	27	40	1737	188
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	28	195	50	200	222	160	104	1902	27	40	1737	188
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.:	28	195	50	200	222	160	104	1902	27	40	1737	188

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	0.80	0.20	1.00	0.58	0.42	1.00	2.96	0.04	1.00	2.71	0.29
Final Sat.:	1600	1273	327	1600	930	670	1600	4685	67	1600	4288	469

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.02	0.15	0.15	0.13	0.24	0.24	0.07	0.41	0.40	0.03	0.41	0.40
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #6 Rexford @ Wilshire

Cycle (sec): 100 Critical Vol./Cap. (X): 0.840
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 77 Level Of Service: D

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	0	1	0	0	1	0	2	1	0	1	0

Volume Module:

Base Vol:	53	239	64	120	223	50	61	2113	41	36	1652	55
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	53	239	64	120	223	50	61	2113	41	36	1652	55
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:	53	239	64	120	223	50	61	2113	41	36	1652	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	239	64	120	223	50	61	2113	41	36	1652	55
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.:	53	239	64	120	223	50	61	2113	41	36	1652	55

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	0.99	1.00	1.00	0.99	1.00
Lanes:	1.00	0.79	0.21	1.00	0.82	0.18	1.00	2.94	0.06	1.00	2.90	0.10
Final Sat.:	1600	1262	338	1600	1307	293	1600	4662	91	1600	4599	155

Capacity Analysis Module:

Vol/Sat:	0.03	0.19	0.19	0.08	0.17	0.17	0.04	0.45	0.45	0.02	0.36	0.36
Crit Moves:	****			****			****			****		

Level Of Service Computation Report

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

Intersection #12 S. Santa Monica @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 0.851
 Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): xxxxxx
 Optimal Cycle: 80 Level Of Service: D

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	1	1	0	0	1	0	1	0	1	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	36	517	90	82	233	35	129	1306	121	102	1243	264
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:	36	517	90	82	233	35	129	1306	121	102	1243	264
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:	36	517	90	82	233	35	129	1306	121	102	1243	264
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	517	90	82	233	35	129	1306	121	102	1243	264
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.:	36	517	90	82	233	35	129	1306	121	102	1243	264

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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	1.70	0.30	1.00	1.74	0.26	1.00	1.83	0.17	1.00	2.00	1.00
Final Sat.:	1600	2726	474	1600	2782	418	1600	2929	271	1600	3200	1600

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.02	0.19	0.19	0.05	0.08	0.08	0.08	0.45	0.45	0.06	0.39	0.17
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****

Level Of Service Computation Report

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

Intersection #13 N. Santa Monica @ Crescent

Cycle (sec): 100 Critical Vol./Cap. (X): 1.096

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	1	1	0	1	1	0	1	0	1	1	0

Volume Module:

Base Vol:	114	531	246	77	226	18	9	2036	83	69	1797	84
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:	114	531	246	77	226	18	9	2036	83	69	1797	84
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:	114	531	246	77	226	18	9	2036	83	69	1797	84
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	114	531	246	77	226	18	9	2036	83	69	1797	84
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.:	114	531	246	77	226	18	9	2036	83	69	1797	84

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	1.37	0.63	1.00	1.85	0.15	1.00	1.92	0.08	1.00	1.91	0.09
Final Sat.:	1600	2187	1013	1600	2964	236	1600	3075	125	1600	3057	143

Capacity Analysis Module:

Vol/Sat:	0.07	0.24	0.24	0.05	0.08	0.08	0.01	0.66	0.66	0.04	0.59	0.59
Crit Moves:	****			****			****			****		

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

Intersection #10 Clifton @ Rexford

Cycle (sec): 100 Critical Vol./Cap. (X): 0.585
Loss Time (sec): 10 (Y+R = 4 sec) Average Delay (sec/veh): 14.0
Optimal Cycle: 0 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	0	1	0	0	1	0	0	0

Volume Module:	North Bound			South Bound			East Bound			West Bound		
Base Vol:	43	234	3	6	314	38	76	120	53	9	107	42
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:	43	234	3	6	314	38	76	120	53	9	107	42
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:	43	234	3	6	314	38	76	120	53	9	107	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	43	234	3	6	314	38	76	120	53	9	107	42
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.:	43	234	3	6	314	38	76	120	53	9	107	42

Saturation Flow Module:	North Bound			South Bound			East Bound			West Bound		
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:	0.16	0.84	1.00	0.02	0.88	0.10	0.31	0.48	0.21	0.06	0.68	0.26
Final Sat.:	85	462	621	10	537	65	171	270	119	30	360	141

Capacity Analysis Module:	North Bound			South Bound			East Bound			West Bound		
Vol/Sat:	0.51	0.51	0.00	0.59	0.59	0.59	0.44	0.44	0.44	0.30	0.30	0.30
Crit Moves:	****			****			****			****		
Delay/Veh:	14.6	14.6	8.2	15.6	15.6	15.6	12.9	12.9	12.9	11.2	11.2	11.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	14.6	14.6	8.2	15.6	15.6	15.6	12.9	12.9	12.9	11.2	11.2	11.2
LOS by Move:	B	B	A	C	C	C	B	B	B	B	B	B
ApproachDel:	14.5			15.6			12.9			11.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	14.5			15.6			12.9			11.2		
LOS by Appr:	B			C			B			B		

APPENDIX C

AIR QUALITY ANALYSIS

AIR QUALITY IMPACT ANALYSIS

BEVERLY HILLS WILSHIRE/CRESCENT MIXED-USE
LOS ANGELES, CALIFORNIA

Prepared for:

Willdan Associates
Attn: Susan O'Carroll
13191 Crossroads Pkwy. N., #405
City of Industry, CA 91746-3497

Date:

May 21, 2002

EXISTING CONDITIONS

Climate and Meteorology

The City of Beverly Hills is located near the western edge of the Los Angeles Coastal Plan within the South Coast Air Basin. The air basin is bounded by the Pacific Ocean to the west, the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east, and San Diego County to the south. The terrain, abundant sunshine, and temperature inversions, combined with high levels of human activity, cause the South Coast Air basin to be naturally conducive to the formation of air pollution. Prevailing daytime winds come to Beverly Hills from the Pacific Ocean. Because prevailing winds entering the basin follow the southern edge of the Santa Monica Mountains, Beverly Hills is typically upwind of much of the air basin and typically has better air quality than most areas located further inland.

The weather is characterized by mild winters, when most rainfall occurs, and warm, dry summers. Average daytime temperature ranges from highs of about 80 degrees (F) in July, August and September, to 60 degrees in January and February. The warmest periods occur when Santa Ana conditions cause breezes to flow offshore from the inland deserts. Rainfall typically averages around 13 inches per year.

Ambient Air Quality Standards

National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) represent upper acceptable limits on airborne concentrations. The standards are designed to protect all aspects of the public health and welfare, with a reasonable margin of safety. The U.S. Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) establish NAAQS and CAAQS, respectively, and designate areas that are either attaining or violating the standards. In California, air quality management and regulation is jointly conducted by the CARB and air districts at the county or regional level.

The NAAQS and CAAQS are established for each of six criteria pollutants. These are ozone (O_3), carbon monoxide (CO), nitrogen dioxides (NO_2), sulfur dioxide (SO_2), particulate matter (PM), and lead. Ozone is an example of a secondary pollutant that is not emitted directly from a source (e.g., an automobile tailpipe). It is formed in the atmosphere by chemical and photochemical reactions. Reactive organic compounds (ROC), including volatile organic compounds (VOC), are regulated as precursors to ozone formation. Current NAAQS and CAAQS are shown in Table 1.

TABLE 1

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	0.12 ppm (235 µg/m ³) ⁸	Same as Primary Standard	Ethylene Chemiluminescence
	8 Hour	—		0.08 ppm (157 µg/m ³)		
Respirable Particulate Matter (PM ₁₀)	Annual Geometric Mean	30 µg/m ³	Size Selective Inlet Sampler ARB Method P (8/22/85)	—	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	24 Hour	50 µg/m ³		150 µg/m ³		
	Annual Arithmetic Mean	—		50 µg/m ³		
Fine Particulate Matter (PM _{2.5})	24 Hour	No Separate State Standard		65 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean			15 µg/m ³		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m ³)	Non-dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	None	Non-dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—		
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	—	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 µg/m ³)		—		
Lead	30 days average	1.5 µg/m ³	AIHL Method 54 (12/74) Atomic Absorption	—	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³		
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	—	Fluorescence	0.030 ppm (80 µg/m ³)	—	Pararosaniline
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (365 µg/m ³)	—	
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	1 Hour	0.25 ppm (655 µg/m ³)		—	—	
Visibility Reducing Particles	8 Hour (10 am to 6 pm, PST)	In sufficient amount to produce an extinction coefficient of 0.23 per kilometer—visibility of ten miles or more (0.07—30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70 percent. Method: ARB Method V (8/18/89).		No Federal Standards		
Sulfates	24 Hour	25 µg/m ³	Turbidimetric Barium Sulfate-AIHL Method 61 (2/76)			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Cadmium Hydroxide STRactan			
See footnotes on next page...						

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM₁₀, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. In addition, Section 70200.5 lists vinyl chloride (chloroethene) under “Ambient Air Quality Standards for Hazardous Substances.” In 1978, the California Air Resources Board (ARB) adopted the vinyl chloride standard of 0.010 ppm (26 µg/m³) averaged over a 24-hour period and measured by gas chromatography. The standard notes that vinyl chloride is a “known human and animal carcinogen” and that “low-level effects are undefined, but are potentially serious. Level is not a threshold level and does not necessarily protect against harm. Level specified is lowest level at which violation can be reliably detected by the method specified. Ambient concentrations at or above the standard constitute an endangerment to the health of the public.” In 1990, the ARB identified vinyl chloride as a Toxic Air Contaminant and determined that there was not sufficient available scientific evidence to support the identification of a threshold exposure level. This action allows the implementation of health-protective control measures at levels below the 0.010 ppm ambient concentration specified in the 1978 standard.
2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24 hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. For PM_{2.5}, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the EPA.
8. New federal 8-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18, 1997. The federal 1-hour ozone standard continues to apply in areas that violated the standard. Contact U.S. EPA for further clarification and current federal policies.

Existing Air Quality

Throughout the South Coast Air Basin, ozone is probably the pollutant of greatest concern. Ozone levels vary widely at monitoring stations throughout the basin, depending on location and time of year, but the highest levels are generally recorded at stations in the interior valleys during warm, stable periods in summer and autumn. Particulate matter is also a pollutant of concern throughout the basin.

Build-up of ozone depends on slow photochemical reactions. For this reason, ozone precursors generated in Beverly Hills tend to be carried by the prevailing ocean breezes to the areas northeast and east and cause higher pollution potential inland. Carbon monoxide is produced directly, and almost entirely, from automobiles. Because CO is non-reactive, the concentrations are highest near the sources. During cool weather and when winds are light, localized CO concentrations can become elevated near congested traffic because the pollutant is not carried away from the sources.

The ambient air quality is evaluated by directly measuring the concentrations of the regulated pollutants. The entire South Coast Air Basin is designated as a federal-level, non-attainment area for ozone (extreme), CO, and PM-10 and the basin has recently improved from non-attainment to attainment with the NAAQS for NO₂. The South Coast Air Basin is a state-level, non-attainment area for ozone, CO (Los Angeles County only), and PM-10.

The ambient air quality in the City of Beverly Hills is characterized by readings taken at the nearest SCAQMD monitoring station. The West Los Angeles Station is located at the Veterans Administration facility in Westwood, approximately three miles west of the project site. Readings at the West Los Angeles monitoring station are representative of pollutant levels just outside Beverly Hills to the west. Because this station is upwind of Beverly Hills, the station provides an indication of the quality of the air that arrives at Beverly Hills before moving further inland. The station seldom records high ozone concentrations primarily because of its relative proximity to the coast. Carbon monoxide conditions at the station seldom exceed the ambient standards despite its location near the intersection of Wilshire Boulevard and the I-405 Freeway.

The federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of all current health data. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed new standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted on July 17, 1997. Implementation of these standards will be phased in over the next few years.

