METRO RAIL PROJECT CORE STUDY TECHNICAL MEMORANDUM 87.7.3 TECHNICAL REPORT: SPECIAL ANALYSIS OF TRAFFIC IMPACTS OF VERMONT AVENUE AERIAL ALIGNMENT

Prepared for:

Southern California Rapid Transit District

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Prepared by:

Schimpeler Corradino Associates

In association with

The Cordoba Corporation Barton Aschman and Associates The Planning Group Manuel Padron & Associates

August, 1986

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SUMMARY

This report presents the results of the special analysis of traffic impacts of the Vermont Avenue aerial alignment under Candidate Alignment J. This alignment is one of four alignments under evaluation in the Metro Rail Project CORE Study. Traffic impacts associated with aerial guideway systems include a reduction in capacity due to placement of structures within street rights-of-way, increases in traffic volumes as vehicles access stations, and changes in traffic patterns due to restriction of traffic movements at intersections affected by the guideway.

The area selected for this analysis was limited to the section of Vermont Avenue between Third Street on the south and Santa Monica Boulevard on the north. The study area includes Vermont Avenue and all cross-street intersections.

The following issues are addressed in this study:

- Impacts of restriction of left turns on Vermont Avenue to signalized intersections.
- o Impacts of restriction of traffic on cross streets to signalized intersections for all but right turns.

It should be noted that, although this study focuses on a specific segment of Alignment J, the study has implications for aerial segments of the entire system.

INVENTORY OF EXISTING CONDITIONS

An inventory of existing conditions was conducted along Vermont Avenue between Third Street and Santa Monica Boulevard. This inventory included number of traffic lanes, traffic volumes, location and type of intersections, and location and number of driveways to parking facilities and developments.

In the study area, Vermont Avenue is a seven-lane divided roadway. The roadway is striped with three through-traffic lanes and a center left-turn lane. With the exception of the Bollywood Freeway, all streets intersecting Vermont in the study area are at-grade. At most intersections, the curb lane is marked as a through/right-turn lane. Cross streets along Vermont range from two-lane to seven-lane roadways.

Existing traffic volumes in the southbound direction on Vermont Avenue during the afternoon peak hour range from 1,009 vehicles per hour (VPH) at Santa Monica Boulevard to 1,979 VPH at Beverly Boulevard. In the northbound direction, peak hour volumes range from 1,400 to Santa Monica to 2,078 at Melrose Avenue.

There are signalized and nonsignalized intersections in the study area. Of the nineteen intersections in the study area between Third Street and Santa Monica Boulevard, a total of thirteen intersections are signalized. With the exception of the intersections with the Hollywood Freeway ramps, all of the signals are two-phase signals with no protected left-turn phase for traffic turning left from Vermont. The other six intersections are not signalized. There are 39 driveways on Vermont between Third Street and Santa Monica Boulevard. These

driveways primarily serve commercial and office developments. Of the 39 driveways, a total of twelve serve parking facilities, ranging in size from less than ten to over 100 spaces. Five parking facilities are classified as public facilities, where vehicles are charged a fee for parking. There are seven private parking facilities reserved for customers or employees of commercial or office properties.

RESULTS OF ANALYSIS

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Traffic volumes and street capacities at signalized intersections along Vermont Avenue were analyzed to determine traffic impacts associated with the aerial guideway. Using year 2000 forecasted station access traffic and diverted traffic, changes in levels of service and critical volumes were identified. The increase in vehicle miles of travel due to diversion of traffic also was identified. The impact of the diverted left turns from Vermont Avenue at driveways into developments and parking facilities was analyzed from the standpoint of changes in accessibility and effects on capacity of signalized intersections.

Assumptions

The assumptions made by the SCRTD General Planning Consultant (GPC) for the special analysis of traffic impacts of the aerial alignment on Vermont Avenue are as follows:

- The existing number of lanes would be maintained on Vermont by reducing the sidewalk widths from fifteen to ten feet for the entire length of the alignment along Vermont.
- Left-turn lanes would be provided at all signalized intersections, not just the major signalized intersections of First, Beverly, Oakwood, Northbound Hollywood Freeway onramp, Melrose, and Santa Monica.
- o Protected left-turn phases would be installed at signalized intersections where sight-distance problems exist. The slght-distance problems could occur when left-turning vehicles pull into the center of the intersection to walt for a gap in the opposing traffic flow. With the vehicles in the center of the intersection, their sight distance could be obstructed by the guideway support columns. If such problems exist, left-turn phasing will be provided.

The provision of left-turn lanes on Vermont at all signalized intersections would mitigate most of the impacts associated with the aerial guideway. The remaining impacts on traffic would be limited to nonsignalized cross streets and left turns from Vermont into driveways and from driveways.

Impact on Traffic at Intersections

Vehicles on nonsignalized cross streets that want to cross Vermont or turn left onto Vermont would be diverted to the nearest signalized intersection in the downstream traffic flow where the desired movements would be permitted. Vehicles wanting to turn left from Vermont at nonsignalized intersections also would be diverted to the next signalized intersection in the downstream traffic flow.

Based on traffic counts performed by the GPC, diverted traffic volumes were identified for cross streets restricted to right turns. Specifically, existing traffic crossing Vermont or turning left onto Vermont from cross streets was identified for the midday peak (12:00 a.m. to 1:00 p.m.), afternoon peak (5:00 to 6:00 p.m.). and the total midday (9:00 a.m. to 4:00 p.m.). Forecasts of these traffic volumes for the year 2000 (when the aerial guideway would be operational) also were identified.

The existing traffic counts show that a total of 905 vehicles on cross streets would be affected during the midday period by the location of the aerial guideway in the center of Vermont Avenue. This includes both through traffic and left-turning traffic from the cross streets of Willowbrook, Lockwood, Burns, Marathon, and Council Streets. Most of the diverted traffic would be left turns -- 862. During the midday peak, a total of 108 vehicles would be diverted, including 101 left-turn and seven through vehicles. Diverted traffic during the afternoon peak hour would total 139 vehicles. Again, most of the traffic would consist of left turns -- 133 vehicles. The forecasts of year 2000 traffic show that a total of 1,050 vehicles would be diverted from cross streets during the midday in year 2000. Diverted traffic during the midday and afternoon peaks would total 125 and 161 vehicles, respectively.

Diverted left-turn traffic volumes from Vermont also were identified from traffic counts at nonsignalized cross streets where left turns would be prohibited. The existing traffic counts show that a total of 632 vehicles would be affected by the location of the aerial guideway in the center of Vermont Avenue during the midday period. This includes left turns from Vermont at the cross streets at Willowbrook, Lockwood, Burns, Marathon, and Council Streets. During the midday peak, a total of 73 vehicles would be diverted. Diverted traffic during the afternoon peak hour would total 152 vehicles. Forecasted 2000 traffic volumes show that a total of 733 vehicles would be diverted from Vermont at nonsignalized cross streets. Diverted traffic during the midday and afternoon peaks would total 85 and 176 vehicles, respectively.

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Impact on Vehicle Miles of Traffic

Additional vehicle miles of travel (VMT) incurred by the diverted traffic were estimated based on the number of vehicles diverted and the additional distance traveled by the diverted vehicles. An examination of the routes for the diverted traffic revealed that only the vehicles crossing Vermont would incur increased VMT. Left-turn vehicles diverted to the next signalized intersection in the downstream traffic flow would continue traveling in the same direction of travel: thus, these vehicles would not incur any increase in VMT. Left-turn vehicles diverted from Vermont would travel to the next signalized intersection in the downstream traffic flow, where they would make a left turn then travel back to their original cross street. Total VMT incurred daily in year 2000 by vehicles diverted from cross streets on Vermont would amount to 38 miles. Total VMT incurred daily in year 2000 by vehicles diverted from Vermont would amount to 363 miles.

Impact on Left Turns at Driveways

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The restriction of left turns on Vermont to signalized intersections would eliminate left turns into driveways and from driveways of developments and parking facilities. Left turns from Vermont into driveways and from driveways also would be diverted to the next signalized intersection in the downstream traffic flow, where they would make a left turn and a U-turn or a series of two left turns and one right turn to complete the desired movement. No estimate of the number of left turns in and out of driveways could be identified.

Impact on Levels of Service and Critical Volumes

An analysis was conducted of the impacts of the diverted cross-street traffic and left turns from Vermont at nonsignalized intersections on critical volumes and levels of service at intersections impacted by the diverted traffic. These intersections include Vermont at Santa Monica Boulevard, Melrose Avenue, First Street, and Beverly Boulevard.

The results of the capacity analysis of the intersections indicate that all are expected to operate at LOS E and F in year 2000, both with and without the project. Thus, diversion of traffic would have little impact on level of service. However, changes in critical volumes would occur with the diversion of traffic to other intersections. The change in critical volume was less than 75 vehicles at three of the four intersections analyzed. A change of less than 75 vehicles is considered to be a minor impact on traffic flow. The remaining intersection was found to have a change in critical volume of 130 vehicles. This is considered to be a moderate impact on traffic flow because the change in critical volume is between 75 and 150 vehicles. A change in critical volume greater than 150 vehicles was considered to be a major impact on traffic flow at the intersection. This represents the maximum number of vehicles that can be added to the critical volume without changing the level of service of the intersection.

MITIGATION OF TRAFFIC IMPACTS

Based on the results of the analysis of traffic impacts of the aerial guideway alignment on Vermont Avenue, traffic mitigation measures will be needed at intersections at LOS E or F.

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Therefore, improvements will be needed regardless of whether the rail project is completed. Types of mitigation measures that could be considered for these intersections include:

- Increase intersection approach capacity through installation of parking restrictions.
- Restripe Intersection approach to provide an additional through traffic and/or turn lane.
- o Install left-turn restriction/prohibition.
- Add or revise traffic signal phase to accommodate the projected traffic movements.

• Widen intersection approach to provide additional through traffic and/or turn lane.

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The specific measure to be applied at each intersection with traffic at LOS E or F will be identified during Final Design of the Metro Rail project.

1. INTRODUCTION

This report presents the results of the special analysis of traffic impacts of the Vermont Avenue aerial alignment under Candidate Alignment J. This alignment is one of four alignments under evaluation in the Metro Rail Project CORE Study.

The report is organized into four chapters. This chapter serves as an Introduction to the report. Chapter 2 presents the results of an inventory of existing conditions that was conducted in the study area. This inventory Included number of traffic lanes, traffic volumes, location and type of Intersections, and location and number of driveways to parking facilities and developments. Chapter 3 describes the approaches used in the analysis of traffic impacts of the aerial alignment on Vermont. Chapter 4 presents the results of the analysis of traffic impacts. Using forecasted station access traffic and diverted traffic, changes in levels of service and critical volumes are identified for intersections impacted by the rall alignment. The increase In vehicle miles of travel due to diversion of traffic also is identified. The impact of the diverted left turns from Vermont Avenue at driveways into developments and parking facilities is discussed from the standpoint of changes in accessibility and effects on capacity of signalized intersections. Chapter 5 Identifies potential measures for mitigation of traffic impacts at Intersections.

1.1 PURPOSE OF STUDY

The purpose of this study is to identify traffic impacts resulting from the location of an aerial guideway in the center of Vermont Avenue. Traffic impacts under aerial guideway systems may include a reduction in capacity due to placement of structures within street rights-of-way, increase in traffic volumes as vehicles access stations, or changes in traffic patterns due to restriction of traffic movements at intersections affected by guideway structures.

1.2 STUDY AREA

The area selected for this analysis is limited to the section of Vermont Avenue between Third Street on the south and Santa Monica Boulevard on the north. The study area includes Vermont Avenue and the Intersections of all cross streets.

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1.3 DESCRIPTION OF AERIAL GUIDEWAY AND ISSUES

The Vermont aerial guideway is one section of Candidate Alignment J. This alignment is a combination of aerial and subway sections. It would include 13.4 miles of subway with twelve stations and 7.1 miles of aerial guideway with seven stations, for a total length of 20.5 miles and nineteen stations. Alignment J would branch near the Wilshire/Vermont Station. It would include a transition to an aerial alignment that traverses north along Vermont Avenue and west on Hollywood Boulevard, where it would transition back to subway and turn north into the San Fernando Valley. The west portion includes a subway along Wilshire Boulevard to the vicinity of Western Avenue, where it would transition to an aerial profile and continue in an aerial configuration along Wilshire to Fairfax Avenue. The issues to be addressed in this study are as follows:

- o Impacts of restriction of left turns on Vermont Avenue to signalized intersections.
- o Impacts of restriction of traffic on cross streets to signalized intersections for all but right turns.