California standards for PM-10, which includes PM-2.5, are more stringent than the federal PM-2.5 standard. New State AAQS corresponding to the adopted federal standards are not necessary. However, because of the observed role between PM-2.5 and a variety of adverse health effects, various state agencies have proposed adoption of State AAQS for PM-2.5 that are more stringent than federal standards. Final consideration by Cal EPA for proposed new state standards for PM-2.5 is scheduled for June, 2002.

Planning and enforcement of the new federal standards for PM-2.5 and for ozone (8-hour) were put on hold through a decision by the U.S. Court of Appeals. While the Appeals Court ruled that EPA did not have discretionary authority to adopt national clean air standards without specific congressional approval, the U.S. Supreme Court unanimously reversed this decision in February 2001. The Court ruled that EPA did not require specific congressional approval to promulgate national clean air standards, and that a cost:benefit analysis was not required for such standards. The Court did find that there was an implementation schedule inconsistency between old and new ozone standards, and stayed final approval of the standards until the schedule issue is resolved. Data collection for these standards is ongoing, but implementation planning is still awaiting schedule revisions.

Particulate measurements are not made at the West Los Angeles AQMD station. The nearest particulate (PM-10) monitoring data resource is in downtown Los Angeles. Table 2 summarizes the last five years of published data for the West Los Angeles air monitoring station, supplemented with inhalable particulate (PM-10 and PM-2.5) data from the downtown Los Angeles (North Main) station as most representative of project site conditions. Healthful air quality is observed on almost every day with only minor excursions above standards.

TABLE 2

**BEVERLY HILLS AREA AMBIENT
AIR QUALITY MONITORING SUMMARY 1996-2000**
(Days Standards Were Exceeded
and Observed Maximum Concentrations)

(Entries shown as ratios = samples exceeding standard/samples taken)

Pollutant/Standard	1996	1997	1998	1999	2000
<u>Ozone:</u>					
1-Hour > 0.09 ppm	13	6	7	4	2
1-Hour > 0.12 ppm	1	0	1	0	0
8-Hour > 0.08 ppm	4	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.14	0.11	0.13	0.12	0.10
<u>Carbon Monoxide:</u>					
1-Hour > 20. ppm	0	0	0	0	0
8-Hour > 9.1 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	7	7	7	6	6
Max. 8-Hour Conc. (ppm)	4.5	4.4	4.5	3.8	4.3
<u>Nitrogen Dioxide:</u>					
1-Hour > 0.25 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.18	0.14	0.13	0.13	0.16
<u>Particulate Sulfate:</u>					
24-Hour > 25 $\mu\text{g}/\text{m}^3$	0/55	0/56	0/64	-/--	0/60
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	12.2	14.0	10.6	---	16.4
<u>Inhalable Particulates (PM-10):</u>					
24-Hour > 50 $\mu\text{g}/\text{m}^3$	11/60	15/60	10/59	19/60	15/60
24-Hour > 150 $\mu\text{g}/\text{m}^3$	0/60	0/60	0/59	0/60	0/60
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	138.	102.	80.	88.	80.
<u>Ultrafine Particulates (PM-2.5)</u>					
24-Hour > 65 $\mu\text{g}/\text{m}^3$	-/---	-/---	-/---	2/136	11/334
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	---	---	---	69.3	87.8

Source: SCAQMD West Los Angeles and Downtown North Main (PM-10 data) Air Quality Monitoring Stations.

Ozone is the only gaseous pollutant that exceeds clean air standards with any substantial frequency in the project area. The federal ozone standard was exceeded on an average of 15 days per year in the late 1980s and on 10 days per year in the early '90s. The more stringent state standard was exceeded on around 60 days per year in the late '80s and on 30-40 days in the early '90s. By the mid-'90s, there were less than 20 days exceeding the State standard and almost no days over the federal standard. The last recorded first-stage smog episode (1-hour ≥ 0.20 ppm) in West Los Angeles was in 1989. The very positive improvement trend in basin air quality was best seen in 1999-2000 which recorded the following new air quality "bests":

- least number of days exceeding state ozone standard (two[°])
- least number of days exceeding federal ozone standard (zero^{°/*})
- lowest one-hr. annual maximum ozone level (0.10 ppm[°])
- lowest one-hr. CO level on record (6 ppm^{°/*})
- lowest eight-hour CO level on record (3.8 ppm^{*})
- lowest one-hour NO₂ level on record (0.13 ppm^{*})

° = in 2000

* = in 1999

Air Pollution Source Inventory

The existing use of the project site is retail and surface parking. Emissions in the vicinity of the project are generated by residential, commercial, retail and office-oriented sources and operation of on-road motor vehicles. In comparison to the emissions caused by vehicles (called mobile sources), the other fixed sources in the vicinity of the project (called stationary- and area-sources) do not contribute substantially to the emissions inventory. Stationary- and area-sources include energy use and natural gas combustion for heating, cooling, and ventilation systems, restaurant cooking exhaust, landscaping activities like leaf blowers, and use of consumer products such as hair sprays and paints.

Throughout the South Coast Air Basin, on-road motor vehicles account for a large portion of ozone precursor (ROG and NO_x) and CO emissions. Furthermore, large proportions of PM-10 emissions are attributed to airborne dust from paved and unpaved roads due to on-road vehicle travel. In 2000, 63 percent of basinwide nitrogen oxides (NO_x) and 51 percent of reactive organic gases (ROG) resulted

from on-road vehicles. On-road sources account for 81 percent of all CO. Therefore, control of motor vehicle emissions is a major component of regional air quality attainment plans.

Nearby Sensitive Receptors

The ambient air quality standards are health based and set at levels to protect the most sensitive members of the population with an adequate margin of safety. Some land uses may house persons who are especially sensitive to air pollution. These are called "sensitive receptors." Surrounding the project site are office, restaurant, and retail uses, multi-family residential units and a pocket park across Crescent Drive, a hotel immediately across Wilshire Boulevard, and senior housing northwest of the site. Another seniors housing facility will be operating on the corner of Clifton and Crescent adjacent to the proposed Wilshire/Crescent mixed-use project. Adjacent apartment buildings and the seniors housing (existing and proposed) are the closest sensitive receptors to the project site.

Air Quality Management Planning Requirements

The South Coast Air Basin has a history of recorded air quality violations and is an area where both state and federal ambient air quality standards are exceeded. Because of the violation of the CAAQS, the California Clean Air Act requires triennial preparation of an Air Quality Management Plan (AQMP) to achieve the standards. Air quality management plans are prepared by the South Coast Air Quality Management District (SCAQMD) with technical and policy inputs from the U. S. EPA, the CARB, and the Southern California Association of Governments. The most recent plan is the 1997 AQMP (with amendments adopted in October 1999). This plan, approved by the USEPA in 2000, is the South Coast Air Basin portion of the State Implementation Plan (SIP). The SIP outlines steps required to achieve the standards while allowing for growth projected by the Southern California Association of Governments.

General development such as the proposed Beverly Hills Wilshire Mixed-Use do not directly relate to the AQMP. The linkage between projects that generate mainly mobile source pollution and air quality planning occurs through the consistency of SCAG's growth forecasts. The growth forecasts in the regional comprehensive plan (RCP) are coupled with the regional transportation plan (RTP) which predicts future regional levels of vehicular air pollution for use in the AQMP. Project consistency with the RCP in general would imply that a project is consistent with the clean air plan. Except for those AQMP measures that relate specifically to certain industries, and those measures that specify specific transportation management procedures, there is no direct relationship between general development and regional air quality management planning.

Although the AQMP is a growth-accommodating document, the SCAQMD recommends that regional impact significance be evaluated in terms of direct project-related emissions rather than by planning consistency. Inconsistency would thus be a potential source of impact significance, as would emissions exceeding de minimis thresholds relative to regional (ozone) air quality.

AIR QUALITY IMPACT ANALYSIS

Standards of Significance

Air quality impacts are considered significant if they cause clean air standards to be violated where they are currently met, or if they substantially contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure would also be considered a significant impact.

Air quality impacts can occur locally near a source if the pollutants are already emitted in their most harmful form. Many pollutants, however, require a subsequent transformation before their exposure is maximally unhealthful. Such pollutants are called "secondary pollutants." Photochemical smog (mostly ozone) is the most common secondary pollutant in Southern California. This transformation of precursor emissions into secondary pollutants may take several hours and occur miles away from the source. During such transport, the emissions from any single source will be diluted to an immeasurably small amount.

Because the emissions from any one source can typically not be translated directly into an ambient air quality impact, the SCAQMD in its 1993 "CEQA Air Quality Handbook" has developed a set of surrogate factors to indirectly assess potential significance. These factors are based on the amount of emissions themselves. The SCAQMD recommends that the following project-related emission levels should be considered to have an individually and cumulatively significant air quality impact if they represent an increase over existing regional emissions:

Reactive Organic Gases (ROG)	-	55 pounds/day
Nitrogen Oxides (NO _x)	-	55 pounds/day
Carbon Monoxide (CO)	-	550 pounds/day
Sulfur Dioxide (SO ₂)	-	150 pounds/day
Particulate Matter (PM-10)	-	150 pounds/day

During construction the above significance thresholds for ROG and NO_x, the two main ozone precursor emissions, are relaxed to 75 and 100 pounds per day, respectively.

The SCAQMD Handbook also identifies a number of secondary sources of potentially significant impacts. These sources include:

- inconsistency with growth projections in underlying regional plans
- microscale "hot spot" potential
- generation of odors, dust or other nuisance
- hazardous or air toxic emissions

These sources should be quantified for evaluation on a project-specific basis. If quantitative analysis is not feasible, they should at least be addressed on a qualitative basis.

Construction Activity Impacts

The primary source of construction activity impact is normally dust released from soil disturbance. Respirable dust (PM-10) emissions from construction activities are difficult to quantify because they depend upon many controlling factors. These include silt content of the soil, moisture level, wind speed, volume of soil disturbed, etc.

In the absence of definite information on multiple variables, the SCAQMD recommends use of a "default" PM-10 generation factor of 26.4 pounds per day per acre of surface disturbed. This factor presumes use of standard dust control (periodic watering) as required by SCAQMD Rule 403 (fugitive dust).

Project-related PM-10 (dust) emissions will occur during demolition of existing improvements, during any subterranean excavation, and during equipment movement on unpaved surfaces. For a 1.7 acre project site, calculated daily PM-10 emissions of 45 pounds will be well below the 150 pound per day threshold considered as regionally significant by the SCAQMD. Any dust emissions concerns would focus more on larger diameter particles that rapidly settle out after leaving the site rather than small particulate matter that remains semi-suspended for extended periods. Deposition of larger particles on parked cars, outdoor furniture or other surfaces may create a temporary soiling nuisance. Because of the proximity of pollution-sensitive uses near the proposed project site, care must be used in dust control to minimize nuisance potential even if the total quantity of emissions is well below significance thresholds.

Construction also involves use of heavy equipment for site preparation and facilities construction. State-wide equipment activity levels average around 250,000 Brake-Horsepower-Hours (BHP-HR) per acre of heavy commercial construction from off-road equipment and on-road haul trucks. Project construction entailing heavy equipment is estimated to span 100 work-days. Average daily on-site emissions from a diesel powered equipment fleet are as follows:

Emissions (pounds/day)		
<u>Pollutant</u>	<u>Project Construction</u>	<u>SCAQMD Threshold</u>
CO	8.1	550.
ROG	2.6	75.
NO _x	36.6	100.
SO _x	2.6	150.
PM-10	1.3	150.

Source: SCAQMD Handbook (1993), Table A9-3-A.

As with the construction PM-10 emissions, daily equipment exhaust will be well below SCAQMD thresholds. Any perceptible impact from equipment exhaust emissions would be due to occasionally noticeable diesel exhaust odor near any individual piece of equipment. Because of the small total volume of emissions and the mobility of the sources themselves, air quality standards will not be threatened during construction.

Diesel exhaust particulates contain cancer-causing compounds. Use of diesel-powered heavy equipment will temporarily increase local receptor exposure to carcinogenic emissions. The carcinogenicity of such materials is based upon an assumed 70-year lifetime exposure, 365 days per year, 24-hours per day, outdoors on the deck or front porch. These factors obviously are not applicable to a construction project spanning a limited period of time when the closest receptors are indoors, or perhaps away at work. Because any exposure to cancer-causing agents is undesirable, even in very limited amounts, mitigation measures are recommended even if quantitative significance thresholds are not exceeded.