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Although this study is concerned with issues of a specific segment of Alignment J, implications for aerial segments along the entire system can be derived from the results documented herein.

2. INVENTORY OF EXISTING CONDITIONS

An inventory of existing conditions was conducted in the study area along Vermont Avenue between Third Street and Santa Monica Boulevard. This inventory included number of traffic lanes, traffic volumes, location and type of intersections, and location and number of driveways to parking facilities and developments. This chapter presents the results of the inventory.

2.1 TRAFFIC LANES

Information on number of lanes and lane utilization on Vermont Avenue and all major cross streets was identified from striping plans obtained from LADOT. A field inventory was conducted by the GPC to verify this information, which was subsequently used in capacity analyses.

Vermont Avenue in the study area is a seven-lane divided roadway. The roadway is striped with three through-traffic lanes and a center left-turn lane in each direction. With the exception of the Hollywood Freeway, all streets intersecting Vermont in the study area are at-grade. At most intersections, the curb lane is marked as a through/right-turn lane. Cross streets along Vermont range from two-lane to seven-lane roadways.

2.2 TRAFFIC VOLUMES

Information on traffic volumes was collected from files maintained by LADOT and from traffic counts conducted by the GPC. Traffic counts were conducted on all nonsignalized cross streets and at the signalized intersections of Santa Monica Boulevard, Clinton, Hollywood Freeway, Beverly, Second, and First Streets. The counts were conducted during the midday, midday peak, and afternoon peak-hours. Appendix A contains the traffic counts obtained from LADOT and those conducted by the GPC.

Existing traffic volumes in the southbound direction on Vermont Avenue during the afternoon peak hour range from 1,009 vehicles per hour (VPH) at Santa Monica Boulevard to 1,970 VPH at Beverly Boulevard. In the northbound direction, peakhour volumes range from 1,400 at Santa Monica to 2,078 at Melrose Avenue.

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2.3 INTERSECTIONS

Location and types of intersections along Vermont Avenue in the study area also were inventoried (Figure 2-1). Intersections in the study area consist of signalized and nonsignalized cross streets. Of the nineteen intersections in the study area between Third Street and Santa Monica Boulevard, a total of thirteen intersections are signalized. With the exception of Council Street to the south of the Hollywood Freeway, all of the nonsignalized intersections are "T" intersections.

2.4 DRIVEWAYS

In addition to intersections, location and types of driveways along Vermont Avenue in the study area also were inventoried. There are 39 driveways on Vermont between Third Street and Santa Monica Boulevard. These driveways primarily serve commercial and office developments. Of the 39 driveways, a

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Signalized Intersection: All Movements Permitted Non-Signalized Intersection: All Movements But Right Turns from Cross Streets Prohibited

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total of twelve serve parking facilities, ranging in size from less than ten to over 100 spaces. Five parking facilities are classified as public facilities, where vehicles are charged a fee for parking. Of the public parking facilities, three contain over 100 spaces, one contains between 25 and 50 spaces, and the remaining facility contains between 10 and 25 spaces. Private parking facilities reserved for customers or employees of commercial or office properties total seven. Four of these facilities contain between 25 and 50 spaces, two contain between 10 and 25 spaces, and one less than 10 spaces.

ANALYSIS APPROACH

This chapter describes the methodology used in the analysis of traffic impacts of the aerial guideway alignment on Vermont Avenue. The analysis focuses on the following four major areas.

- Establishment of base traffic volumes.
- Establishment of station traffic volumes.
- o Diversion of traffic along the alignment and from intersecting cross streets.
- Analysis of traffic volumes and capacities at intersections impacted by diverted traffic.

3.1 BASE TRAFFIC VOLUMES

The traffic impacts associated with the aerial guideway and Vermont Avenue will result from reduction of roadway capacity due to placement of the guideway structures in the center of the street and from changes in traffic patterns caused by restriction of traffic movements. To provide a base for comparison of the traffic impacts of the aerial alignment, traffic volumes were established for year 2000 without the rall system. The base year 2000 traffic volumes were obtained from plottings of network traffic volumes output from the auto assignments performed for the original FEIS, as reported in the "Working Paper, Revised 2000 Base Condition Traffic Volumes," prepared by the Department of Transportation, City of Los Angeles, October, 1982.

3.2 STATION TRAFFIC VOLUMES

The base year traffic volumes as obtained from the projected traffic assignment represent "background" volumes without station area or mode-of-access traffic. Therefore, the base traffic volumes had to be modified to include mode-of-access traffic generated by the Metro Rail stations on Vermont. The mode of access traffic includes park-and-ride and kiss-and-ride auto traffic.

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The number of kiss-and-ride trips was derived from VASSIGN computer outputs for the Vermont/Beverly and Santa Monica/Vermont Stations as obtained from the travel demand models used by RTD in forecasting transit patronage. The kissand-ride trips were combined with base or background traffic to establish total traffic for intersections impacted by the diverted traffic on Vermont.

3.3 DIVERTED TRAFFIC

The construction of the aerial guideway in the center of Vermont Avenue will require that traffic crossing Vermont or turning left onto Vermont be limited to signalized cross streets. Additionally, left turns from Vermont Avenue to all nonsignalized intersections would be prohibited. All but one of the nonsignalized intersections on Vermont Avenue between Third Street and Santa Monica Boulevard are "T" intersections, and left turns from Vermont Avenue would be from one direction only. New routings were developed to measure the impact on capacity of this diversion of traffic movements. Figure 3-1 presents the



- Permitted Movement
- Diverted Movement
- A B C D X Diverted Left Turn Movement From Vermont
- Diverted Through Movement from Cross Street
- Diverted Left Turn Movement from Cross Street
- Permitted Right Turn Movement from Cross Street
- Movement Prohibited

Figure 3-1 **DIVERSION OF TRAFFIC**

schematic used for diversion of traffic. This schematic is for a cross-street intersection. At "T" intersections, all movements shown on the schematic would not occur. Traffic reassignments were based on the following assumptions:

o Motorists desiring to turn left from Vermont Avenue would be diverted to the next signalized intersection in the downstream movement and would then execute a series of turns to accomplish the desired movement (Movement A on Figure 3-1).

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- O Traffic on nonsignalized cross streets that desires to cross Vermont Avenue completely would be diverted to the closest signalized intersection, where it would cross Vermont and then travel back to its original east-west street (Movement B on Figure 3-1).
- o Traffic on a nonsignalized cross street that desires to turn left onto Vermont Avenue would also be diverted to the closest street that intersects Vermont at a signalized intersection, and then turn left (Movement C on Figure 3-1). All cross street movements are permitted at signalized intersections with Vermont Avenue (Movements A, B, C, and D on Figure 3-1).

To execute the traffic diversion process, turning-movement counts were made at all nonsignalized intersections along Vermont.

Because diverted traffic must travel increased distances, an estimate of the additional vehicle miles of travel was computed as follows.

• The extra travel for diverted left turns from Vermont Avenue equals two times the distance to the first block downstream (distance "X" on Figure 3-1) plus two times the distance from Vermont to the nearest north-south street (distance "Y" on Figure 3-1). Some additional travel might be created by forcing the left turns to a point north or south of the location desired for the left turn. This extra distance was not added to the calculations because of an inability to determine the driver's final destination (Movement A on Figure 3-1).

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- The additional distance traveled for diverted cross-street through traffic is the distance from the street of origin to the reassigned cross street, plus the distance back to the street of origin (distance "X" on Figure 3-1) (Movement B on Figure 3-1).
- o There was no additional travel assigned to vehicles desiring to make a left turn from the various cross streets along Vermont (Movement C on Figure 3-1). Although the traffic would move over different streets, it was assumed that no additional travel would occur.

3.4 CAPACITY ANALYSIS

Traffic volumes and street capacities were analyzed to determine impacts of diverted traffic on critical intersections. The method used for calculation of capacity was based on procedure for planning applications as described in Transportation Research Circular 212, "Interim Materials on Highway Capacity". published by the Transportation Research Board. The capacity procedures described in the referenced report are referred to as critical movement analysis. Critical movement analysis is a procedure which allows for capacity and level-of-service determination for signalized intersections. The analysis incorporates the effects of intersection geometry and traffic signal operation, and results in a level-of-service determination of the intersection as an operating unit.

For each critical intersection, capacity analyses were performed using base traffic volumes for the year 2000 as modified to account for the effects of station access traffic and diversion of traffic. Turning movement percentages as determined from existing counts were applied to the modified volumes to establish traffic movements for each critical intersection. The existing traffic counts used in this analysis were obtained from files of traffic counts maintained by LADOT and counts conducted by the GPC. Intersection geometrics identifying number and width of lanes and lane utilization were identified from initial aerial guideway and striping plans developed by SCRTD for the Vermont aerial alignment (see enclosed Figure 3-2). These plans represent preliminary conceptual design, rather than final design.

Additional capacity analyses were performed for existing conditions and for year 2000, using the base traffic volumes without the transit station access and diverted traffic. Impacts on traffic due to the operation of the rall system were determined by comparing the change in critical volume and level of service between the ideal alignment alternative and the base condition.

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4. RESULTS OF ANALYSIS

Traffic volumes and street capacities at signalized intersections along Vermont Avenue were analyzed to determine traffic impacts of the aerial guideway. Using forecasted station access traffic and diverted traffic, changes in levels of service and critical volumes were identified. The increase in vehicle miles of travel due to diversion of traffic also was identified. The impact of the diverted left turns from Vermont Avenue at driveways into developments and parking facilities was analyzed from the standpoint of changes in accessibility and effects on capacity of signalized intersections. The results of the analysis are presented in this chapter.

4.1 ANALYSIS ASSUMPTIONS

The assumptions made by the GPC for the special analysis of traffic impacts of the aerial alignment on Vermont Avenue are as follows:

- The existing number of lanes would be maintained on Vermont by reducing the sidewalk widths from fifteen to ten feet for the entire length of the alignment along Vermont.
- Left-turn lanes would be provided at all signalized intersections; they now exist at only the major signalized intersections of First, Beverly, Oakway, Northbound Hollywood Freeway on-ramp, Melrose, and Santa Monica.
- o Protected left-turn phases would be installed at signalized intersections where sight distance problems exist. The sight distance problems could occur when left-turning vehicles pull out into the center of the intersection to wait for a gap in the opposing traffic flow. With the vehicles in the center of the intersection, their sight distance could be obstructed by the guideway support columns. Left-turn phasing will be provided if these problems exist.

The provision of left-turn lanes on Vermont at all signalized intersections would mitigate most of the impacts. The remaining impacts on traffic would be limited to nonsignalized cross streets and left turns from Vermont into driveways.

4.2 DIVERSION OF TRAFFIC

Traffic from cross streets along Vermont would be restricted to signalized intersections for all but right turns. In addition, left turns from Vermont at nonsignalized intersections would be prohibited. This is a result of the obstruction of sight distance to cross-street traffic turning left onto Vermont or crossing Vermont, and traffic turning left from Vermont. at nonsignalized intersection. Nonsignalized intersections in the study area where turns would be restricted include Willowbrook, Lockwood, Burns, Marathon, and Council. All of these intersections except Council are "T" intersections. Traffic on cross streets that desires to cross Vermont or turn left onto Vermont would be diverted to the nearest signalized intersection in the downstream traffic flow, where the desired movements would be permitted. Traffic desiring to turn left from Vermont at nonsignalized intersections also would be diverted to the next signalized intersection in the downstream traffic flow. The location of the cross streets restricted to right turns and routes for diversion of the cross street traffic are identified in Figure 4-1. Figure 4-2 identifies the location where left turns from Vermont would be prohibited and the routes for diversion of this traffic.