Given the age of the existing structures proposed for demolition, there may be small amounts of asbestos containing materials (ACMs) in roofing or flooring. If ACMs are present in any structure, they must be removed prior to demolition by licensed contractors using control methods prescribed in SCAQMD Rule 1403. Rule 1403 covers every phase of assessment, removal and disposal. Depending upon the friability (powdering tendency) of the ACMs, removal procedures range from persons wearing respirators inside sealed rooms ventilated with high efficiency particulate filtration to simply wetting down the surface to scrape off the ACMs. Disposal by licensed haulers must be at special hazardous waste facilities constructed to securely entomb the materials for perpetuity. Thus, while there may be some concerns regarding ACMs within the existing building, adequate mechanisms are in place to insure safe exposure for both abatement workers as well as the general public.

New construction also utilizes paints, stains and other surface treatments that emit volatile organic compounds (VOCs) when applied. The VOCs evaporate quickly which allows the coating to dry and harden. VOCs also help the coatings to keep pigments in proper suspension. Even good water-based coatings have around two pounds of VOCs per gallon. Application of more than 37.5 gallons of such paint per day would cause the 75 pound per day of reactive organic compounds (which is what most VOCs are) significance threshold to be exceeded. Maintaining a less than significant threshold entails use of building materials that are pre-coated under factory conditions, or limiting the amount of paint and other VOC-containing compounds applied on a given day. For a single structure such as this project, daily paint application is likely 30 gallons per day or less. This application rate is small enough to prevent the significance threshold for VOCs from being exceeded.

Although construction activity air quality impacts are less than significant, the small distance buffer between site activities and the nearest neighbors could create possible nuisance impacts even if significance thresholds are not exceeded. Mitigation measures are thus recommended for inclusion in construction permits to minimize nuisance potential even if they are not mandatory to achieve a level of insignificance.

Site Operations Emissions Impacts

By far, the greatest project-related air quality concern derives from the mobile source emissions that will be generated from project site residents and limited commercial activities. The project traffic consultant estimates that 1,296 "new" weekday vehicle trips will be generated at full site development.

The SCAQMD calculates that the average one-way trip length of residential development is 7-8 miles/trip. Project implementation would add approximately 10,000 weekday vehicle miles traveled (VMT) to the existing regional VMT burden of around 300 million VMT per day. Project energy demand met by burning fossil fuels in regional power plants will add a small NO_x increment from project operations, and add very minute amounts of other pollutants.

Project operational emissions can be readily calculated using computerized procedures developed by the California Air Resources Board (CARB) for urban growth mobile source emissions. The emissions model, called URBEMIS7G, was run using the trip generation factors specified by the project traffic consultant for this specific project. The models were run for a 2005 buildout year for weekday traffic.

Table 3 summarizes the project-related operational emissions. Project-related mobile source emissions are less than the SCAQMD CEQA Handbook significance threshold. In the absence of any secondary considerations, emission levels below the recommended threshold should be found to have an individually less-than-significant air quality impact.

Microscale Air Quality Impacts

At street level, a microscale impact screening approach based on the California line source dispersion model CALINE4 was used to estimate sensitive receptor air pollution exposure near the proposed project area. This screening procedure is based on the recently released/revised U.C. Davis-Caltrans CO analysis protocols (1997) approved by the EPA for use in California and was used to estimate combined local plus regional background carbon monoxide (CO) levels at 25 feet from any roadway edge in the project vicinity. The screening procedure combined worst-case dispersion conditions with both the a.m. and p.m. peak hour traffic hours.

TABLE 3

PROJECT-RELATED MOBILE SOURCE EMISSIONS

<u>Scenario</u>	<u>Emissions (lb/day)</u>			
	<u>CO</u>	<u>ROG</u>	<u>NOx</u>	<u>PM-10</u>
<u>Existing</u>				
On-Road Mobile*	14.2	1.9	2.3	1.4
<u>With Project (2005)</u>				
On-Road Mobile*	97.3	12.8	15.0	9.9
Net Increase	83.1	10.9	12.7	8.5
SCAQMD Threshold	550.	55.	55.	150.
Exceeds Threshold (?)	No	No	No	No

* - CARB UBEMIS7G Air Quality Model; Output in Appendix

Travel speed/congestion effects were modeled by segregating inbound turning movements from outbound travel volumes. An average delay per vehicle was assigned to inbound volumes which increases the local CO emissions due to vehicle queuing waiting for the light. Extra delays ranged from less than 5 seconds at an intersection operating at LOS = A to 75 seconds per vehicle for an LOS = F intersection. Calculations were performed for existing conditions, as well as for future (2005) no-project and with-project scenarios.

Results of the microscale CO impact analysis for the 10 intersections analyzed are shown in Tables 4A and 4B for the 3 scenarios analyzed. The values in Tables 4A and 4B are worst-case conditions in that they presume that the theoretical maximum local microscale CO exposure and the maximum regional background occur at the same day/hour. Use of 6.0 ppm as measured at the West Los Angeles Air Quality Monitoring Station for both existing and build out years assumes this level remains unchanged through the year 2005. The values in Tables 4A and 4B are thus theoretical worst-case predictions.

TABLE 4A

MICROSCALE IMPACT ANALYSIS - ONE HOUR
 (CO concentration in ppm at 25 feet from edge of pavement)
 (California one-hour CO standard = 20 ppm)

(A.M. Peak Hour)

<u>Intersection</u>	<u>Exist.</u>	<u>Future (2005) No Proj.</u>	<u>Future (2005) W/Proj.</u>
Crescent Dr. & S. Santa Monica	11.2	10.4	10.4
Beverly Dr. & Wilshire Blvd.	10.8	11.2	11.3
Wilshire Blvd. & Crescent Dr.	10.4	9.8	9.8
Wilshire Blvd. & Cañon Drive	9.5	9.8	9.8
Rexford Dr. & Wilshire Blvd.	10.4	9.8	9.8
Rexford Dr. & Clifton Way	6.7	6.6	6.6
N. Santa Monica Blvd. & Crescent Dr.	11.5	10.7	10.7
Crescent Dr. & Charleville Blvd.	6.8	6.9	6.9
N. Santa Monica Blvd. & Wilshire Blvd.	18.9	17.1	17.1
Crescent Dr. & Clifton Way	6.7	6.6	6.7

Including a regional one-hour CO background level of 6.0 ppm (2000) as per SCAQMD Handbook (Table 5-2).

Source: Screening procedure based on CALINE4 computer model.

TABLE 4B

MICROSCALE IMPACT ANALYSIS - ONE HOUR
 (CO concentration in ppm at 25 feet from edge of pavement)
 (California one-hour CO standard = 20 ppm)

(P.M. Peak Hour)

<u>Future Intersection</u>	<u>Exist.</u>	<u>(2005) No Proj.</u>	<u>Future (2005) W/Proj.</u>
Crescent Dr. & S. Santa Monica	10.9	10.1	10.1
Beverly Dr. & Wilshire Blvd.	12.7	13.4	13.5
Wilshire Blvd. & Crescent Dr.	10.3	10.9	11.1
Wilshire Blvd. & Cañon Drive	9.1	8.7	8.7
Rexford Dr. & Wilshire Blvd.	10.7	11.1	11.1
Rexford Dr. & Clifton Way	6.8	6.7	6.7
N. Santa Monica Blvd. & Crescent Dr.	16.5	15.1	15.1
Crescent Dr. & Charleville Blvd.	7.2	7.0	7.0
N. Santa Monica Blvd. & Wilshire Blvd.	18.7	17.1	17.1
Crescent Dr. & Clifton Way	7.0	6.8	6.9

Including a regional one-hour CO background level of 6.0 ppm (2000) as per SCAQMD Handbook (Table 5-2).

Source: Screening procedure based on CALINE4 computer model.

Even with a "worst-case local" and simultaneous "worst-case background assumption, Tables 4A and 4B shows that peak hour CO levels even in very close proximity to the analyzed roadways may approach, but do not exceed the California one-hour CO standard of 20 ppm. All exposures are far below the federal one-hour standard of 35 ppm. Peak hourly CO levels of 10-18 ppm occur near major arterial intersections which are mainly commercial areas without "sensitive receptors" present. In residential areas, peak one-hour CO levels (combined local + maximum background) are less than 10 ppm (less than 50 percent of the most stringent standard). Project implementation will not individually or cumulatively create any CO "hot spots" in the project vicinity.

The increase in worst-case CO exposure due to Wilshire/Crescent mixed-use project traffic is +0.2 ppm ("w/Proj." minus "No Proj." in Tables 4A and 4B). A less than one ppm change is considered a de minimis change in SCAQMD Rule 1303 (air quality impact modeling). Microscale air quality will thus remain healthful with a large margin of safety, and any degradation to local air quality impacts are predicted to be negligible even under artificial worst-case assumptions.

IMPACT MITIGATION

Air quality impacts are predicted to be less than significant. The site is too small for any substantial levels of dust or equipment exhaust to be generated that would exceed SCAQMD thresholds. Vehicular emissions for the site-specific travel fleet are less than levels which the SCAQMD recommends as being designated as individually or cumulatively significant. Microscale air quality is unaffected by any traffic congestion effects.

Although there are no impacts exceeding accepted significance thresholds, the close proximity of adjacent residents to project construction and operations creates a potential for nuisance impacts, particularly during constructions. Emissions from construction activities should therefore be minimized where possible. Project conditions for approval should incorporate emissions control requirements to address these non-traffic impact concerns. Recommended conditions include:

- o Using adequate water for dust control (preferably using reclaimed water).
- o Terminating earth disturbance during high wind (>25 mph)

conditions.

- o Operating street sweepers or roadway washing trucks on adjacent roadways to remove dirt dropped by construction vehicles or dried mud carried off by trucks moving dirt or bringing construction materials.
- o Covering trucks or wetting down loads of any dirt hauled to or from the project site.
- o Performing low-NO_x emissions tune-ups on on-site equipment operating on-site for more than 60 days.
- o Requiring on-site contractors to operate a congestion control program including:
 1. Rideshare incentives for construction personnel
 2. Off-street parking for construction contractors
 3. Lane closures limited to non-peak traffic hours
 4. Receipt of construction materials scheduled for non-peak traffic periods where possible.

URBEMIS7G COMPUTER MODEL OUTPUT

BEVERLY HILLS WILSHIRE/CRESCENT MIXED-USE

- Existing Replaced Uses
- 1,296 "New" Weekday Trips

APPENDIX D

NOISE ANALYSES

NOISE IMPACT ANALYSIS

BEVERLY HILLS WILSHIRE/CRESCENT MIXED USE
LOS ANGELES, CALIFORNIA

Prepared for:

Willdan Associates
Attn: Susan O'Carroll
13191 Crossroads Pkwy. N., #405
City of Industry, CA 91746-3497

Date:

May 15, 2002

EXISTING CONDITIONS

Noise Descriptors

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally considered to be unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

The decibel (dB) scale is used to quantify sound pressure levels. Although decibels are most commonly associated with sound, "dB" is a generic descriptor that is equal to ten times the logarithmic ratio of any physical parameter versus some reference quantity. For sound, the reference level is the faintest sound detectable by a young person with good auditory acuity.

Since the human ear is not equally sensitive to all sound frequencies within the entire auditory spectrum, human response is factored into sound descriptions by weighting sounds within the range of maximum human sensitivity more heavily in a process called "A-weighting", written as dB(A). Any further reference in this discussion to decibels written as "dB" should be understood to be A-weighted.

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called LEQ), or alternately, as a statistical description of the sound pressure level that is exceeded over some fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Ldn (day-night) or the Community Noise Equivalent Level (CNEL). The CNEL metric has gradually replaced the Ldn factor, but the two descriptors are essentially identical.

Noise Standards

An interior CNEL of 45 dB is mandated by state law for multiple family dwellings, and is considered a desirable interior noise exposure for single family dwelling units as well. Since typical

noise attenuation within residential structures may range from 10 to 25 dB, depending on door and window positions, an exterior noise exposure of 55 to 70 dB CNEL or Ldn is thus typically the design exterior noise exposure for new residential dwellings in California that meets a 45 dB interior goal. Because commercial or industrial uses are not occupied on a 24-hour basis, a less stringent noise/ land use compatibility criterion is generally specified for these less noise sensitive land uses.

CNEL-based noise standards generally apply to sources preempted from local control such as motor vehicles, aircraft, trains, etc. They focus more on the land use authority of a jurisdiction related to siting a use in a given noise environment rather than control of the source itself. CNELs are the noise metric that is required for use in the Noise Element of the General Plan. Authority of the adoption of a Noise Element and implementation of noise/land use compatibility standards derives from the California Public Resources Code.

Land use siting decisions relative to ambient traffic noise are thus made on the basis of CNELs. The City of Beverly Hills noise policy is to achieve a 65 dB CNEL exterior noise level at any usable exterior space in noise-sensitive development. Usable space is any outdoor recreation environment such as yards, patios, etc. If future noise levels are predicted to exceed 65 dB CNEL, mitigation in the form of barriers or other noise attenuation features (increased setback, site redesign, etc.) must be employed.

The proposed project includes ground floor commercial uses along the Wilshire Blvd. frontage. Interior noise is the appropriate noise evaluation criterion for commercial uses. Noise levels of 50 dB CNEL are considered an acceptable exposure for retail activities. Structural attenuation for retail buildings with closed doors/windows is 20-25 dB. Exterior noise levels of 70-75 dB CNEL can therefore be easily accommodated while still meeting interior noise standards.

For noise sources not preempted from local control, the California Health & Safety Code provides the authority for creation of a noise ordinance as part of the municipal code. State law contains a blanket prohibition against creation of a noise nuisance. A noise nuisance is one that annoys, irritates or offends any considerable number of people of normal auditory sensitivity. Abatement of noise under nuisance rule, however, is difficult. It generally requires a legal finding that a noise is a nuisance which may then entail hearings, appeals, etc. For a temporary noisy activity, it is often finished long before the legal process under the nuisance rule runs its course.

The City of Beverly Hills has incorporated the nuisance prohibition into its municipal code, including the provision for judicial relief through summary abatement, restraining order or injunction. The ordinance prohibits the creation of noise that causes discomfort or annoyance to reasonable people of normal sensitiveness. However, the definition of "discomfort or annoyance to reasonable persons of normal sensitiveness" is open to interpretation. The City's noise ordinance, in Title 5, Chapter 1, Article 2 of the Code, therefore contains a number of specific measures and regulations that limit/prohibit the type, time or magnitude of certain noisy activities.

Section 5-1.202 limits the operation of any machinery so as to increase the noise level on an adjacent property by more than five (5) decibels. This criterion is most often applied to air conditioners, pool pumps or similar mechanical equipment. It would also apply to any on-site commercial uses, or to existing commercial uses accessed via the rear alley behind Cañon Drive. Whereas existing site use for parking represents no noise sensitivity to any existing commercial activities, site conversion to residential use may create a constraint to current commercial activities in the alley.

Baseline Noise Levels

As part of environmental studies for previously proposed site uses, extended (24+ hours) noise measurements were made in the project vicinity at adjacent residential uses to establish the baseline upon which any project impact may be superimposed. Monitoring was conducted at the apartments near the corner of Clifton/Crescent on 11/19/99. A second meter at the mid-block apartment building closest to the office building directly across Crescent from the proposed project site did not activate because of a disconnected battery. The site was revisited with 24 hour measurements made successfully on 11/29/99.

Previous project vicinity noise monitoring for the proposed Sunrise Assisted Living project had suggested that project vicinity noise levels average 62-68 dB for both peak hours and for the weighted 24-hour CNEL. The 1999 measurements duplicated the earlier project-vicinity readings as summarized in Table 1.

Observed CNELs were 64-65 dB(A) with peak one-hour levels as high as 68 dB(A) Leq. Noise levels from 7 a.m. to 9 p.m. were almost all in the low-60 dB Leq range with only minor hour-to-hour variation. Noise levels of 65 dB CNEL are considered acceptable for usable outdoor space (decks, patios, etc.), and require no

TABLE 1
PROJECT SITE NOISE MEASUREMENT SUMMARY (1999)
(dB[A])

<u>Parameter</u>	<u>Corner of Clifton/Crescent</u>	<u>Mid-Block Crescent</u>
24-Hour CNEL	65	64
Peak One-Hour	65	68
Time of Peak	10-Noon 2-4 p.m.	4-5 p.m.
Minimum One-Hour	50	47
Time of Minimum	1-2 a.m.	1-2 a.m.
1-Second Maximum	88	88
1-Second Minimum	42	42

substantial structural mitigation other than closing windows to meet interior noise standards.

While there are no usable spaces directly fronting Clifton or Crescent, interior standards are a noise concern. Because the baseline levels just marginally meet City standards for residential use, adjacent residential uses may be adversely impacted by only small noise increases that could elevate noise exposures above the desired Beverly Hills noise/land use compatibility guidelines for residential uses.

Prior to the two 24-hour measurements, short-term (15-minutes per site) noise measurements were made on October 22, 1999 at four locations at noise-sensitive residential uses near the proposed project site. The monitoring results are shown in Table 2. In order to determine any year-to-year changes in noise levels, the closest sensitive receptors were monitored again on September 26, 2000 and, most recently, on March 6, 2002. Both the 2000 and 2002 data duplicated the 1999 readings within ± 1 dB for both the average (Leq) and 50th percentile (L50) levels. Table 2 includes this most recent measurement data.

Noise level differences within the energy equivalent average (LEQ) and the 50th percentile (L50) between 1999-2002 were negligible. The LEQ at each monitoring location was +1 dB higher in 2002 than in 1999. Differences of less than 1.5 dB are indistinguishable even under laboratory conditions. There has therefore perhaps been a small noise increase in four years, but the magnitude of such an increase is imperceptibly small.

Mid-day (1-3 p.m.) noise levels were similar to long-term (24-hour) measurements. The typical daytime noise levels at building facades of the nearest noise-sensitive land uses were in the low-to mid-60 dB range. Daytime noise levels in the lower 60 dB range are thus the baseline condition upon which any project impact would be superimposed.

As previously noted, the City of Beverly Hills Municipal Noise Ordinance limits the allowable noise intrusion from one land use upon another to no more than +5 dB above ambient. Given the baseline noise observed, the appropriate noise standards that would apply to any on-site project noise generation are shown in Table 3.

In addition to off-site residential uses to the north and east, there are commercial uses to the west and south. Short-term noise measurements were therefore also made in proximity to these adjacent commercial uses as a basis for determining possible on-site noise exposure constraints from site perimeter commercial development. Two mid-day, 30-minute noise readings were made on

TABLE 2
SENSITIVE RECEIVER NOISE MONITORING RESULTS

October 22, 1999 (1-3 p.m.)

	<u>LEQ</u>	<u>Lmax</u>	<u>Lmin</u>
<u>L50</u>			
Seniors Housing on Crescent	64	76	53
Residences on Clifton (Crescent - Rexford)	62	73	52
Apartment Building* (Clifton/Crescent)	67	87	54
Apartment Building** (Crescent across from Site)	64	72	56

September 26, 2000 (2-3 p.m.)

	<u>LEQ</u>	<u>Lmax</u>	<u>Lmin</u>	<u>L50</u>
Apartment Building * (Clifton/Crescent)	68	84	54	64
Apartment Building ** (Crescent Across from Site)	64	75	54	62

March 6, 2002 (1-3 p.m.)

	<u>LEQ</u>	<u>Lmax</u>	<u>Lmin</u>	<u>L50</u>
Seniors Housing on Crescent	65	72	54	64
Residences on Clifton (Crescent- Rexford)	63	74	50	60
Apartment Buildings* (Clifton/Crescent)	68	81	57	66
Apartment Building** (Crescent across from site)	65	79	53	62

* = at the corner

** = at mid-block between Clifton and Wilshire

TABLE 3
APPLICABLE NOISE STANDARDS (dB LEQ)

<u>Time</u>	<u>Measured Baseline</u>	<u>Allowed*</u>
Late night	lower 50 dB	upper 50 dB
Early morning + late evening	upper 50 dB	lower 60 dB
7 a.m. - 10 p.m.	lower 60 dB	upper 60 dB

* Measured baseline + 5 dB increased allowed by ordinance

TABLE 4
ON-SITE NOISE MONITORING SUMMARY (dB[A])
JULY 29, 1999

<u>Location:</u>	<u>LEQ</u>	<u>Lmax</u>	<u>Lmin</u>	<u>L10</u>	<u>L50</u>	<u>L90</u>
Near Wilshire (Shanghai Grill)	69	86	56	70	64	58
Mid-Way in Alley (Rear of Restaurants & Commercial)	58	74	52	58	56	54

July 29, 1999 in the alley separating the project site from the rear of uses along Cañon Drive and/or Wilshire Blvd. Since the off-site readings have not measurably changed in various readings taken over a three-year span, it is assumed the on-site reading also have not markedly changed since 1999. The noise levels (dBA) are shown in Table 4.

The mid-alley reading of 58 dBA, as representative of much of the rear of commercial uses on Cañon Drive, is not a constraint to proposed residential uses. Noise levels in the alley are lower than along the site perimeter streets. Noise mitigation for off-site roadway noise incorporated into the project will be equally effective for any commercial activity noise.

REGULATORY FRAMEWORK

The Noise Control Act of 1972 assigns the U.S. EPA the responsibility of developing regulations to adequately control environmental noise such that it does not endanger the population's health and welfare. The EPA established the Office of Noise Abatement and Control, but in 1981, funding for the office was removed. Similarly, the California Department of Health Services once operated an Office of Noise Control that has since been disbanded. As such, environmental noise protection is usually a local governmental responsibility.

State of California

California encourages each local government entity to perform noise studies and implement a noise element as part of their general plan. The Office of Noise Control at the California Department of Health Services published guidelines for evaluating the compatibility of various land uses as a function of community noise exposure. The Department of Health guidelines indicate that residential land uses and other noise-sensitive receptors generally should locate in areas where exterior ambient noise levels do not exceed approximately 70 dBA (Ldn or CNEL). Exterior noise levels of 60 dBA CNEL and lower are considered to be "normally acceptable" for single family, duplex, and mobile homes involving traditional construction without any special noise insulation requirements. Exterior noise levels up to 70 dBA CNEL are considered to be "conditionally acceptable" for residential use where the proposed uses may be conditioned to include noise insulation features.

Application of this guideline to development projects is not mandated by the Department of Health, but the Department recommends consideration of the guidelines in jurisdictions' general plans.

Title 24 of the California Code of Regulations (California Noise Insulation Standards, California State Building Code [Part 2, Title 24, CCR]) establishes standards governing interior noise levels that apply to all new (post-1974) multi-family residential units (hotels, motels, apartments, condominiums, and other attached dwellings) in California. These standards require that acoustical studies be performed prior to construction at residential building locations where the existing exterior Ldn or CNEL exceeds 60 dBA. Such acoustical studies are required to establish a design that will limit maximum Ldn or CNEL noise levels to 45 dBA in any habitable room.

City of Beverly Hills Noise Element of the General Plan

The Noise Element of the City of Beverly Hills General Plan was adopted on November 4, 1975, and provides a description of existing and projected future noise levels, and incorporates comprehensive goals, policies, and implementing actions.

The following Policies and Programs to Mitigate Noise Problems from the Noise Element are relevant to the proposed project:

- o Continue efforts to discourage through-traffic on residential streets;
- o Enforce vehicle noise emission standards; and,
- o Enforce the City's adopted Noise Ordinance.

City of Beverly Hills Noise Ordinance

The City has adopted an ordinance to control noise in Title 5 of the Public Health, Welfare, and Sanitation Code. Consistent with the Noise Element, the City's Noise Ordinance prohibits unnecessary, excessive and annoying noise. Specific noise sources and regulations, including decibel criteria and restrictions on allowable times for construction activities, are included in the ordinance. Based on the levels of ambient noise determined by local project-specific noise measurements, mitigation measures would be identified to maintain the appropriate indoor or outdoor noise levels if necessary.