4.3 DIVERTED CROSS-STREET TRAFFIC VOLUMES AND VEHICLE MILES OF TRAVEL

Based on traffic counts performed by the GPC, diverted traffic volumes were identified for cross streets restricted to right turns. Specifically, existing traffic crossing Vermont or turning left onto Vermont from cross streets was identified for the midday peak (12:00 a.m. to 1:00 p.m.), afternoon peak (5:00 to 6:00 p.m.), and the total midday (9:00 a.m. to 4:00 p.m.). Forecasts of these traffic volumes for the year 2000, when the aerial guideway would be operational, also were identified. The existing and forecasted traffic volumes on cross streets that would be diverted to signalized intersections are shown in Table 4-1.

The existing traffic counts demonstrate that a total of 905 vehicles would be affected during the midday period. This includes both through traffic and left turns from the cross streets of Willowbrook, Lockwood, Burns, Marathon, and Council Streets. Most of the diverted traffic would represent left-turning vehicles (862). During the midday peak, a total of 108 vehicles, including 101 left-turn and seven through vehicles. Diverted traffic during the afternoon peak hour would total 139 vehicles. Again, most of the traffic would consist of left-turning vehicles (133).

Because the analysis of traffic impacts focused on year 2000 impacts, it was necessary to forecast to year 2000 the existing traffic that would be diverted. The forecasts were developed by the GPC using the 1980 and year 2000 volumes from the base condition traffic assignments developed by LADOT for the FEIS. A comparison of changes in traffic on Vermont between 1980 and 2000 showed an average change of sixteen percent. Assuming traffic on cross streets would increase at the same rate as traffic on Vermont, year 2000 forecasts of diverted traffic from cross streets were prepared by applying this percentage change to the existing traffic volumes. The forecasts show that a total of 1,050 vehicles would be diverted from cross streets during the midday in year 2000. Diverted traffic during the midday and afternoon peaks would total 125 and 161 vehicles, respectively.

Additional vehicle miles of travel (VMT) incurred by the diverted traffic were estimated based on the number of vehicles diverted and the additional distance traveled by the diverted vehicles. An examination of the routes for the diverted traffic revealed that only the vehicles crossing Vermont would incur increased VMT. Left-turn vehicles diverted to the next signalized intersection in the downstream traffic flow would continue traveling in the same direction of travel; thus, these vehicles would not incur any increase in VMT. Vehicles incurring additional VMT would be limited to those crossing Vermont from Council Street. Vehicles diverted from westbound Council would incur twenty additional miles of travel daily, while vehicles diverted from eastbound Council would

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Signalized Intersection: All Movements Permitted
Non-Signalized Intersection: All Movements But Right Turns from Cross Streets Prohibited
Diverted Left Turns from Southbound Vermont
Diverted Left Turns from Northbound Vermont





- Diverted Left Turns from Northbound Vermont

TABLE 4-1

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		Existing Traffic			
		Total	Midday	Afternoon	
	Directional	Midday	Peak	Peak	
Cross Street	Movement	(9-4)	(12-1)	(5-6)	
WD Willtensen	Tafk turn	65			
HD WILLOWDEOOK	Theory	65	11	11	
	Total	<u></u>	<u></u>	<u></u> 11	
	IOCAL	65	11	77	
EB Willowbrook	Left turn	30	9	10	
	Through				
	Total	. 30	· 9	10	
WB Lockwood	Left turn	89	10	16	
TD DOCKWOOD	Through				
	Total	89	10	16	
		•••	••		
WB Burns	Left turn	208	21	34	
	Through		<u></u>		
	Total	208	21	34	
WB Marathon	Left turn	30	8	4	
	Through				
	Total	30		4	
WB Council	Left turn	273	21	31	
	Through	_25	_6	_5	
	Total	298	27	36	
EB Council	Left turn	78 - ⁄	11	11	
	Through	18	_1	_1	
	Total	96	12	12	
All Streets	Toft turn	862	101	199	
THE DELECTS	Through	43	7	6	
	Total	905	108	139	

DIVERTED CROSS STREET TRAFFIC VOLUMES

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TABLE 4-1 (CONTINUED)

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DIVERTED CROSS STREET TRAFFIC VOLUMES

		Year 2000 Traffic			
		Total	Midday	Afternoon	
	Directional	Midday	Peak	Peak	
Cross Street	Movement	(9-4)	(12-1)	(5-6)	
***		75	12	10	
WB WILLOWDFOOK	Leit turn	(5	15	13	
	Through	==	<u></u>		
	lotal	(5	15	15	
EB Willowbrook	Left turn	35	10	12	
	Through				
	Total	35	10	12	
WB Lockwood	Left turn	103	12	19	
ND DOCKWOOD	Through				
	Total	103	12	19	
	1000				
WB Burns	Left turn	241	24	39	
	Through		<u></u>	==	
	Total	241	24	39	
WB Marathon	Left turn	35	9	5	
	Through				
	Total	35	9	-5	
WB Council	Left turn	317	24	36	
	Through	29	$\frac{7}{2}$	_6	
	Total	317	24	42	
EB Council	Left turn	90	13	13	
	Through	_21	_1	_1	
	Total	111	14	14	
All Streets	Left turn	1.000	117	154	
	Through	50	8	_7	
	Total	1,050	125	161	

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incur eighteen miles of travel daily. Total VMT incurred daily in year 2000 by vehicles diverted from cross streets on Vermont would amount to 38 miles.

4.4 DIVERTED LEFT-TURN TRAFFIC VOLUMES AND VEHICLE MILES OF TRAVEL

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In addition to the restriction of nonsignalized cross streets to right turns only, left turns on Vermont Avenue would be restricted to signalized intersections. Left turns at nonsignalized cross streets and into driveways on the opposite side of the street would be prohibited.

Based on traffic counts performed by the GPC, diverted left-turn traffic volumes were identified at nonsignalized cross streets where left turns would be prohibited. Specifically, existing traffic turning left from Vermont at nonsignalized cross streets was identified for the midday peak (12:00 a.m. to 1:00 p.m.), afternoon peak (5:00 to 6:00 p.m.), and the total midday (9:00 a.m. to 4:00 p.m.). Forecasts of these traffic volumes for the year 2000, when the aerial guideway would be operational, also were identified. The existing and forecasted left-turn traffic volumes on Vermont at nonsignalized cross streets that would be diverted to signalized intersections are shown in Table 4-2.

The existing traffic counts show that a total of 632 vehicles would be affected by the location of the aerial guideway in the center of Vermont Avenue during the midday period. This includes left turns from Vermont at the cross streets of Willowbrook, Lockwood, Burns, Marathon, and Council Streets. During the midday peak, a total of 73 vehicles would be diverted. Diverted traffic during the afternoon peak hour would total 152 vehicles.

Forecasted 2000 traffic volumes show that a total of 73 vehicles would be diverted from Vermont at nonsignalized cross streets. Diverted traffic during the midday and afternoon peaks would total 85 and 176 vehicles, respectively.

Additional vehicle miles of travel (VMT) incurred by the diverted traffic were estimated based on the number of vehicles diverted and the additional distance traveled by the diverted vehicles. Left-turning vehicles diverted from Vermont would travel to the next signalized intersection in the downstream traffic flow, where they would make a left turn and then travel back to their original cross street. Total VMT incurred daily in year 2000 by vehicles diverted from Vermont would amount to 363 miles.

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The restriction of left turns on Vermont to signalized intersections would eliminate left turns into driveways of developments and parking facilities. The Inventory of existing conditions identified a total of 39 driveways on Vermont. Twelve of the driveways serve parking facilities. Left turns from Vermont Into the driveways also would be diverted to the next signalized intersection in the downstream traffic flow, where they would make a left turn and then a series of two left turns and one right turn to complete the desired movement. No estimate of the number of left turns from Vermont into driveways could be identified without conducting additional traffic counts or developing estimates from trip generation factors and information on land use along Vermont. Time and budgetary constraints prevented such an undertaking for this study. However, it can be stated that the prohibition of left turns on Vermont will potentially reduce accessibility to surrounding developments and increase traffic at signalized intersections where left turns are permitted. The increased number of left turns could further degrade traffic flow at these intersections.

TABLE 4-2

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TotalMiddayAfternoonDirectionalMiddayPeakPeakCross StreetMovement(9-4)(12-1)(5-6)WB WillowbrookLeft turn1871160WB WillowbrookLeft turn77141EB LockwoodLeft turn881525FB BurpaLeft turn1501736
DirectionalMiddayPeakPeakCross StreetMovement(9-4)(12-1)(5-6)WB WillowbrookLeft turn1871160WB WillowbrookLeft turn77141EB LockwoodLeft turn881525FB BurgeLeft turn1501736
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EB Lockwood Left turn 88 15 25
FR Purpose Toft turn 150 17 36
ED DULUS DELCCULU 100 I. 00
EB Marathon Left turn 18 3 3
WB Council Left turn 79 9 19
EB Council Left turn 33 4 8
All Streets Left turn 632 73 152
Year 2000 Traffic
Total Midday Afternoon
Directional Midday Peak Peak
Cross Street Movement (9-4) (12-1) (5-6)
WB Willowbrook Left turn 217 13 70
EB Willowbrook Left turn 89 16 1
EB Lockwood Left turn 102 17 29
EB Burns Left turn 174 20 42
EB Marathon Left turn 21 3 3
WB Council Left turn 92 11 22
EB Council Left turn 39 4 9
All Streets Left turn 733 85 176
Green Street Diverted Bally VMT
GLOSS STLEET AUGITIONAL DISTANCE DIVELLED DATLY VIII
WB Willowbrook .19 132
EB Willowbrook .46 5
EB Lockwood 28 81
EB Burns .14 58
EB Marathon .14 5
WB Council .25 55

DIVERTED MAIN LINE TRAFFIC VOLUMES

MTA LIBRARY

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EB Council All Streets

4.5 IMPACT OF DIVERTED TRAFFIC ON VOLUME/CAPACITY AT INTERSECTIONS

An analysis was conducted of the impacts of the diverted cross-street traffic and left turns from Vermont at nonsignalized intersections on critical volumes and levels of service at intersections impacted by the diverted traffic. These intersections include:

- o Santa Monica Boulevard/Vermont Avenue
- o Melrose Avenue/Vermont Avenue
- o First Street/Vermont Avenue
- o Beverly Boulevard/Vermont Avenue

The analysis of each intersection was conducted both under existing and future conditions. The analysis of existing conditions was performed using traffic counts conducted by the GPC and traffic count data obtained from files maintained by LADOT. The analysis of future conditions was performed under base year 2000 conditions both with and without the rall project. Traffic volumes for the year 2000 with the rall project include diverted cross-street traffic and the traffic generated by the Metro Rail stations at Beverly and Santa Monica Boulevards.

Figures 4-3 through 4-6 depict peak-hour traffic movements at the intersections Impacted by the diverted traffic under existing and future conditions with and without the rail project. Levels of services were determined from the capacity analysis of the intersections and used to make judgments of the impacts. LOS D was considered to be acceptable. At this service level, delays will occur, but only for limited duration. A change in level of service from the 2000 base condition to a LOS E or F with the project was considered to be a major impact and an indication of the need for improvement.

Levels of service and critical volumes from the capacity analyses of intersections impacted by the diverted traffic are shown in Table 4-3. Appendix B contains computer printouts of the capacity analyses. The results indicate that all intersections are expected to operate at LOS E and F in year 2000 both with and without the project. Thus, diversion of traffic would have little impact on level of service.

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However, changes In critical volumes would occur with the diversion of traffic to other intersections. The change in critical volume was less than 75 vehicles at three of the four intersections analyzed. A change of less than 75 vehicles is considered to be a minor impact on traffic flow. The remaining intersection was found to have a change in critical volume of 130 vehicles. This is considered to be a moderate impact on traffic flow, because the change in critical volume is between 75 and 150 vehicles. A change in critical volume greater than 150 vehicles was considered to be a major impact on traffic flow at. the Intersection. As noted, none of the intersections analyzed would experience a major impact on traffic flow as a result of the diversion of traffic on Vermont. This rating of traffic impacts based on changes in critical volumes was derived from threshold levels of critical volumes for levels of service A through F for planning applications as described in Transportation Research Circular 212. A review of the critical volumes by level of service revealed that a change in critical volume of 150 vehicles per hour would produce a change in service level from one level to the next. This represents the maximum number of vehicles that can be added to the critical volume without changing the level



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DIVERTED TRAFFIC INTERSECTION ANALYSIS VERMONT/SANTA MONICA PM PEAK HOUR



Figure 4-4

DIVERTED TRAFFIC INTERSECTION ANALYSIS VERMONT/MELROSE PM PEAK HOUR 41 -







2000 BASE CONDITION

N

EXISTING

Same as Above



2000 WITH PROJECT AND DIVERTED TRAFFIC

Same as Above

Figure 4-5

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DIVERTED TRAFFIC INTERSECTION ANALYSIS VERMONT/FIRST PM PEAK HOUR



DIVERTED TRAFFIC INTERSECTION ANALYSIS

VERMONT/BEVERLY PM PEAK HOUR

of service of the intersection.

TABLE 4-3

IMPACT OF DIVERTED CROSS STREET AND STATION ACCESS TRAFFIC ON CRITICAL VOLUMES AND LEVELS OF SERVICE

	Exis	sting	2000 Ba	96
Santa Monica/Vermont	Critical Volume	Level of Service	Critical Volume	Level of Service
Santa Monica/Vermont	943	В	1,446	F
Melrose/Vermont	1,340	Е	1,724	F
First/Vermont	1,149	D	1,333	E
Beverly/Vermont	1,814	F	2,288	F

	With		
Santa Monica/Vermont Intersection	Critical Volume	Absolute Change	Level of Service
Santa Monica/Vermont	1,462	16	F
Melrose/Vermont	1,748	24	F
Beverly/Vermont	2,418	130	F
	=======================================		

5. MITIGATION OF TRAFFIC IMPACTS

Based on the results of the analysis of traffic impacts of the aerial guideway alignment on Vermont Avenue, traffic mitigation measures will be needed at intersections at LOS E or F. These Intersections Include:

- o Santa Monica Boulevard/Vermont Avenue
- o Melrose Avenue/Vermont Avenue
- o First Street/Vermont Avenue
- o Beverly Boulevard/Vermont Avenue

Each of these intersections was found to operate at LOS E or F both with and without the project. Therefore, improvements will be needed regardless of whether the rail project is completed. Types of mitigation measures that could be considered for these intersections include:

- Increase intersection approach capacity through installation of parking restrictions.
- Restripe intersection approach to provide an additional through traffic and/or turn lane.
- o Install left-turn restriction/prohibition.
- Add or revise traffic signal phase to accommodate the projected traffic movements.
- Widen intersection approach to provide additional through traffic and/or turn lane.

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The specific measure to be applied at each intersection with traffic at LOS E or F will be identified during Final Design of the Metro Rall project. Factors to be considered in the selection of the appropriate mitigation measure to be applied at an intersection include costs, public acceptance, effectiveness, and responsibility for funding and/or enforcement. SCRTD is responsible for certain specific mitigation measures, primarily those within the immediate vicinity of stations, and these will be implemented as part of station construction. Other measures not in the immediate vicinity of stations would probably not qualify for project funding. These measures could be implemented either by the LADOT or by the County Road Department through their Capital Improvement Program. Implementation of such measures would be subject to availability of adequate city or county capital improvement funds.

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APPENDIX A

TRAFFIC COUNTS

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HOURS AM	3-6. PM		
SCHOOL DAY 11 DISTRI	T hellowyou	(1)	
N/B 5/2	B E/B W/B	5	X (c)
DUAL WHEELED 122 4	2 38 20		(C
BUSES 158 11	8 312 30		
N/B TIM	S/B TIME	E/B TIME	W/B TIME $3/2$
AM PEAK 15 HIN 299 9	239 7 20	10.45 y	100: 7
PM PEAK 15 MIN _ 3944 5	30/ 500	136 52	123 500
AP PEAK HOUR < 1162 9	922 700	358 72	380 7 20
PM PEAN HOUR 1537 5"	1180 500	538 5	456 5
NORTHBOUND APPROACH	SOUTHBOUND APFROA	CII TOTAL	XING S/L(d) XING N/L(h)
$1 \frac{1}{2} $	(e) (f) (g)	(h) $d+h$	In the line -
C C 104 PPP 24 1110	18 814 91	ADD IPSIN	1070 - 10
Q-111 128 000 28 111.D	20 5041 1.11	588 1402	1010 - 14h -
7-11 122 112 12 11/10C	20 1002 17.2	11571 2:358	120 - 20 -
1.5 00 1112 111 1271	28 1010 112	1081 2310	944 - 117 14
5 (200 1:30 98 1530	30 1024 126	1191 2712	100 - 46 2
TOTAL 832 1012 234 7184	14:2 5102 402	FIMI 13031	654 10 114 14
EASTBOUND APPROACH	WESTBOUND APPROA	CH TOTAL	XING W/L(1) XING E/L(p)
HOURS (1) (1) (k) (1)	(m) (n) (o)	(p) <u>1 + p</u>	Ped Sc Ch Ped Sc Ch
7-8 54 221 72 352	98 228 10 3	3.36 1.88	31 78 14
8.9 1.2118 112 272	52 2.841 18 3	3516 626	32 - 72 -
9-10 72 158 66 296	Rel 141 12.	2000 1696	22 - 156 2
3-0 49 252 90 1120	57 228 18	301 7.21	38 - 82 12
	21: 288 22 3	330 792	11-1 - 38 2
5 4 4.2 422 744 15.38	1.2 11.2.2 .22 K	651. 99.12	18 - 97 6
TOTAL 3.25 1.581 426 2341	284 1594 102 1	1990 U.3 2	191 - 468 24

CITY OF CLOS ANGELES

DEPARTMENT OF TRANSPORTATION

24 Hour ⁽¹⁾ Traffic Volume

t -

I.OCATION						-	DAT	E		DESCRIPTION			DAY		WEEK
MELROSE AV	AT V	ERMON	T AV				•	10-1	7-82	C 03340	23		MO		WR
HOUR		E	<u> </u>	งบิบุณ	٥ 			EST	BOUN		R A	Τ́Ι	0 (E.	/~}	
	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	
12 AN	38	41	21	29	129	17	15	26	10	65	2.2*	3.4*		2.9*	194
	25	19	<u>21</u>	31	<u> </u>	23	12	13		57	1.1	1.5*	1.6*	3.4*	152
AM S	4	5	6	0 7	20 22	[0 5			6	42	1.1	1.6*	.8	1.3	92
4 A M	6	2	5	3	16	<u> </u>			2		- 8 1 5 #	•8	.9	3.5*	42
" <u>5_AM</u>	77	14	77	17	45	6	13	15	15	49	1.2		.5#	1.1	94
6 A M	19	34	31	56	140	10	40	40	53	143	1.9*		.9	1.1	283
<u>7 AM</u>	88	114	98	127	<u> </u>	73	93	113	125	404	1.2	1.2	.9	1.0	831
MA 5	120	101	84	61	366	116	107	101	94	418	1.0	.9	. 6,	.6*	784
10 AM	81	<u> </u>	80	72		- 49	/8	98	78	353	1.1	1.1	. 8'	•9	699
11 AM	20	95	69	88	342	97	00 81	60 67	69	269	1.2	1.2		1.0	583
12 PM	99	82	95	94	370	94	105	96	78	373	1.1	1.2		1.2	- 013
<u> </u>	93	95	67	89	344	83	95	73	76	327	1.1	1.0	.9	1.2	671
- 2 YM	91	87	73	90	341	87	89	72	76	324	1.0	1.0	1.0	1.2	665
<u> </u>	131	105	128	121	485	85	98	73	89	345	1.5*	1.1	1.3*	1.4	830
ч 4 РМ І Б РМ	120	120	131	149	520	103	102	103	94	402	1.2	1.2	1.3	1.6*	922
···· 6 PM	120	112	117		492	$\frac{102}{110}$	119	113	-116	450	1.3	1.1	1.1	1.0	942
- <u>7 PM</u>	105	_ 117	94	84	400	106	133	· 94	109	474		1 2	1.2	1.0	912
8 P.M	86	88	87	62	323	49	74	. 45	48	216	1.8*	1.2	$1.9 \neq$	1.3	539
<u> </u>	101	92	92	94	<u> </u>	77	71	92	75	315	1.3	1.3	1.0	1.3	694
10 PM	68	70	51	57	246	53	46	44	47	190	1.3	1.5*	1.2	1.2	436
<u> </u>	<u> · 4/</u>	50	<u> </u>	4	162	30	2 3	25	- 26	104	1.6*	2.2*	2.4*	•2*	266
										l					
•		<u>бн</u>			2636					2372					5008
>		16 ⊦ 			6049					5467					11516
		24 +		TAL	6814					6008					12822
РЕАК Н	บบคร		BEGIN	ur Ining	VOLUME			HO BEGIN	ua Inin g	VOLUME			HO BEGIN	UA	VOLUME
		AM	7	15	459		АМ	7	30	461].	АМ	7	30	907
FORM NO 253 REV. (1/83)		РМ	4	30	541		РМ	5	30	478		РМ	4	30	959
49950 75850	6 10	-17-8	3				ME	LROSE	AV	AT VERMONT	AV		<u>. </u>		
" 75 l4				1	, 4					I ,					68

CITY OF DEPARTME

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LUS ANGELES OF TRANSPORTATION

24 Hour I rame volume

							DAT	E		DESCRIPTION	· · · · -		DAY	OF THE	WEEK
VERMONT AV		ELROS	E AV					ι∩-i	7-83	C 042 42	4 4		нO		Ни
		N	ORTH	ьOuN	υ		5	OUTH.	ÜOUN	ບ	RA	TI	0 (N.	/51	
BEGININING	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTA
12 AM	87	74	67	69	299	112	108	77		365	.9	.7*	9	1.0	664
<u>1 AM</u>	54	40	45	38	177	72	50	59	45	226	.8	•8	.8	.3	403
2 A M	39	37	20	70	166	67	62	45	32	206	•6*	•6*	•4*	2.2*	372
3 A M	24	26	23	17	95	26	\$u	16	17	79	.9	1.3	1.8*	1.0	174
4 A M	26	16	23	37	102	22	27	26	23	98	1.2	•6*	:9	1.6*	200
<u>5 AM</u>	40	_ 56	69	90	255	29	37	48	59	173	1.4	1.5*	1.4	1.5*	428
6 AM	127	205	198	273	803	79	106	108	151	453	1.6*	1.9*	1.8*	1.7*	1256
<u> </u>	257	257	356	397	1267	208	237	301	304	1050	1.2	1.1	1.2	1.3	2317
1. <u>9</u> AM	34 9	233	374	402	1408	317	276	237	247	1077	1.1	1.0	1.6*	1.6*	2465
<u> 9 AM</u>	677	91	347	342	<u>1457</u>	270	_ 255	228	246	999	2.5*	.4*	1.5*	1.4	<u> </u>
10 AM	354	30.6	358	371	1389	257	281	255	265	1058	1.4	11.1	1.4	1.4	2447
<u>11 AM</u>	338	339	326	302	1305	315	310	281	296	1202	1.1	1.1	1.2	1.0	2507
12 PM	372	369	358	362	1461	324	341	365	319	1350	1.1	1.1	1.0	1.1	2811
	339	335	328		1368	320	358	285	291	1254	1.1	.9	1.2	1.3	2622
2 2 2 2	340	329	389	383	1447	355	304	276	281	1216	1.0		1.4	1.4	2663
<u> </u>	201	374	672	41		322	· 331	314	307	1274			1.2	1.5	276
	1 604	547	432	473	1039	320	294	308	314	1 1242		1 2 4	L • 4 J = 4	1.4	208
<u> </u>	521	201	471	499	1722	310	371	344	309	1202			1.5%		332
. т. т. р.м	339	254	244	226	1071	319	315	262	250	1146	1.07		1.4		2907
8 PM	341	203	190	194	928	252	278	256	232	1018	1.4	.7*	7*	- 8	1944
9 9 4	220	192	195	170	785	310	350	331	332	1323	7*	5.4		.5*	2108
10 PM	169	157	1 38	131	595	257	214	158	156	785	.7*	.7*			1380
11 PM -	135	108	126	92	461	158	133	151	122	574	1 .8		.8	.3	103
								1	1			••			
		61		TAI											
• n		ן יי		IAL	9305					6924					1622
		161									1				
· · · ·					21595					18180				•	397
		24 1	HOUR TO	DTAL	23745					20686					444
			HC		· VOLUME	T		HC BEGI		VOLUME			HC BEGI	DUR	νοιυμε
РЕАК Н	OURS		1			-		-			-	┣=──	-		<u> </u>
. . .		AM	А	15	1736		АМ) 11	15	1211		AM	1 8	15	270
				_*/		-1		- <u> </u>	<u> </u>	<u> </u>	- T		<u> </u>		<u> </u>
IF FORM NO. 253 REV. (1/83)		I PM	5	15	2078		PM	12	30	1363		PM	5	5 15	33
758 50 49950	5 10	-17-8	3					KMONT	VA	AT MELRUS	EAV	-			
75 13					1	•									