IMPACTS

Noise impacts from project development will derive mainly from the traffic generated by site activities. Office uses will have negligible noise generation, and the specialty retail component of several smaller shops will not generate substantial commercial activity noise (delivery trucks, loading docks, late evening hours, etc.). Parking will be underground, and could possibly affect on-site residents, but not off-site, noise-sensitive land uses. Operation of mechanical equipment or other machinery (elevators, etc.) associated with site operations must comply with City noise ordinances designed to insure a less-than-significant impact. Temporary construction noise will also result during demolition of existing structures and pavement, underground parking excavation and subsequent building construction. Such sources are short-term and will thus not affect the long-term noise exposure in the project vicinity.

Standards of Significance

Noise impacts are considered significant if they create an unacceptable noise exposure that did not exist without the project, or if impacts measurably worsen an existing excessive noise environment. Urban environments along arterial roadways are generally already noisy, while residential areas are normally relatively quiet. A "measurable" increase for already noisy conditions would be approximately +1.5 dB. A clearly perceptible (substantial) increase under less noisy existing conditions would be +3 dB.

The above "measurable" significance criteria apply to on-road traffic noise. On-site noise generation is regulated by ordinance. Compliance with ordinance levels is presumed to occur in the absence of any discretionary authority to not comply. Nevertheless, the possibility that on-site activities might cause noise ordinance levels to be exceeded would be considered a potentially significant impact. Principal compliance criteria from the ordinance include a prohibition against increasing ambient noise levels by more than 5 dB from operation of any equipment or mechanical device.

Construction Noise Impacts

Temporary construction noise impacts vary markedly because the noise strength of construction equipment ranges widely as a

function of the equipment used and its activity level. Short-term construction noise impacts tend to occur in discrete phases dominated by large, earth-moving and/or demolition equipment sources. Construction activities are treated separately in various community noise ordinances because they do not represent a chronic, permanent noise source. In order to minimize noise impact potential, the City of Beverly Hills has established Section 5-1.206 of the Municipal Code to abate the potential nuisance from construction noise and other sources.

Construction of the proposed project will occur in various phases. The existing structures on the site will be demolished, upon which grading and excavation will commence. Construction and finishing will generally follow. During these phases of building assembly and finish construction, equipment is generally less noisy. Predicted construction noise levels have been estimated using the results of a study prepared for the U.S. Environmental Protection Agency (EPA).¹ Sensitive receptors located nearest to the project site include the multi-family residences along Crescent Drive to the northeast, and the proposed Sunrise Assisted Living Facility on the Clifton/Crescent corner northwest of the proposed project. Additional noise-sensitive uses on Crescent NW of Clifton and on Clifton NE of Crescent are located farther away, and will be somewhat blocked by intervening structures.

Although construction equipment may operate as close as 50 feet from the nearest noise-sensitive uses, the average distance is generally farther. A more typical source-to-receiver separation would be 100 feet to the nearest apartments, and 200 feet to existing or proposed seniors housing.

The nearest apartments and the nearby seniors housing could experience noise levels from construction at approximately the levels shown on Table 5. Table 5 shows worst-case levels when construction equipment is located near the perimeter of the project site and average levels when operating more in the center of the site. Other sensitive receptors would experience noise levels somewhat less than these worst case levels, decreasing with distance from the site and intervening obstacles. Noise levels that differ by +10 dB are perceived to be twice as loud, while a +20 dB increase would be perceived to be four times as loud as the background. Peak noise differences of +25 dB (90 dB max. versus 65 dB background) would be judged to be perhaps six times louder than background conditions. Short-term maximum noise impacts would be perceptually intrusive if nearby residents were forced to listen to the loudest sources for any length of time.

¹ Bolt, Beranek and Newman, "Noise from Construction Equipment and Home Appliances", U.S. Environmental Protection Agency, December 31, 1971.

TABLE 5
CONSTRUCTION NOISE IMPACTS
 (dBA at 50 feet)

<u>Activity*</u>	<u>Exist.</u> <u>Noise</u>	<u>Maximum</u> <u>Construction</u> <u>Noise @ 50'</u>	AVG. CONSTRUCTION NOISE	
			<u>Apts.</u>	<u>Seniors</u>
Demolition	65	85	79	73
Excavation	65	90	84	78
Construction	65	85	79	73
Finishing	65	80	74	68

Source: EPA, 1971

As noted in Table 5, construction noise impacts could occur during each phase of construction, although these noise levels are highly unlikely to be continuous. Code compliance will limit construction noise impacts to periods of reduced noise sensitivity, i.e., 8 a.m. to 6 p.m., and thus reduce sleep disturbance and other noise nuisance potential. Appendix G of the most recent CEQA Guidelines suggests that compliance with an adopted quantitative standard or established ordinance may be a sufficient basis for a finding of a less-than-significant impact.

Based on these guidelines, short-term construction noise, if confined to allowable hours of activity, would be an adverse, but less-than-significant impact.

Pile driving may possibly be required after demolition and excavation are completed and before building frame assembly begins. Average noise levels during pile driving are similar to that from continuously operating heavy equipment, but each individual impulse is considerably noisier. Because of the intrusiveness of pile driving, if required, it should be restricted to the hours of 8 a.m. to 4 p.m., Monday through Friday when adjacent apartments are least likely to be occupied.

Mobile Noise Sources

Project implementation will increase the number of cars on the local roadway system. Weekday traffic volumes will increase by 1,296 daily trips from existing retail, office and parking use of the site. Close to the project site, traffic noise may be minimally increased. As project-related traffic becomes progressively diminished on any particular roadway, the incremental contribution to the noise environment becomes continually smaller.

Along most area roadways, existing elevated baseline traffic noise levels will mask any project contribution. Changes in traffic noise levels associated with the proposed project are shown in Table 6. Any increases of 1.5 dB or less are undetectable even under laboratory conditions, and changes of 3.0 dB or less are considered a less-than-significant increase in an ambient environment. Traffic noise changes along any site vicinity road are 0.2 dB or less due to the proposed project alone. Therefore, traffic noise changes due to this project are a de minimis (imperceptible) increase.

Noise standards for mechanical equipment or other "stationary" sources allow for no more than a 5 dB increase above ambient levels. Ambient levels during quieter periods are around 55 dB at surrounding noise-sensitive uses. The compliance standard for on-site equipment would thus be 60 dB within 20 feet. Even with

TABLE 6

TRAFFIC NOISE IMPACT ANALYSIS
(CNEL in dBA @ 50 feet to centerline)

<u>Street/Location</u>	EXIST. 2002	<-FUTURE- 2003->	
	<u>Week Day</u>	<u>Week Day</u>	<u>Week Day</u>
Crescent Drive:			
N of Santa Monica Blvd.	65.3	65.3	65.4
S of Wilshire Blvd.	63.7	63.7	63.8
Rexford Drive:			
Clifton Way - Elm Drive	63.9	64.0	64.0
Foothill Drive:			
Burton Way - Dayton Dr.	60.1	60.2	60.4
Clifton Way:			
Foothill Drive - Elm Dr.	59.7	59.7	59.7

Source: FHWA-RD-77-108 (Calveno mod.)

multiple AC units, the 60 dB threshold is met within 50 feet of the equipment. For equipment housed atop the roof of the new on-site structure, the buffer distance to off-site uses is much over 50 feet. Noise impacts from on-site mechanical equipment operations are less than significant.

Interior Noise Compliance

Building facade noise levels will be slightly over 65 dB CNEL. Exterior-to-interior noise reduction for standard construction practice is typically 10 dB with open windows, and 20 dB with windows closed. The needed exterior-to-interior reduction to meet the city and/or state standards of 45 dB CNEL is 20 dB. Enhanced structural practice such as dual-paned windows or double-layer drywall are not likely needed. Because the building facade exterior level exceeds 60 dB CNEL, the State Building Code requires that an interior noise mitigation analysis be prepared during construction plan check. That study will confirm that proposed building elements are of sufficient strength and mass to produce a 45 dB CNEL interior level, and that supplemental ventilation is available to shut out roadway noise. That same report must document that proposed wall assemblies have been tested to achieve a sound transmission class (STC) of 50 or higher, in all "party walls." Similarly, floor/ceiling assemblies in stacked units must be sound rated at STC=50 or higher, and must also have an impact isolation class (IIC) rating of 50 or higher.

MITIGATION

Only minor construction activity noise concerns were identified during the noise impact analysis. These concerns and suggested mitigations are as follows:

- Arrival of construction vehicles and/or loading or unloading of construction materials or debris may not begin until 8 a.m.
- Pile driving, if required, should be restricted to the hours of 8 a.m. to 4 p.m. on Monday through Friday.
- Construction haul routes that avoid adjacent residential streets shall be approved by the City of Beverly Hills Building Dept.

Operational activity impacts from site-related traffic or from on-site mechanical equipment operations will be less than significant and require no mitigation.

Residential interior noise levels may exceed 45 dB CNEL in units with windows facing site perimeter roadways. A final acoustical report shall be prepared that documents attainment of the 45 dB CNEL standard with proposed building components, and that proposed party walls and shared floor/ceiling assemblies meet building code sound/impact protection requirements.

REFERENCES:

- (1) Barry, T.M. Reagan, J.A., FHWA Highway Traffic Noise Prediction Model, Report No. FHWA-RD-77-108, Federal Highway Administration, Office of Research, Office of Environmental Policy, Washington, D.C., December 1978.
- (2) Hendriks, R.W., California Vehicle Noise (Calveno) Emission Levels (Final Report), Report No. FHWA/CA/TL-87/03, Office of Transportation Laboratory, California Department of Transportation, Sacramento, CA., January 1987.
- (3) Giroux & Associates, Noise Impact Analysis, Sunrise Assisted Living Facility, Beverly Hills, CA., January 18, 1999.

APPENDIX E

GEOTECHNICAL REPORT

FINAL REPORT

GEOSEISMIC REVIEW PROPOSED WILSHIRE CRESCENT BUILDING (TRIANGLE GATEWAY PROJECT) BEVERLY HILLS, CALIFORNIA

Prepared for
EIP Associates
11601 Wilshire Boulevard, Suite 1440
Los Angeles, California 90025

August 26, 1999

URS Greiner Woodward Clyde

2020 East First Street, Suite 400
Santa Ana, California 92705
57-09912028.01

URS Greiner Woodward Clyde

A Division of URS Corporation

2020 East First Street, Suite 400
Santa Ana, CA 92705
Tel: 714.835.6886
Fax: 714.667.7147
Offices Worldwide

August 26, 1999
Project No. 57-09912028.01

Mr. Steve Gerhardt
EIP Associates
11601 Wilshire Boulevard; Suite 1440
Los Angeles, California 90025

**SUBJECT: GEOSEISMIC REVIEW
PROPOSED WILSHIRE CRESCENT BUILDING
(TRIANGLE GATEWAY PROJECT)
BEVERLY HILLS, CALIFORNIA**

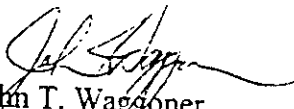
Dear Mr. Gerhardt:

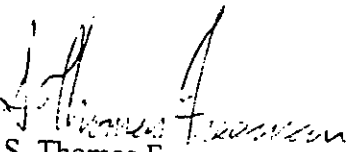
As you requested, URS Greiner Woodward Clyde (URSGWC) performed a geoseismic review of the subject project site, to evaluate whether the Santa Monica fault crosses the site and thus represents a surface rupture hazard to site development. The attached report summarizes: 1) the work completed; 2) the sources of information reviewed; 3) the results of the review; 4) our conclusions; and 5) our recommendations. This information is provided for your use in preparing an Environmental Impact Report (EIR) for the subject project.

We appreciate the opportunity to assist you by performing this evaluation. Should you have any questions or require clarification of certain issues in the attached report, please call.