CITY OF LUS ANGELES

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24 mour __ ramic volume

DATE

DESCRIPTION

DAY OF THE WEEK

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ARTMENT 👾 **TRANSPORTATION**

LOCATION

VERMONT AV	S/O B	EVERL	Y BL				:	03-2	1-85	ç d43 33	4 3		ТН		нм
HOUR BEGINNING		N	OR TH	BOUN	D		S	OUTH	BOUN	D	RA	1 T	0 (N	/S)	
	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL
12 AM	114	105	83	87	389	137	120	107	97	461	.8	• 9	.8	.9	850
<u>1 AM</u>	56	75	62	73	266	89	60	59	62	270	.6≉	1.3	1.1	1.2	536
2 AM	70	65	54	59	248	62	65	67	41	235	1.1	1.0	• B	1.4	483
3 AM	- 31	31	30	17	109	33	35	28	36	132	•9	•9	1.1	•5≉	241
9 AN 5 AM	23	20	31	34	116	31	38	32	20	121	.7*	•7*	1.0	1.8%	237
	27		88	100	283	40	40	55	96	231	1.0	1.4	1.6%	1.0	514
7 AM	113	100	188	271	738	128	161	236	311	836	•9	1.0	•8	•9	1574
<u> </u>	201	308		333	1264	412	430	452	<u> </u>	1808	•6*	.7*	•8	.7*	3072
0 AM 0 AM	243	200	213	299	1241	526	521	509	412	1968	•7*	•5*	•6≠	.7*	3209
10 AM	203		200	291	1083	439	376	396	315	1526	•6#	•6*	.7*	<u>•9</u>	2609
10 AM	214	201	303	360	1230	338	320	313	323	1294	• 8	•9	1.0	1.1	2524
12 PM	340	217	240		1322	318	320	337	306	1281	1.0	•9	1.0	1.2	2603
1 PM	370	220	221	200	1345	310	214	281	504	1316	1.1	1.5*	1.2	•7*	2651
2 PM	220	220	300	343	1327	300	255	403	<u> </u>	1259	1.1	1.3	-8	1.1	2586
2 FM	363	200	207	201	1455	288	288	276	343	1195	1.3	1.2	1.4	1.1	2650
<u></u>	407	<u> </u>	421	421	1574	338	312	336	332	1319	1.0	1.2	1.3	1.3	<u>2892</u>
́ 5 РМ	440	430	420	479	1800	3/3	377	332	328	1410	1.1	1.2	1.4	1.5*	3210
<u> </u>	407	<u>414</u> 600	420	482		362	352	341	336	1391	1.3	1.3	1.3	_1.4	3273
7 PM	504	- 100	. 421	980	1813	325	300	289	317	1231	1.5*	1.4	1.6*	1.5≯	3044
8 PM	260	<u> </u>	200	204	1503	358	287	276	250	1171	1.7*	<u>{7≭</u>	1.3	1.4	<u> </u>
9 P.M	287	200	207	270	1260	239	212	240	249	940	1.54	1.5×	1.2	1.2	2200
10 PM	344	272	250	264	1200	- 239	243	296	294	1072	1.2	1.2	1.0	1.0	2272
11 PM	104	154	1/2	160	1141	244	217	209	199	869	1.4	1.3	1.2	1.3	2010
			4	150	049	199	1.35	160	124	618	1.0	1.1	•9	1.3	1207
	•	6 H	OUR TO	TAL	00//										
	ŀ					┠				9421	ļ				18265
•		16 H		TAL	22037	_			-	21015					43053
		24 +		TAL			•		_					_	
	ļ				25238	L		•		23953	<u> </u>				491 91
РЕАК НС			HO BEGIN	UR INING	VOLUME			HO BEGIN		VOLUME			HO BEGIN	IUR NNING	VOLUME
		AM	11	15_	1346].	AM -	7	45_	2060] '-	АМ	ر	30	3347
								1		1	1		1		

PM

75850 07430 3 03-21-85 47 14

FOPMINO 253 REV (1/83)

PM

6 15

1935

VERMONT AV STO BEVERLY BL

1462

12 45

РМ

4 45

32.81

JITY OF LOS ANGELES

.RTMENT _ C ANSPORTATION

24 Hour _ Traffic Volume

OCATION							DAT	E		DESCRIPTION			DAY	OF THE	WEEK
VERMONT AV	AT B	EVERL	Y BL					03-2	1-85	C C 42 42	4 4		тн		Н₩
HOUR		N	ORTH	BOUN	D		5	אדטס	BOUN	D	RA	ΤI	0 (N	/5)	
BEGINNING	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL
12 AM	200	177	157	154	688	190	161	139	126	616	1.1	1.1	1.1	1.2	1304
<u> 1 AM </u>	151	121	<u>9</u> 5	120	487	86	105	84	93	368	1.8*	1.2	1.1	1.3	855
2 AM	143	130	120	93	486	83	107	68	49	307	1.7*	1.2	1.8*	1.9*	793
MA E	87	58	64	46	255	60	51	52	33	196	1.5*	1.1	1.2	1.4	451
4 A.M	36	25	41	34	136	55	51	28	- 6 :	199	.7*	•5*	1.5*	•5*	335
<u>5 AM</u>	47	45	54	<u> </u>	205	59	84	143	199	485	•8	• 5×	• 4 X	•3*	690
6 AM	64	97	99	146	406	287	374	480	623	1764	•2*	•3*	•2*	•2*	2170
<u> </u>	147	153	180	<u>196</u>	676	640	738	695	806	2879	•2*	•2*	•3*	•2*	3555
8 AM	182	219	204	256	861	797	792	603	601	2793	• 2*	• 3*	•3*	•4*	3654
<u> </u>	276	26 3	286	286	1111	557	<u>532</u>	454	<u> 468</u>	2011	•5*	•5*	•67	•6*	3122
10 AM	305	287	319	315	1226	414	433	420	390	1657	.7*	.7+	9.	•8	2883
<u> </u>	334	321	323	373	<u>13</u> 51	411	459	406	39 3	1669	.8	.7*	•8	.9	302.0
12 PM	347	360	360	346	1413	425	426	416	3 68	1635	.8	.8	•9	•9	3048
<u> </u>	396	366	341	382	<u>1485</u>	405	466	410	<u> </u>	1672	1.0	- 8	-8	1.0	3157
2 PM	397	362	405	385	1553	391	365	448	437	1641	1.0	1.0	•9	•9	3194
<u>3_PM_</u>	376	344	449	466	<u> </u>	396	462	<u>42</u> 6	483	1767	.9	.7*	1.1	1.0	3402
4 PM	411	437	457	522	1827	499	440	413	440	1792	• 6	1.0	1.1	1.2	3619
<u> </u>	461	438	499	469	<u> 1867 </u>	473	509	<u>481</u>	<u>51</u>	<u> </u>	1.0	.9	1.0	.9	3846
6 PM	453	406	431	414	1704	428	440	465	504	1837	1.1	.9	•9	.8	3541
<u>/ PM</u>	38/	395	384	405	1575	444	437	<u>1 367</u>	373	<u>1621</u>	.9	.9	1.0	1.1	3196
8 PM	355	¥ 298	332	342	1331	335	359	378	355	1437	1.1	.8	.9	•9	2768
<u> </u>	281	285	306	312	1190	395	469	<u>425</u>	<u>38</u> (1659	.7*	•6*	.74	•8	2859
10 PM	322	261	271	247	1107	333	345	307	300	1285	1.0	•8	.9	•8	2392
II_PM	291	254	251	183	<u>979</u>	226	270	<u>199</u>	229	926	1.3	.9	1.3	-8	1905
											· .				
		6			<u> </u>					13221					21198
		16	HOUR TO	DTAL	21211					29823					51034
		24 1	HOUR TO	DTAL	255.54			•		34205					50750
		<u> </u>	НС			<u> </u>	<u> </u>	Н	มมุล		1		н	านต	71 77
PEAK HO	OURS		BEGI	NING		_		BEGI	NING				BEGI	NNING	VOLUME
		АМ	11	15	1364		АМ		7 30	3090		АМ		730	3867
FORIA NO 253 REV (1-83)		РМ	4	45	1920		РМ	<u>5</u>	5_00	1979		РМ		5 00	3846
75850 07430) 5 03	-21-5	15				VI	ERMONT	AV	AT BEVERL	YBL		- I		
47 05					I				•	l I					26

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CITY OF 1405 ANGELES

PARTMENT - . FRANSPORTATION

24 Hour _ Traffic Volume

			<u> </u>				DAT	E		DESCRIPTION			DAY	OF THE	WEEK
SEVERLY BL	<u>у Та</u>	ERMON	T AV					03-2	1-85	C 035 35	3 3		ТН		HW
HOUR		E	AST	BOUN	D		W	EST	BOUN	D	RA	T I	0 (E	/W)	
	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL
12 AM	66	65	53	39	223	45	33	33	27	138	1.5*	2.0*	1.6*	1.4	361
<u>LAM</u> 2AM	36	24	10	29	107	21	33	21	26	101	1.7*	<u>•.7</u> *	•9	1.1	208
3 AM		11		13		23	12	17	7	64	•9	1.3	1.0	1.9*	137
4 AM	5	10	14	10	39	11	<u>_</u>	· 11	10		× 2 • 3 ×		1.3	<u> </u>	- 11
<u> </u>	10	10	2.2	33	75	20	16	39	38	113	• 5*	1 • / *	1.5	•0	19
6 AM	33	53	86	122	294	52	114	140	165	471	•6*	<u>•</u> 5≉	•6#	•7*	765
<u> </u>	126	174	_241	25_1	792	193	247	314	298	10.52	.7*	.7*	.8	.8	1844
8 AM	242	257	239	· 235	973	315	311	335	320	1281	.8	.8	.7*	•7*	2254
<u> </u>		156	_176	<u> 159</u>	651	258	_ 213	<u> 193</u>	223	887	_•6*	.7*	•9	<u> </u>	1538
IU AM	157	100	161	154	640	174	1.82	204	210	770	•9	•9	•8	•7*	1410
<u></u>	164	194	198		<u> </u>	211	221	206	<u> 202</u>	840	•7*	• 8	.8	• 9	1500
1 PM	209	225	205	109	121	220	213	205	251	895	•7*	•9	•9	•8	1616
2 PM	180	169	194	220	760	191	204	211	$\frac{211}{247}$	817	1.1	1.1	1.0	_ • 9	1654
3 PM	225	_236	235	223	919	200	212	201	241	874	1.9	•8	• 9	• 9	1643
4 PM	245	265	257	285	1052	307	300	- 207	205	1220		<u>+7</u>	<u>• 9</u>	10	1951
<u>5 PM_</u>	268	261	86	483	1098	348	327	352	342	1369	•0 - 8	•7 . Я	•0	1.4	2612
6 PM	267	257	256	237	1017	312	285	253	242	1092	.9	.9	1.0	1.0	2109
<u> </u>	307	<u>· 198</u>	<u> 14 2</u>	157	. 804	233	182	143	154	712	1.3	1.1	1.0	1.0	1516
M4 8	133	134	118	98	483	128	131	136	112	507	1.0	1.0	.9	• 9	990
<u> </u>			106			112	1_12	82	89	395	.9	1.0	1.3	1.4	837
10 PM	101	79	96	77	353	91	108	86	72	357	1.1	•7*	1.1	1.1	710
	1 <u>1</u> 4		69	65	285	<u> </u>	70	54	48	2 30	1.3	1.1	1.3	1.4	<u>515</u>
		6H		TAL 	5485					68.41	! ·				12324
		16 ዞ		TAL	10150							_			
										14214					2636
		<u> </u>			13350		f			15291					28641
			HO BEGIN	UR INING	VOLUME			HO BEGIt		VOLUME			HO BEGIN		VOLUME
РЕАК НО	JUHS	AM					 AM		<u>ــــــــــــــــــــــــــــــــــــ</u>						· · ·
		<u> </u>	7	30	<u> </u>	4		B	_00	12.81_	l ·		<u> </u>	00	2254
FORM NO 253 REV (1-83)		РМ	5	45	1262		РМ	-	00	1240		РМ	_		
07430 75850	6 03	-21-8				L !			00	<u>1369</u>			<u> </u>	00	l <u>2467</u>
47 04			•				9 C	¥ ⊑ K ⊑ T	υĻ	AT VERMON	AV				
					.*										3.