Sincerely,

URS Greiner Woodward-Clyde


John T. Waggoner
Senior Associate
Engineering Geologist 1322


S. Thomas Freeman
Vice President

JTW/STF:jw

TABLE OF CONTENTS

Section 1	Introduction	1-1
Section 2	Information Reviewed	2-1
Section 3	Results of Review	3-1
Section 4	Conclusions	4-1
Section 5	Recommendations	5-1
Section 6	Selected References	6-1

LIST OF FIGURES

- 1 Site Location Map
- 2 Fault Rupture Caution Zones
- 3 Regional Fault Map
- 4 Fault Structure Interpretations of Crook and Proctor (1992)
- 5 Map of Hollywood Fault Zone
- 6 Map of Santa Monica Fault Zone
- 7 Interpretive Sections from Pratt et. al. (1998)

A development known as the Triangle Gateway Project, is proposed within the City of Beverly Hills, California. As shown on Figure 1, the project site is adjacent to Wilshire Boulevard and Crescent Drive. The city and the subject site are located along the southern front of the Transverse Ranges Physiographic Province, which in part is comprised of the Santa Monica Mountains. The south front of these mountains is crossed by two active regional faults, namely the Hollywood and Santa Monica faults. As identified in the Seismic Safety Element for the City of Beverly Hills (Woodward-Clyde, 1987), the location of one of these faults (the Santa Monica fault) was estimated to be near or beneath the subject site.

EIP Associates is preparing an Environmental Impact Report for the proposed project, and because of the proximity of the Santa Monica fault to the project site, one of the issues to be addressed is the potential for a fault surface rupture hazard. As a result, EIP Associates retained URS Greiner Woodward Clyde to perform the following scope of work, as presented in our January 19, 1999 proposal:

1. Review geotechnical documents presented by the project proponent.
2. Review other relevant reports that address the Santa Monica surface fault rupture hazard issue.
3. Compare the information presented in the above reports with information contained in our library and from the Southern California Earthquake Center, and other research institutes.
4. Prepare a report summarizing the work completed, sources of information reviewed, results of the review, conclusions, and recommendations.

Several reports and research publications are available regarding the Santa Monica fault and the general tectonics of the site region. Some of the more pertinent references are listed below in Section 6.0 (Selected References). Those references that are considered particularly relevant to the site and the Santa Monica fault are discussed briefly below, in chronological order. A more detailed discussion of the results presented in these references is provided in Section 3.

Woodward-Clyde (1987) - Geotechnical Report, Seismic Safety Element for the City of Beverly Hills, California

In 1987, Woodward-Clyde Consultants was retained by the City of Beverly Hills to provide geotechnical input for the preparation of a Seismic Safety Element Report for the City. The Woodward-Clyde report discussed potential geologic hazards within the City, including the potential fault rupture hazard associated with the Santa Monica fault. Of particular relevance to the subject site, the Woodward-Clyde report provided a map showing recommended "Fault Rupture Caution Zones" along three faults (Santa Monica, Hollywood, and Newport-Inglewood faults) that were inferred by previous studies to cross areas of the City. The 1987 map showing recommended Fault Rupture Caution Zones is reproduced herein as Figure 2. As shown on Figure 2, the Triangle Gateway site is located within the Caution Zone, and is crossed by the estimated subsurface trace of the Santa Monica fault.

Crook and Proctor (1992) - The Santa Monica and Hollywood Faults and the Southern Boundary of the Transverse Ranges Province

In 1992, Crook and Proctor provided a summary of available information relative to the Santa Monica and Hollywood faults, focussing on site-specific studies along the faults. The regional fault map provided by Crook and Proctor, reproduced herein on Figure 3, is useful to illustrate that the Triangle Gateway site is located in a tectonically complex area approximately at the intersection of three regional faults (Santa Monica, Hollywood, and Newport-Inglewood). Based on the available information, Crook and Proctor (1992) presented a chronological summary of three fault structural interpretations that have been developed over the past several years by various researchers. These interpretations are reproduced herein on Figure 4.

As shown on Figure 4, the upper and lower (Figures 6a and 6c of Crook and Proctor, 1992) interpretations suggest an eastward continuation of the Santa Monica fault, beyond the Newport-Inglewood fault, and thus suggest the potential for a fault rupture hazard at the site. Conversely, the middle (Figure 6b of Crook and Proctor, 1992) interpretation suggests that the Santa Monica fault may not extend east of the Newport-Inglewood fault, and thus a fault rupture hazard at the site would be unlikely.

Law/Crandall (1996) - Geotechnical Investigation, Proposed Gelson's Market Development

A 1996 Law/Crandall report provides the results of a geotechnical investigation of the Triangle Gateway site. The Law/Crandall investigation included the advancement of several geotechnical boreholes, the results from which were used to evaluate whether or not the Santa Monica fault crosses the project site. As indicated in the Law/Crandall report, the Santa Monica fault is known to act as a groundwater barrier, with a differential water level of up to about 40 to 50 feet at some locations across the fault. Based on the finding that water levels observed in their geotechnical boreholes defined a gentle groundwater gradient across the site, Law/Crandall concluded that there was no indication of faulting beneath the project site.

Dolan, Sieh, Rockwell, Gupta, and Miller (1997) - Active Tectonics, Paleoseismology, and Seismic Hazards of the Hollywood Fault, Northern Los Angeles Basin, California

Dolan, et.al. (1997) used data from geotechnical boreholes, coupled with geomorphologic analyses, to develop refined interpretations regarding the location and activity of the Hollywood fault. As shown by Dolan, et.al. (1997), the trace of the Hollywood fault is indicated by topographic scarps located along the front of the Santa Monica Mountains, about 2 km north of the Triangle Gateway project site. Although their work focussed mainly on the Hollywood fault, a portion of the Santa Monica fault (also defined by topographic scarps) was mapped about 2 km west of the site. Their summary map, showing the topographic scarps that are interpreted to coincide with the faults, is reproduced herein on Figure 5, with the site location indicated.

Pratt, Dolan, Odum, Stephenson, Williams, and Templeton (1998) - Multiscale Seismic Imaging of Active Fault Zones for Hazard Assessment: A Case Study of the Santa Monica Fault Zone, Los Angeles, California

Pratt et.al. (1998) mapped topographic scarps to the west of the work of Dolan et.al. (1997), and also performed geophysical surveys across the interpreted trace of the Santa Monica fault, near Sepulveda Boulevard (a location about 4 km southwest of the Triangle Gateway site). The geophysical surveys were performed in an attempt to image stratification and deformation in shallow sediments. The results were used to map faulting and/or folding related to the Santa Monica fault. As shown on Figure 6, mapping by Pratt et.al. (1998), shows the interpreted trace of the Santa Monica fault zone extending nearly 12 km, from Pacific Palisades to a location about 1 km west of the intersection of Wilshire Boulevard and Santa Monica Boulevard. Near Wilshire Boulevard, the topographic scarp turns northward, and apparently is not observed east of the West Beverly Hills Lineament, which may represent a poorly defined northerly extension of the Newport-Inglewood fault. Interpretive regional cross sections and detailed cross sections presented by Pratt et.al (1998) are reproduced herein on Figure 7. As shown on Figure 7, the

Santa Monica fault is interpreted as a 30- to 55-degree north dipping fault, which has displaced and/or warped the sediments that overlie the fault (on the north side of the fault).

The J. Byer Group, Inc. (1998) - Geotechnical Engineering Exploration, Proposed Wilshire Crescent Building

In August 1998, the J. Byer Group performed an additional geotechnical investigation at the Triangle Gateway site. The investigation included a discussion of the Santa Monica fault, indicating that the fault is located within one mile, but does not cross the site. Similar to the Law/Crandall investigation, the basis for the J. Byer Group's conclusion that the Santa Monica fault does not cross the project site was that groundwater level data do not indicate an abrupt change (groundwater barrier) beneath the site.

The Santa Monica fault and the Hollywood fault are part of a series of roughly east-west trending faults, which include the Malibu Coast fault to the west and the Raymond fault to the east, that form the southern boundary of the Transverse Ranges physiographic province. Early mapping by Hill et al (1979) suggested that a trace of the Santa Monica fault projected across, or in close proximity to the Triangle Gateway site, as shown on Figure 2.

Recent work in the site region by Dolan and Sieh (1993), Dolan et al (1997), and Pratt et al (1998), has identified fault features including topographic scarps that are considered a geomorphic expression of recent deformation (see Figures 5 and 6). Based on the mapped locations of these scarps, geologically recent deformation appears to step northward from the Santa Monica fault to the Hollywood fault, across the West Beverly Hills Lineament (see Figures 5 and 6), and thus does not cross the site.

As shown on Figure 5, at its closest approach, the north-dipping Hollywood fault is mapped about 2 km north of the site. As shown on Figure 6, traces of the Santa Monica fault (based on scarps) are mapped trending eastward, generally toward the site, but apparently turn northward and/or end at the West Beverly Hills Lineament, located about 2 km west of the site. As a result, geologically recent surface faulting at the site, as evidenced by topographic scarps, is not suggested by recent studies. However, these studies do not preclude the existence of buried fault traces near or beneath the site, as suggested by the interpretation of Crook and Proctor (1992) (see Figure 4, Figure 6c of Crook and Proctor).

In considering the possibility of faults beneath the site, two primary lines of evidence are available to consider: 1) the apparent lack of surface expression of a fault; and 2) the apparent lack of an anomaly in groundwater levels beneath the site. As discussed above, topographic scarps, which are commonly observed along active faults, were not identified within the surficial Holocene age sediments (up to about 3,000 years old and possibly older) in the site area by either Dolan et.al. (1997) or Pratt et.al. (1998).

Another line of evidence regarding the potential for faulting beneath the site, is the apparent lack of an anomaly in groundwater local levels. Such groundwater level anomalies commonly reflect the existence of subsurface faulting, and have been observed elsewhere along the Santa Monica fault. Based on the data presented by Law/Crandall (1996) and the J. Byer Group (1998), the groundwater level beneath the site appears relatively uniform. In addition, groundwater level data from our in-house files, from a site located about one block northwest of the Triangle Gateway site, is consistent with the groundwater level measurements at the Triangle Gateway site. As a result, faulting at the site is not suggested by the available groundwater level data.

Based on our evaluation of geotechnical data from the Triangle Gateway site, and from a site investigated by URS Greiner Woodward Clyde (located about one block to the northwest), faulting at the Triangle Gateway site is not suggested. However, the existing data is not sufficient to preclude the presence of a subsurface fault(s), nor to preclude the potential for a future rupture across the site.

Based on published information and site specific reports, it is our opinion that the potential for fault surface rupture at the Triangle Gateway site is low, but cannot be completely ruled out. A subsurface investigation that is specifically geared to identify subsurface faults, or the lack thereof, would be needed to increase confidence that a fault rupture hazard does not exist at the site. Even so, considering the tectonic complexity of the region, where displacement is apparently "stepping northward" from the Santa Monica to the Hollywood fault (as shown on Figure 4 [Figure 6b of Crook and Proctor]), and where the style of displacement contains both thrust and lateral components, it is likely that the possibility of future displacements cannot be absolutely precluded.

As discussed above, the potential for fault surface rupture at the site is considered low. The decision to perform additional studies to further evaluate and characterize this potential hazard should be made by the owner and the City of Beverly Hills, based on the intended land use and other issues, such as project design.