UT 200 MIZ, 101 المراجبة المعاد الميته فالالتراج والمراجع والمراجع City of Los Angeles TSP Department of Transportation 12/5/5 75156 Kine . 120 minut NORTH/SOUTH 10031. T/WEST (g) HL S FIAMA (n) (p) WEATHER Click DAY & DATE lice. (a) 5-6 PH 4. 11' AM HOURS **>**(e) Hellyner (1) DISTRICT (j) SCHOOL DAY 4.2 **>**(c) W/B E/B N/B S/B 119 5 liste DUAL WHEELED Y Ð 11.9 Ŷ 1.21 · Le BUSES (k)(f)(m)(d) TIME OF W/B TIME E∮B TIME TIME 32 S/B N/B 800 3 298 0 29AL AM PEAK 15 MIN Nº EU 530 5-30 えんご 24 301 PH PEAK 15 MIN 430 000 0 12 32 165 1110 AH PEAK HOUR 15-10 500 5 121 23 1:33 379 PH PEAK HOUR XING S/L(d) XING N/L(h) SOUTHBOUND APPROACH TOTAL NORTHBOUND APPROACH Ped Sc Ch Ped Sc Ch d + h(£) (2) 3 (h) (c) (d)(e) URS (b) (a) 987 996 -2; 3 2: 12 33 15 7.2.1 7 3 ili 8 1932 Q 1.2 9 3 20 -22 8-0 h 100 m ist 3/7 .2 33 18 LIT 1072 722 9-11 39 2.269 İ 9 IPM 154 11.1 3.44 37 230 31 F1 52L 2.5 hiv 10.5 28 310 2517 1102 5 5-1-11. 2.31 1.259 5% 24 TOTAL hx.1 1.14 XING W/L(1) XING E/L(p) WESTBOUND APPROACH TOTAL EASTBOUND APPROACH Ped Sc Ch 1 + pSc Ch Ped HOURS (n) (0) (P) (1) (1)(k) (1)(m) 8 26 8 26 27) 4-5 28 G 28 Q 7-9 9 . سود مرد 32 3 3 0-11 ç 1 P.L 5 AL 3 24. In 1.1 95 Č) 17 70 -1 5Ti 5 2-5 13 . 34 2 -83 3 -1; 1211 42 ni 314 300 3 -TOTAL

CITY CT LOS ANGELES

DEPARTMEN OF TRANSPORTATION

24 Hou C'Traffic Volume



OCATION			-				DAT	E		DESCRIPTIC	DN			DAY OF T	HE WEEK
BURNS AV E	U VER	YONT /	AV					01-0	9-85	A 016 1	6 1 1	1		WE	Н₩
HOUR		E	AST	BOUN	D		M	EST	80UN	D		RA	T 1 (D (E/W)	
BEGINNING	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTA	AL 00-	-15	15-30	30-45 45-6	HOUR TOT
12 AM	1	4	2	4	11	5	2	5	- 4	16		•2*	2.0*	.4* 1.0	2
<u> </u>		3	1	- 4	ង	· .	4	3	3	10			•B	.3× 1.3	
2 AM	3	_		1	4	3		1	3	. 1	r 1.	•0			¹
<u> 3 AM</u>		1	1	2	- 4				2	2	2		·	- 1.0)
4 AM 5 AM		*	· 1		د	2	2		2	8	3 ,	•3*	•5*	1.0	1
<u></u>			3	10	16	2			4	10					
7 44	12	ลิ	ر ب	16	45	2 8	1	1 11		20	5 1	5 #	•17		ים (כ אני אני
	14	17	16	25	74	19	- 10	12	18	50	<u>, r</u>	• <u>) -</u> - 7zd	•7	1.5# 1.4	
9 A.H	34	15	21	13	83	21	23	11	14			6#	.7*	1.97	15
10 AM	30	18	17	24	69	28	19	20	19	86	5 1	1	.9	.9 1.	$\frac{12}{3}$
11 AM	9	16	18	10	53	23	22	25	14	84	- -	•4*	.7+	.7*	7* 13
12 PA	16	19	13	14	62	29	15	8	17	69	9	•6*	1.3	1.64 .	3 13
1 PM	16	9	12	18	55	24	25	24	16	- 89	3	.7*	. 4*	.5* 1.	1 14
2 PM	16	15	12	19	62	12	11	13	13	49	9 1	.3	1.4	.9 1.	5* 11
<u> </u>	12	15	10	20	57	25	. 18	16	15	_74	<u>4</u>	<u>•</u> 5*	.8	6# 1.	3 13
4 PH	12	20	23	17	72	18	14	22	20	74	4	•7₹	1.4	1.0	€ 14
<u>5 PM</u>	11	22	25	18	82	46	22	15	29		2	<u>•4</u> *	1.0	1.7*	5* 19
6 PM	22	23	28	52	125	26	27	29	41	12	3 .	•8	•9		3 24
	27	12	10		92	31	31	24	25			•1	• (Ŧ	•8 •	<u>>* 20</u>
о гл	13	12	5		L 07	15	20	1 10	21			+7 j	• 1* 	• 7 1 •	J , 14 9 , 16
10 PM	11	12		7	42	15	13				2	<u>+7</u> 7±	+0+	<u> </u>	
11 PM	1 1	a a	2		16		••	1 1	′ ı		2	• • •	***	2.08 3.	n* ĭ
				· · ·			1		•	· <u>·</u> ··································					
		61		DTAL											
					413	_ 				42	7 —				8
		16	HOUR T	OTAL	1076					120	9			•	22
		24	HOURT	OTAL	1159					129	6				24
·		•	HC BEGI	DUR NNING	VOLUME			H BEGI	DUR INNING	VOLUME	=			HOUR BEGINNING	VOLUM
PEAK I	HOURS	AM	8	45	. 95		АМ	· 11	15	9	0		АМ	. 10 00	
FORM NO. 313 OPA		РМ		. 15	142	1	РМ			13			РМ	4 20	
LOUNDO SOLUEA 11/8	41		.L		I-7Z		1	1 6	00	1 15	0			1 0 30	6

CITY (CLOS ANGELES

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DEPARTMENI OF TRANSPORTATION

24 Hou Traffic Volume

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							DAT	E		DESCRIPTION			DAY	OF THE	WEEK
VERMUNT AV	AT BL	IRNS A	L V				-	01-0	7-05 (0 10 33 43	સ મ		WE		
HOUR		NC	א נא	BUUN).		51	лати	BOON	<u></u>	КА	TI	Э (N.	/51	
BEGINNING	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL
12 AM	03	52	47	43	252	ذ 4	79	63	<u>5</u> 5	290	.9	1.0	•7≠	6.	54d
<u> 1 AM</u>	50	40	4 ف	51	160	<u>5</u> 6	50	45		1 89	1.0	.8	. 7*	1 •5≆	٢٥٤
2 AM	38	35	31	24	128	42	خ E	23	20	118	.9	1.1	1.3	1.2	246
5 APi 6 AM	22	24	22	20	89	22	10	18	17	73	1.0	1.5*	1.2	1.2	161
4 AN	22	20	10	<u> </u>		20			18	76		1.04	• o 7 -	1.2	103
БАМ	76		40	110	119	20	45	07	42	172		1.4		1.4	351
7 AM	195	191	210	234		217	212	277	268	405	L • L	1.0			1.502
Ă A M	204	2.35	282	267	1048	300	293	264	200	1135	.4	• 7	1.0	1.0	2185
9 AM	291	299	289	322	1201	221	207	224	231	883	1.3	1.4	1.25	1.4	2004
MA 01	200	ات ک	34 6	329	1226	241	222	229	244	• 941	. Ü	1.6*	1.5*	1.3	2167
11 AM	293	298	خاد ا	321	1232	290	241	244	262	10+3	1.0	1.2	1.5	1.2	2275
IL FM	332	336	4 0 4	ەدد	1310	290	217	254	261	10 95	1.1	1.2	1.2	1.3	2342
I PM	329	105	320	345	1295	275	215	207	258	1085	1.2	1.1	1.2	1.3	2300
2 PM	315	329	324	_ ذ 3	1300	271	292	290	239	1062	1.2	1.3	1.1	1.4	2352
<u> </u>	296	321	311	296	1220	201	290	328	207	1146	1.1	1.1	.9	1.1	2372
4 PM	300	336	ن د د	3/1	1345	234	279	345	218	1150	1.2	1.2	1.0	1.3	2499
<u> </u>	535	108	365	317	1443	265	310	304	209	1154	<u>2.ú*</u>	<u>•5</u> *	1.2	1.4	126.02
D PM V DM	312	393	340	401	1500	205	293	314	300	1196	1.3	1.3	1.1	1.3	2702
<u> </u>	300	291	240	272	1153	276	249	240	201	972	1.4	1.2	1.0	1.3	2135
U PA G PA	241	100	140	1 221	747	1 101	210	1 411	1 156	7.25		1.2		1.2	1/00
10 28	154	67	10	143	102	1 161	1 1 4 7	140	115	563	1.0	1.0	1 1 • 1	1.2	916
11 PM	1.3.3	107	112	od	+40	1 129	1 1 1 1		60	600	1.0	н	1.0		900
••••••							1 1 2 1		1 00		1.0		1	1	,
		61		TAL	7099		•		••	64.43					13542
		16													
					18373					15825					34191
		24	HOUR TO	OTAL	20102					17772					37874
			HC)ur Nning	VOLUME			BEGI	dur Nning	VOLUME	ļ		BEGI	NNING	VOLUME
PEAK H	IOURS	АМ	10	15	1324	1	AM	. 7	30	11 39		АМ	11	15	2304
		РМ				1	РМ				1	РМ	- <u> </u>		
FORM NO 253 REV. (1/83	<u> </u>		4	15_	1575	<u> </u>		4	0	1204	<u> </u>	1	4	15	214
12820 10930	10 כי	-09-8	2		2 e4		۷Ľ	KWUNT	AV	AI BUKNZ	A V				1 -

TRAFFIC COUNT SUMMARY 14/14/243 1117 DT 210 (CR-2.41) City of Los Argele A Department o Tra sportation 1. 1. nert il and . NORTH/SOUTH 1/ 15 ouncil Street (g) -EAST/WEST (π) 1 21 6 WEATHER (1 CAL) DAY & DATE 6.... (a) 3-6 PM -/ / AM HOURS DISTRICT Horizont (1)1º st SCHOOL DAY W/B E/B S/8 N/B 14. 174 15 123 111 DUAL WHEELED Ø Q V 92 67 **BUSES** (k)(f)(n)(d) W/B TIME TIME 8 11.5 E/B TIME S/B TIME N/B 745 845 145 22 477×4 2119 5 30 AH PEAK 15 MIN 17 15 17.30 4.15 23 32 138 PM PEAK 15 MIN 8:15 730 Ere 1130 56 59 2011 1210 500 500 AM PEAK HOUR 11:5 500 16 2.050 4.01 PH PEAK HOUR XING S/L(d) XING N/ TOTAL SOUTHBOUND APPROACH NORTHBOUND APPROACH Sc Ch | Ped | S Ped d + h(h) (g) (f) (c) (c) 1 (d) (5) HOURS (a) 2921 12:2 1477 51 4.1 61 1162 n 11.2%-7-4 3233 19: 18 963 25 64 29 1:10 1231 10 4 2 22 1330 10 1362 211.1.1 9-10 11.2% 12. 1017 14 10 12 1289 27/1/ E-if 1211= 25 21 30 14/11 1491 2 1371 3.592 12 20 26 1715 1244 11.1.1 17 ----11-1 3+15 22 8 133 131.5 -6 19 211: 14. 2050 4 4 10 9335 17875 136 94 2711 TOTAL 193 11:5 6211 4661 XING W/L(1) XING E/ WESTBOUND APPROACH TOTAL EASTBOUND APPROACH Ped S 1 + pPed Sc Ch (p) (m) (n) (0) (1)HOURS (1) (1)(k) 419 3 12 37 81 24 1. 45 :50 22 7 7. 2 68 30 2 14 52 12. 20 4 31 8.1 40 36 15 21 32 53 6% -25 27 7 34 51 260 16.3 36 401 14 124 3 34. . .. 1 12 :0 2 74 105 33 105 29 ã. 3 26 ster . 51 11: 50 31 5 59 11 153 ----(-1 11 11 1 906 2.4.7 646 208 11.51 13 12 TOTAL 165 6 340 3.00 2,2