If additional studies are to be performed, a variety of investigation methods can be used, and one or more techniques may be appropriate. A common strategy in performing fault investigations, and one that we would recommend if further investigation is desired, is to use a phased approach beginning with less intensive/costly methods and then moving to the more intensive/costly methods, on an as-needed basis. For example, further investigation at the site could include the following phases:

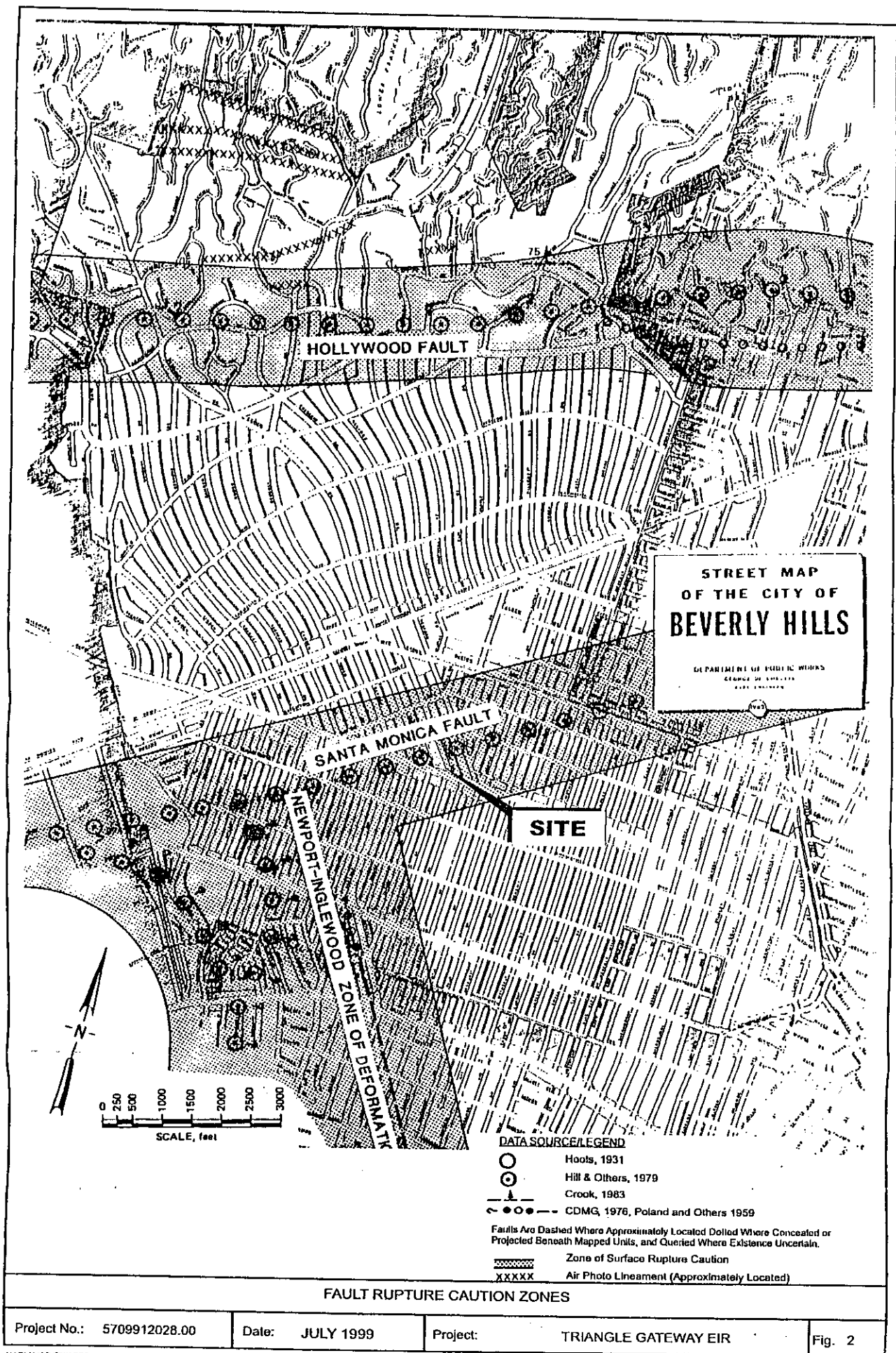
1. Perform surface geophysical surveys (similar to those which were performed by Pratt et al (1998) across areas west of the site) to identify the continuity or discontinuity of subsurface stratigraphy.
2. Perform a series of closely-spaced cone penetration tests, and use the data (along with the existing geotechnical borehole data) to define the continuity (or lack thereof) of subsurface layers.
3. Perform core borings or large diameter borings for down-hole inspection of subsurface conditions, to collect data for correlation with previously-collected data.
4. Excavate and log trenches in the vicinity of the building site, and perpendicular to the suspected trace of faulting.

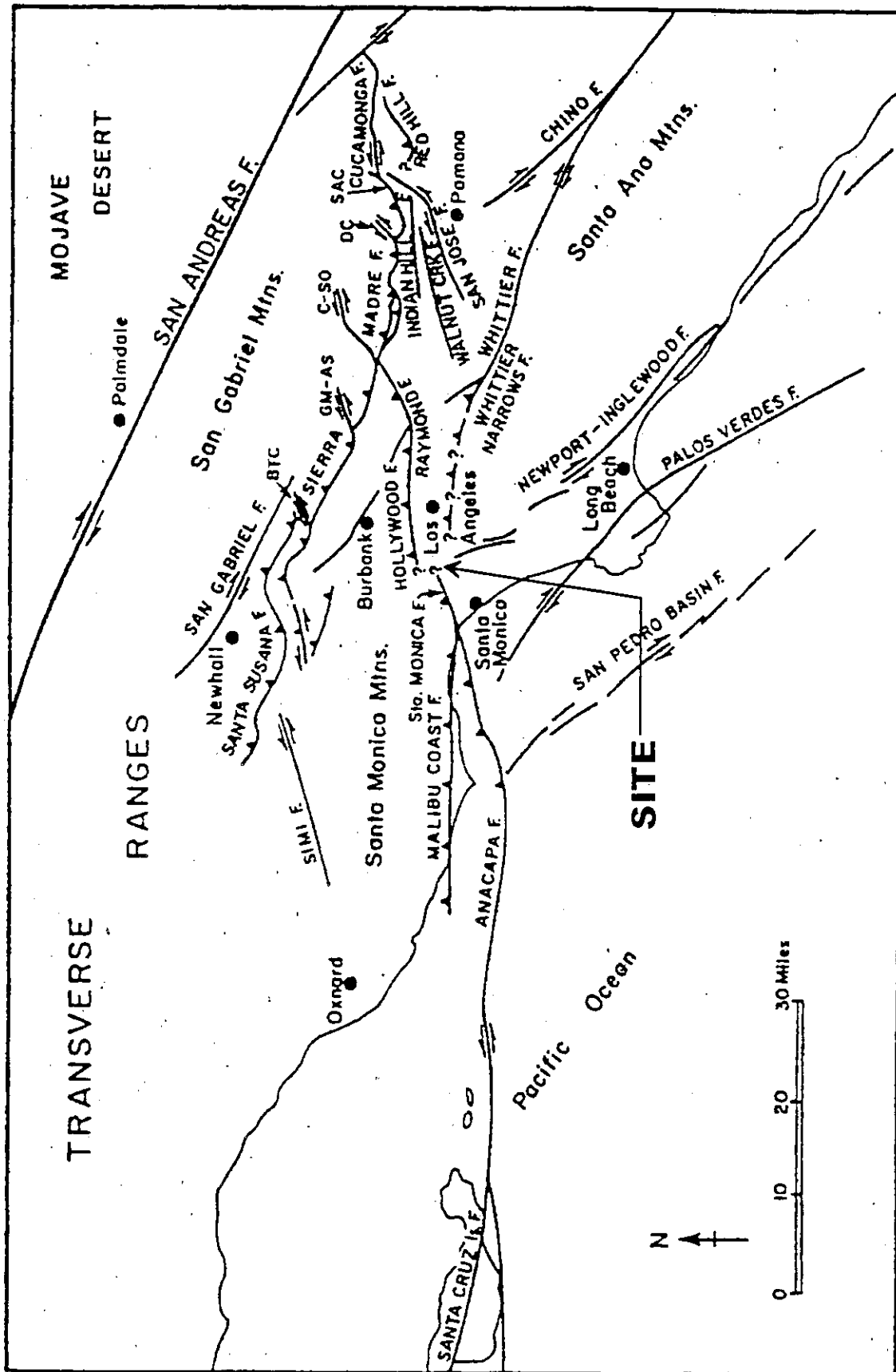
SECTION SIX

Selected References

- Crook, R., Jr., and R. J. Proctor, 1992. The Santa Monica and Hollywood faults and the southern boundary of the Transverse Ranges province in Pipkin B. W., and Proctor, R. J., eds., Engineering Geology Practice in Southern California: Star Publishing, p. 233-246.
- Dolan, J.F., Sieh, K., Rockwell, T.K., Guphill, P., and Miller, G., 1997. Active tectonics, paleoseismology, and seismic hazards of the Hollywood fault, northern Los Angeles basin, California. Geological Society of America Bulletin, v. 109, no. 12, p. 1595-1616.
- J. Byer Group, Inc., 1998. Geotechnical Engineering Exploration. Proposed Wilshire Crescent Building, Lots 8-16. Beverly Hills Tract 149-191 Crescent Drive, Beverly Hills California. Unpublished consultant report prepared for Snyder Commercial, L.P. August 4, 1998; Project JB 17816-I.
- Law/Crandall, 1996. Report of Geotechnical Investigation. Proposed Gelson's Market Development. Unpublished consultant report prepared for Gelson's Marktes, Beverly Hills, California. November 6, 1996, Project 70131-6-0547.0001.
- Pratt, T.L., Dolan, J.F., Odum, J.K., Stephenson, W.J., Williams, R.A., and Templeton, M.E., 1998. Multiscale seismic imaging of active fault zones for hazard assessment: a case study of the Santa Monica fault zone. Los Angeles, California.
- Woodward-Clyde Consultants, 1987. Geotechnical Report. Seismic Safety Element for the City of Beverly Hills, California. Consultants report to the City of Beverly Hill, Department of Building and Safety, March.

URS Greiner Woodward Clyde





Base map from Crook and Proctor (1992).

REGIONAL FAULT MAP

Proj.No. 9912028.01

Date: July 1999

Project: Triangle Gateway EIR

Figure 3

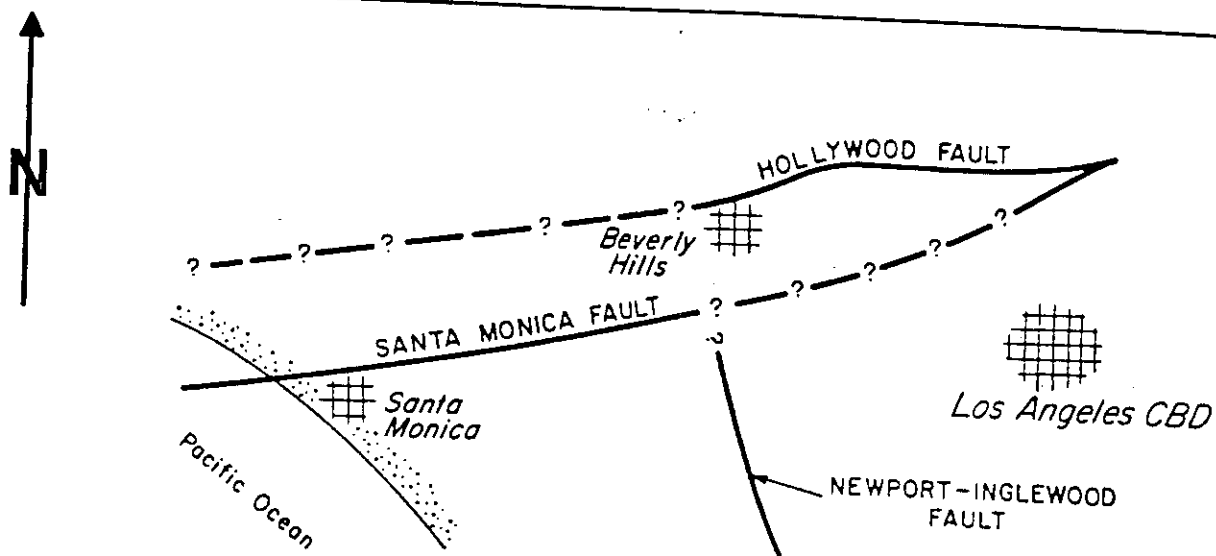


Figure 6a. Fault interpretation shown on many maps to 1980s. Does the Hollywood fault extend westward? does the Santa Monica fault extend eastward?

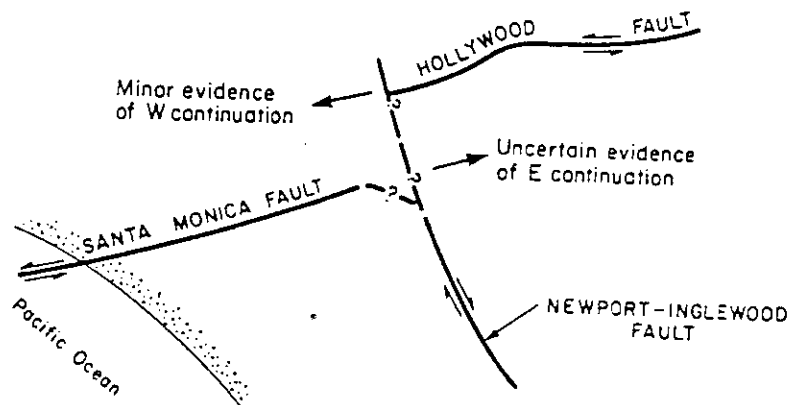


Figure 6b. Possibility of left-stepping separation of 1.5 miles by the right-lateral Newport-Inglewood fault (wrong sense of historic movement); or possibility of merging of Santa Monica and Newport-Inglewood faults as shown by Zony and Jones (1989), but causing conflicting sense of historic movement on each fault.

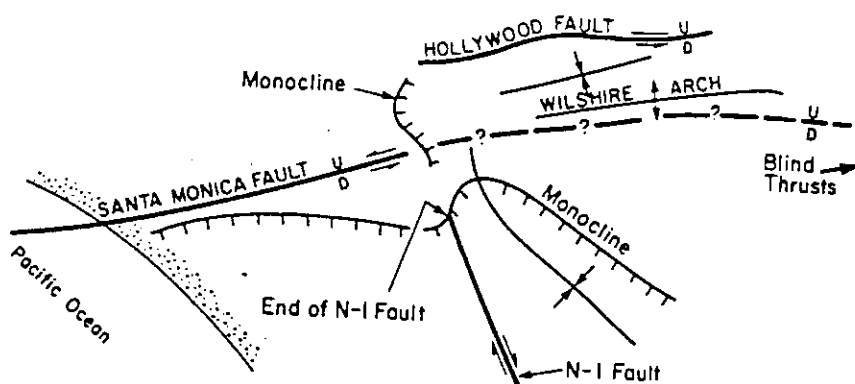


Figure 6c. Two new possibilities: (1) Faults ending in east- and south-dipping monoclines (Wright, 1992, Fig. 16c). (2) Our conjecture of as yet undiscovered buried eastward extension of the Santa Monica fault, possibly associated with the newly discovered Wilshire Arch of Robert S. Yeats (pers. comm., 1992; Hummon and others, 1992), extending eastward to connect to known E-W blind thrusts toward Whittier Narrows.

FAULT STRUCTURE INTERPRETATIONS OF CROOK AND PROCTOR (1992)

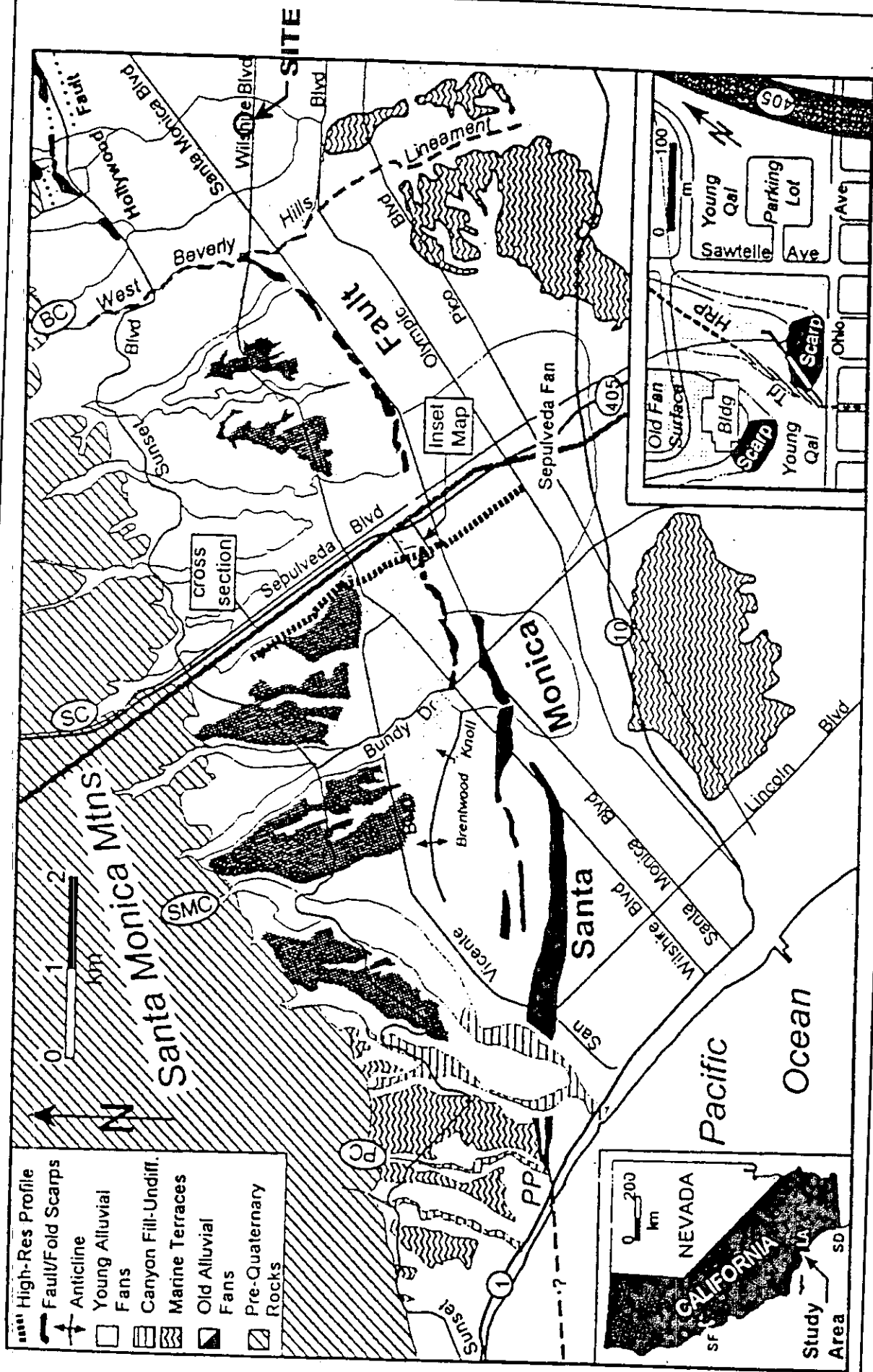
Proj.No. 9912028.01

Date: July 1999

Project: Triangle Gateway EIR

Figure 4

URS Greiner Woodward Clyde



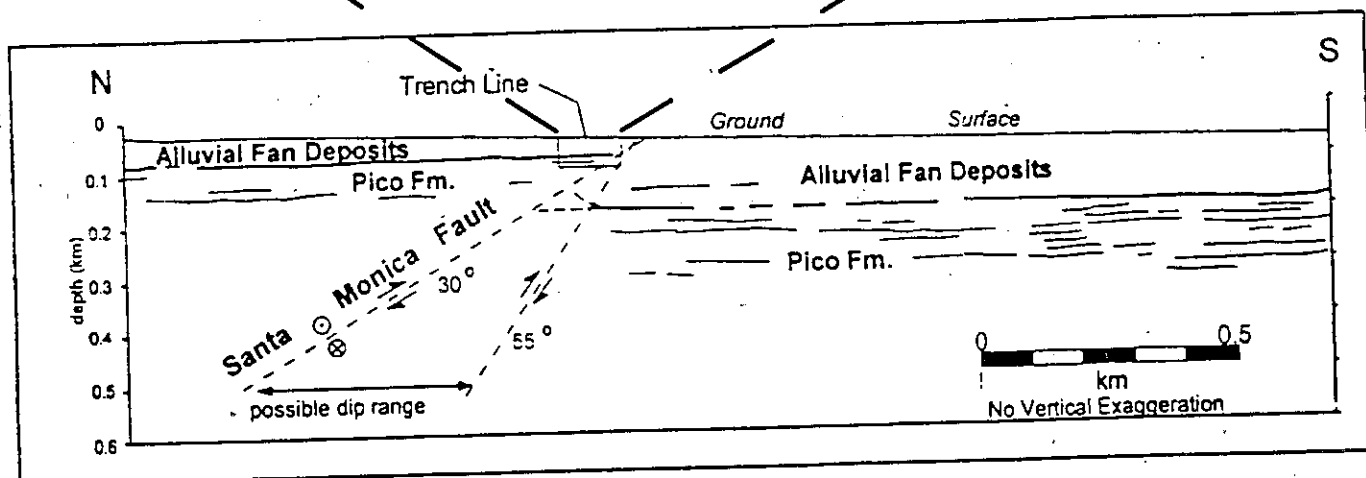
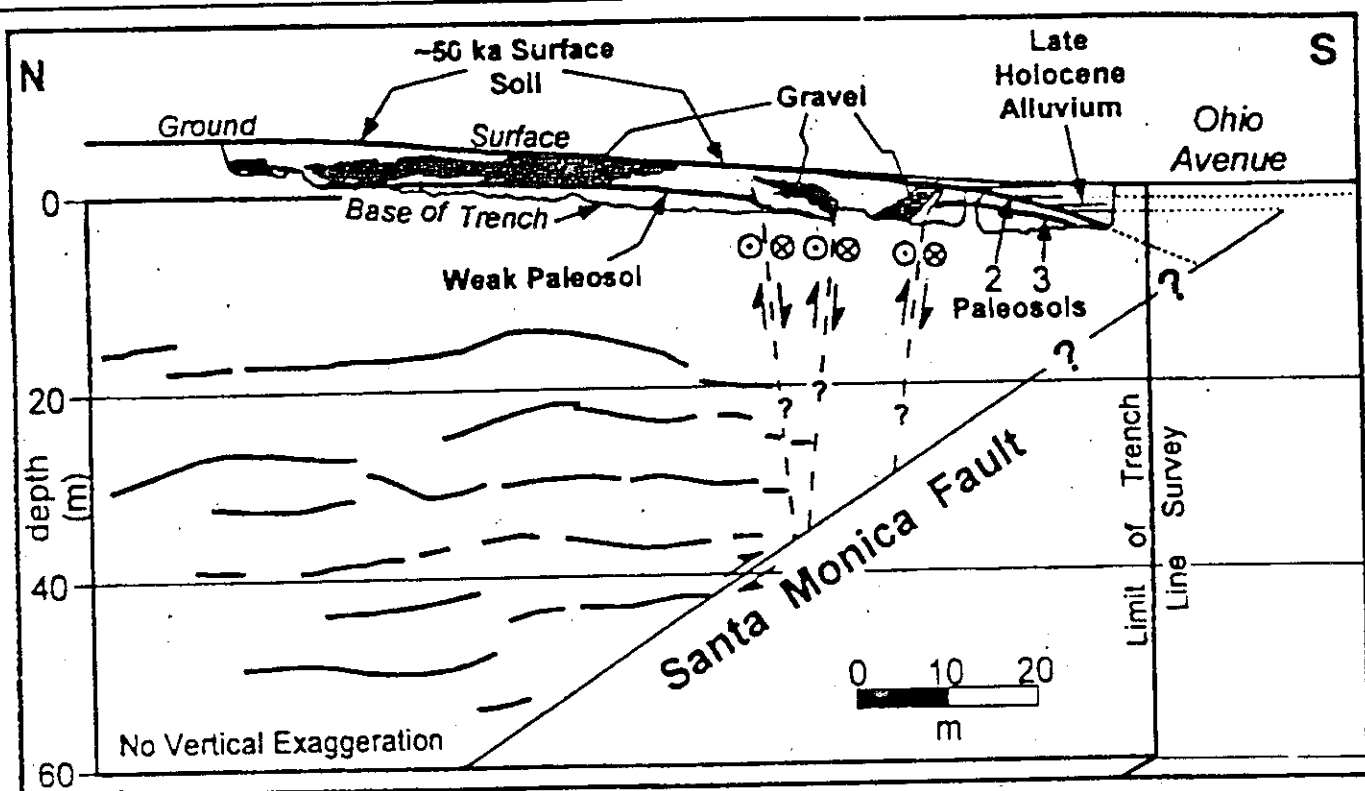
MAP OF SANTA MONICA FAULT ZONE (PRATT ET AL., 1998)

Proj.No. 9912028.01

Date: July 1999

Project: Triangle Gateway EIR

Figure 6



INTERPRETIVE SECTIONS FROM PRATT ET AL (1998)

Proj.No. 9912028.01

Date: July 1999

Project: Triangle Gateway EIR

Figure 7

URS Greiner Woodward Clyde