ITY OF 'S ANGELES ARTMENT - C. TRANSPORTATION

24 HOUR RAFFIC VOLUME

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CATION							<u>DAT</u>	Έ		DESCRIPTION	ł		DAY	OF TH	E WEEK
Execution AV	AI 4	1.1700	<u> </u>					01-2	1-82	i. 650 40	44		FP.		Ни
HOUR		K	UF I H	ธปังส	5		5	UNTH	មាមអ	<u>ייייי</u> י	A 5:	I T	 5) (K	75)	
	00-15	15-30	30-45	45-60	HOUR.TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL
12 44	1.		32		512	11 5	- 31	7 iu	85	355	• 3*	1.1	1.1	• 5	007
<u> </u>	<u> </u>		(ر <u>بن</u> ا در		<u>(1)</u>	1ن	<u> </u>	<u> </u>	2.31	1.0	1.1	1.0	<u></u> 1	474
2 AM 3 44	21	2.1	43	ມເ	163	لا ت ا	9 °	34	36	1.52	1.0	1.5*	1.2	1.0	350
<u> </u>	· · ·				<u>104</u>	<u></u>			<u> </u>	.12		1.2	.9	1.0	219
	÷.		23	ک د	102	انت ا	1 19	43	- <u>;</u> ;	111	6.0	1.5×	e''	0 ¹	÷lu.
		<u>· · · ·</u>		<u> </u>		21	<u> </u>	- <u></u>	<u> </u>	<u> </u>	. 7*	1.0		. (*	<u>'''''''</u>
(A.4		127	112	11.2	551	13%	2.27	3 He	<u> 4 1</u> 9	1101	• 5	≮ن∎	÷د•	• 2 *	1757.
					<u> </u>	<u> </u>	124	271	<u></u> .	21_2	<u></u> *	6*	نا هـ	<u>, i</u> *	1192
U JAM J AM			2,4	D143	1 1 1 1	518	494	41:	-+16	【 ギタウス	+ 2A	^ه ن و	+ 1 <u>-</u> 3,	•1#	3952
<u> </u>				201		<u> </u>	تحد ا	251	دلاف	1291		<u>e H</u>		. 1	<u></u>
3 4.4	6	2.94	290	320	1195	315	202	3 00	520	1296	•9	1.0	•3	1.2	24.21
<u></u>			<u></u> 2	ير ار	5		_ 315	218	34"		- •2	1.0	1.0	1.0	2639
1 in 17 19 1 militari			325	21.	7 ز 14		300	311	335	1,254	1.1	1.2	3+2	1.2	2195
		<u></u>			<u>+ i</u>	- 534	- 212	<u></u>	310	1232	103	lel	1 cli	Lei	2020
- 11 - 5 - 11 - 5		500	202	270	1515	299	314	ن اك	نا ز	12.38	1+4	1.2	1.1	1.2	2125
	···· ·		<u> </u>	<u> </u>		<u> </u>	215	201		LZ_U	1.4	1.3		1.3	2735
ય ટેલ સંતર્ભ	49.		75 2	457	1325	327	555	51é	373	1341	1.3	1.3	1.5#	1.3	9105
			/	<u></u>		1-1-1	341		!!		1.3	1.4	1.2	1.2	<u>12.</u>
C FM			2 Í 1	19 e	10) L	403 S.	311	عاد	310	1225	1:0	J•÷	1.2	142	2904
				32.5	<u> </u>	1221	ز کنی	<u>. 2</u> 4u		<u>1110_</u>	101	162	l c4	Lini	24/15
	471	(C / S	230	299	ن+11 ·	251	233	2ei	252	990	1.2	1.2	1.1	1.2	2109
<u></u>	220	<u></u>	<u> </u>	20 1			<u></u>	. 223	233		1.4	1.2	1.2	1.1	1444
		200	ن کی ہے۔ ا	22-	959	607	1.50	220	185	J 52	1.2	2.4	1.0	1.2	1941
	شخـــــل						<u>– 175</u>	لسلتنا	<u> </u>	<u> </u>	1.1.42	<u>let</u>	1.3	1.2	1353
		-													
		; 6 H	OUR TO	TAL							ſ				
					<u></u>					<u>9104</u>					17902
		16 H	OUR TO	TAL	5										
					21232										- 2401
		24 H	OUR TO	TAL			•								
		— I			- 74/10					22244	<u> </u>				4.4 11:2
РЕАК НС			BEGIN		VOLUME			BEGIN	UR 1N1NG	VOLUME			HO BEGII	UR NNING	VOLUME
		АМ	ti	15	1.4.5.6		АМ	די	1()	22:1		Ам		, .	
		PM			tt						1	— —	{ <i>(</i>	<u> </u>	<u> </u>
M NO. 253 REV.			**	30	14-3		РМ		1.4	1		PM			
1			4	<u> </u>				2.1 141 1	<u> </u>		L		L		<u> </u>

PARTMENT

24 HOUR TRAFFIC VOLUME

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LOCATION			-				DAT	ε		DESCRIPTION			DAY	OF TH	E WEEK
COUNCIL ST	AT V	ERMON	τ Αν					01-2	1-03	1 015 20	1 1		FR		НМ
HOUR		E	AST	BOUN	D		н	EST	вали	D	RA	ΤI	0 (E	/ਸ਼)	
BEGINNING	00-15	15-30	30-45	45-60	HOUR.TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL	00-15	15-30	30-45	45-60	HOUR TOTAL
12 AM 1 AM	1	2	4	1	8 8	4	4	1	3	12	• 3*	•5*	4.0*	• 3*	20
2 AM			A		, j	1	1	1	2	5	·			<u># 6. ''</u>	5
<u> </u>	·	1	1	1	4	1		<u> </u>	2	6	1.0	•3*	1.0	<u>,5</u> *	12
	1	1	1		3			1		3		1.0	1.0	1+0	<u>6</u> -
6 AM	┼──▲	1	2	4	. 7	1			<u>1</u>	10		1.0	-57	<u>L_sU_</u> 1_sU	17
7_A3_	3	4	'4		19	<u>.</u>	16	9		64	. 47	-34	44		£3
8 AM	A	10	14	15	47	16	19	11	13	59	•5*	•5*	1.3	1+2	106
<u><u><u>9</u></u><u>A</u><u>4</u></u>	16	9	<u>a</u>	11	45	26	15	9	23	73 ^	<u>•6</u> ‡	<u> </u>	1.1	.5*	118_
		10	7	12	47	19	17	14	23	73	•9	•6*	•5#	•5*	120
17 5H		15		12	<u> </u>	19	21	<u></u> (23	1026	- 67		- 67	<u>. 8</u> 	126
1 20		12			43	36	1 31 1 1 R	22	23		1.14	• 54	•] *	• 5 *	104
2 14	10	11	27	27	75	21	16	20	13	70	;¢	•7*	1.4	2.1*	145
	1 = 1 =	-11	14	13	53	20	36	51	45	1520		3¥	-32		205
4 P.1 5 0 M		10	14	11	43.	27	16	31	19	93	•5*	•0*	•5*	•6*	141
<u> </u>		17	13		<u> </u>	37	-16		23		2 0 -			1.0	170_
<u> </u>		10	14	9	47	6	9	(1		42	2.31	1.5^{m}	4.7*	1.3	72
85.6	6	¢ 11	10	8	37	7	5	5	ć	23	1.1	2. :*	2.04	1.3	60
<u>9 PM</u>	فـــــــــــــــــــــــــــــــــــــ	<u> </u>	<u> </u>	66		5	9	4	ر `	25	1.0	-30	1.8*	.9	45
10 28			5	6	21	5	4	3	5 4	16	1.0	-8	1.7%	2.04	- 37
	<u> </u>	د		1	±0	4	4 7	L	<u> </u>	20	1-0	1 2 5 *		2.23	<u> </u>
		64		TAL											
					288_			<u> </u>	_	535					F23
		16 н	OUR TO	TAL							•				
		┣━───			740					1077					1817
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FORM NO. 253 ACV.		РМ		16]	Рм		> 1 E	150	1	РМ		- •	
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Working Notes





	TRAFFIC MOVEMENTS				
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9:00 - 9:30	: <u>44</u>	1 101	<u></u>	-	
-9:30 -10:00	36		14	N	
10:00 - 10:30	36	67	18		
10:30 - 11:00	37	58	<u></u>	-	
11:00 - 11:30	48				
11:30 - 12:00		78	10		
12:00 - 12:30	. 47	94		-	
12:30 - 1:00	. 57	<u> </u>	27		
1:00 - 1:30	54	<u> </u>	10	-	
1:30 - 2:00	45	12			
2:00 - 2:30	131	44	3		
2:30 - 3:00	39				
3:00 - 3:30	<u> </u>				
3:30 - 4:00	- 477	·		-	
4:00 - 4:30	1.0		<u> </u>		
4:30 - 5:00	4.0		- 4.,	-	
5:00 - 5:30	42				
5:30 - 6:00	47				

Southern California Rapid Transit District, 425 South Main Street, Los Angeles, CA 90013







		TRAFFIC	Lovenents	
TIME		Lunio Millon T.		<u> (</u>
9:00 - 9:30		0.62 334 2.33	461	22
9:30 - 10:00			-15:1	
10:30 - 11:00	*.	111/ 200	<u></u>	
11:00 - 11:30		<u> </u>	<u> </u>	3.3
17:00 - 12:30		764 1910		2.4
12:30 - 1:00			546	45
1:00 - 1:30 1:30 - 2:00	19194 7.8		21.2.2	
2:00 - 2:30				<u> </u>
2:30 - 3:00				
3:30 - 4:00	74		<u>r.1:1</u>	111
4:00 - 4:30				
5:00 - 5:30			211	··)
5:30 - 6:00	<u>.</u>		<u>773-</u>	

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:	TRAFFIC MOVEMENTS					
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9:00 - 9:30	26	(2)/2				
19:30 - 10100	THE 18	1. 10 10 10 D	W - uc RRM	10 01		
10:00 - 10:20	12	5/8	· · · · · ·	13		
10:30 - 11:00	2/		2.6.7	25		
11:00 - 11:30		124	(())			
11:30 - 17:00	14	136	11.4.15	<u> </u>		
12:00 - 12:30		333	137	29		
12:20 - 1:00	<u>///</u>)	33/	14		
12.50 = 1.00	15	245	18. 18 M. 7. 19	37		
1.30 - 7.00		100 DAG	40. 40.2	<u>10 53</u>		
7:00 - 7:30		(1967,)	.7.81	27		
2:30 - 3:00	<u> </u>	261	2/0	43		
3:00 - 3:30		55)	3.6.4	7		
3:20 - 4:00	27	= -/ -:	2772	39		
4:00 - 4:30	39 "	270	346	<u> </u>		
4:30 - 5:00	47	327	2.4.2	43		
1.00 - 530		3%5	3.89	50		
5:30 - 6:00		78.0	3,00	37		
	<u>1</u>	,	·			

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	TRAFFIC MOVEMENTS				
TIME	(- Joseph and the	0.10		
9:00 - 9:30		»	_		
5130 - 10100	26	L. 75	-		
1.50 - 10.00	40	.51			
3.00 - 10.30	26	56	-		
1.00 - 11:30	~ 9	70			
1:30 - 17:00	419	105	-		
7.00 - 1730	25	104	-		
$\frac{1}{2}$	46				
1.00 - 1.00	<u> </u>	125	-		
1.00 = 7.00	51	115	27		
	11	120	44		
2.00 - 2.50	<u> </u>		38		
2130 - 3.00	CSC)	146	44		
5.00 - 3.50	<u>(75)</u>	155	63		
5.50 - 4.30	CL		36		
1:20 - 5:00	<u> </u>		42		
1.50 5.00 A - 5.3A		3/3	43		
-20 - 400	97	27/			

Southern California Rapid Transit District, 425 South Main Street, Los Angelos, CA 90013

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Southarn California Rapid Transit District, 425 South Main Streat, Los Angeles, CA 90013

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	South Liound			
TIME	Left	<u> </u>		
9:00 - 9:30				
9:30 - 10:00	_7			
10:00 - 10:30	_5			
10:30 - 11:00	Q			
11:00 - 11:30	10			
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12:00 - 12:30	·//			
12:30 - 1:00	17			
1:00 - 1:30	9			
1:30 - 2:00				
2:00 - 2:30	6			
2:30 - 3:00	7			
3'00 - 3:30				•
3:30 - 4:00	il .		·	
4:00 - 4:30	10			
4:30 - 5:00	11			
5:00 - 5:30				
5:30 - 6:00	10	·		
0.00	*	···		

Southern California Rapid Transit District, 425 South Main Street, Los Angelos, CA 90013



	.1	TRAFFIC	NOVEMENTS_	
	5001+ :	West line of	EAST & Live port	North
TIME	<u> </u>			_!
:00 - 9:30	4		- <u> </u>	
:30 - 10:00	4	5	/	
100 - 10:30	5	7	1	
:30 - 11:00	5,14	5	3	$-\frac{12.i^{-1}}{12.i^{-1}}$
:00 - 11:30	1'	6	5	- <u> / / </u>
30 - 12:00	13, 11-3	6	1.2	16, 0.5
:00 - 12:30	7	2	3	17 11-2
:30 - 1:00	<u>ר</u>		<u> 6</u>	
:00 - 1:30	8 6-1	4	2	21
:30 - 2:00	7. 11.1		0	
100 - ZIZO	4	10		1.1.2
:30 - 3:00	9 91.25	- m	<i>C</i> .	
:00 - 3:30		1	1-12	
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100 - 4:30	2			
:30 - 5:00	1	1:	4	
:00 - 5:30	8		<u></u>	<u> </u>
:30 - 6:00	6	15	<u> </u>	

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Southern California Rapid Transit District, 425 South Main Street, Los Angeles, CA 90013

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

MKTG 9 REV 8/84

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Working Notes



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		TRAFFIC MOVEMEN	rs
	Scill income	CrSI Smith	
TIME	<u></u>		
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9:30-10:00	10. 0.2	<u> </u>	
10:00 - 10:30	3	<u> </u>	
10:30 - 11:00	7	5	
11:00 -11:30	4. 11-2	<u></u>	
11:30 - 12:00	4	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	
12:00 - 12:30	10, 0-1	5,01-3	
12:30 - 1:00	<i>4</i>	1 10-1	
1:00 - 1:30	P	and see the second s	
1:30 - 2:00	4, 4,-1	<u>7: u-1</u>	
2:00 - 2:30	9	5	
2:30 - 3:00	9 11-1	- A	
3:00 - 3:30	h	3	
3:30 - 4:00	4. 11-1	21. cr.1	
4:00 - 4:30	6	1	
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5:00 - 5:30	14	3	
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Houch	TRAFFIC NOVEMENTS							
Count	NTHBD	WSTBD	ESTIBD	NIHBD	STUBD	ESTISD	WSTBD	STUBD
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9:30-10:00}	62		95	·	3/		<u>_//</u>	
10:00 - 10:30								
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2:00 - 2:30			İ					
2:30 - 3:00								
3:00 - 3:302								
3:30 - 4:00	10.5		101		4/		<u>131</u>	
4:00 - 4:30;					-		+	·
4:30 - 5:00	114		22		57		<u>115</u>	
5:00 - 5:30?			•					
5:30 - 6:00)	135	L	99		64		<u>//6</u>	

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SOUTHERN CALIFORNIA RAFID TRANSIT DISTRICT



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	Scutt. Bicker Bet	مربع المربعة المنتسي المنتسي الم	Right	Naltheory and		
TIME				11		
9:00 - 9:30	16	0		16		
9:30-10:00		9	<u> </u>	15		
10:00 - 10:30		12	/	6		
10:30 - 11:00	10		-/	<u> </u>		
11:00 - 11:30	8					
11:30 - 12:00	19	10	<u></u>	<u> </u>		
12:00 - 12:30	<u> 18</u>	_17		2		
12:30 - 1:00	13	_7	11	7		
1:00 - 1:30	10	3	<u> </u>	14		
: 1:30 - Z:00	16	10	<u> </u>	10		
2:00 - 2:30	11	<u>4</u>	15	<u> </u>		
2:30 - 3:00	7	8	7	14		
3:00 - 3:30	22		9	//,		
3:30 - 4:00	12		20	<u></u>		
4:00 - 4:30	35	15 - 1	36	6		
4:30 - 5:00	34	25 '	3/	13		
5:00 - 5:30	46	53	58	14		
5:30 - 6:00	17	20	40	//2		

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

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Working Notes





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	<u> </u>	1.0	63	NO LEFT LINE
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1:00 - 11:30	36	55		
1:30 - 12:00	34	<u> </u>	88	
2:00 - 12:30	1.25	90		
2:30 - 1:00	45			· · · · ·
:00 - 1:30	477	60	5/	t
1:30 - 2:00	82	6		
2:00 - 2:30	53	51		
2:30 - 3:00	67	45		
5:00 - 3:30	11		<u> 08</u>	• II
3:30 - 4:00	6-0	45	116	
1:00 - 4:30	71	54	1 122	
1:30 - 5:00	26	35	<u> </u>	
5:00 - 5:30	82	43		
5:30 - 6:00	48		115	
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Southern California Rapid Transit District, 425 South Main Straet, Los Angeles, CA 90013

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

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Working Notes





		TRAFFIC	NOVEMENTS	
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	Left.	RANE		
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19:30 -10:00	11 . (3)	20	34	
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10:30 - 11:00	$\overline{v} \rightarrow \overline{u}$	29	47	- 20
11:00 - 11:30	· (Ď			
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17:00 - 17:30	<u> </u>	39	28	
12:30 - 1:00	<u>n . (1)</u>	- 4M	.20	
1:00 - 1:30	·· //	- 39	- 21	
1:30 - 2:00	·· ()			
7:00 - 2:30	P ;	45		
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		TRAFFIC N	LOVEMENTS	
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10:00 - 10:30	2	12		
10:30 - 11:00	4	8		1
11:00 - 11:30	5		· · · · · · · · · · · · · · · · · · ·	
11:30 - 12:00	6	12		<u></u>
12:00 - 12:30	<u>.8</u>	_		
12:30 - 1:00	14			
1:00 - 1:30				
: 1:30 - Z:00	4	10		
2:00 - 2:30	10			·
, 2:30 - 3:00	12			
3:00 - 3:30	5		·	
3:30 - 4:00	4			
4:00 - 4:30	<u> </u>	5		
4:30 - 5:00				
5:00 - 5:30	<u> </u>			
5:30 - 6:00				

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT



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Working Notes



	TRAFFIC MOVEMENTS					
	Sould Bound	West Somis				
TIME	L9F +	1.667				
9:00 - 9:30	2	3				
9:30 - 10:00	2	<u>ې</u>				
10:00 - 10:30	1	1				
10:30 - 11:00	1					
11:00 - 11:30	0					
11:30 - 12:00	3	1				
12:00 - 12:30	0	- 5				
12:30 - 1:00		3				
1:00 - 1:30	0	<u>д</u>		-		
: 1:30 - Z:00	3	4		_		
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Working Notes





· · · · ·	TRAFFIC MOVEMENTS					
	South Issued	North + Brownod;				
TIME						
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9:30 - 10:00	_0					
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11:30 - 12:00	10					
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1:00 - 1:30						
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2:00 - 2:30	16			-		
2:30 - 3:00	9					
3:00 - 3:30	6	20				
3:30 - 4:00	12	19				
4:00 - 4:30	_7	2.3		_		
4:30 - 5:00	13	15				
5:00 - 5:30	<u> </u>	17				
5:30 - 6:00	14	24				

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Working Notes





SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

MKTG 9 REV 8/84

Working Notes



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100, 100, 100, 100, 100, 100, 100, 100,	TRAFFIC MOVEMENTS				
	A	· ·		· ·	
9:00 - 9:30)	/				
.9:30-10:00	<u></u>			2	
10:20 - 10:30					
11:00 - 11:30			· · · · · · · · · · · · · · · · · · ·	·····	
11:30 - 12:00	<u>.</u>	·	Liseanna (1997)		
12:30 - 1:00					
1:00 - 1:30			· · · · · · · · · · · · · · · · · · ·		
7:00 - 2:30					
, 2:30 - 3:00				<u></u>	
3:00 - 3:30	601-		·		
4:00 - 4:30					
4:30 - 5:00	742				
5:30 - 6:00)	702				

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

MKTG 9 REV 8/84

Working Notes





APPENDIX B

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CAPACITY ANALYSES

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CAPACITY ANALYSES

EXISTING CONDITIONS

VERMONT EXISTING ANALYSIS - VERMONT VERMONT 1ST 1ST ANY DAY P.M. PEAK HOUR 1986

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VOLUME ALLOCATION TO LANES

TRAFFIC	Lé	ANE 1		L	ANE 2		L	ANE 3		1	LANE 4	
FROM	L	S	R	L	S	R	L	S	R	L	S	R
NORTH	106	0	Ů	0	476	Ü	0	476	Ŭ	Ŭ	387	87
EAST	92	Ŭ.	Û	0	281	Ó	0	227	54	0	0	Ó.
SOUTH	85	0	Ŭ	0	592	0	Q	592	0	Ŭ	519	7 3
WEST	170	0	Ū	Û	344	0	Ŭ	260	84	0	Ū	Û

LEFT TURN CHECK

TRAFFIC	LEFT	TURN	PHASE
FROM	CAFACITY	VOLUME	NEEDED?
NORTH	120	106	N
EAST	120	92	N
SOUTH	120	85	N
WEST	120	170	Y

CYCLE LENGTH : 60 SECONDS

G/C RATIO : NORTH/SOUTH 0.61 EAST/WEST 0.39

FLANNING

PHASE	TRAFFIC FROM	MOVE MENT	CRITICAL VOLUME	FERCENT CAPACITY USED	EFFECTIVE GREEN TIME	AVERAGE DELAY
						
1	NORTH/SOUTH	ALL	698	49.0	32	16
2	WEST	ALL	170	11.9	В	43
З	EAST/ WEST	ALL	281	19.7 -	13	33

TOTALS	1149	80.6	53
LEVEL OF SERVICE	D		

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VERMONT EXISTING ANALYSIS VERMONT VERMONT BEVERLY BEVERLY ANY DAY P.M PEAK HOUR 1986

VOLUME ALLOCATION TO LANES

TRAFFIC	LA	NE 1		l	ANE 2	•	L	ANE 3		L	ANE 4	,
FROM	L	S	R	L	S	R	L	S	R	L	S	R
NORTH	111	0	0	0	500	0	0	500	0	0	363	137
EAST	122	0	0	0	1078	150	0	0	0	0	0	0
SOUTH	86	0	0	0	421	0	0	421	0	0	315	106
WEST	75	0	0	0	802	92	0	0	0	0	0	0

LEFT TURN CHECK

TRAFFIC FROM	LEFT CAPACITY	TURN VOLUME	PHASE NEEDED?
	•		
NORTH	120	111	N
EAST	120	122	Y
SOUTH	120	86	N
WEST	120	75	N
YCLE LEN	GTH : 60	SECONDS	

G/C RATIO : NORTH/SOUTH 0.31 EAST/WEST 0.69

PLANNING

PHASE	TRAFFIC FROM	MOVE MENT	CRITICAL VOLUME	PERCENT CAPACITY USED	EFFECTIVE GREEN TIME	AVERAGE DELAY
		 AL 1		41 1		
I	NURTH/SUUTH	ALL	280	41.1		
2	EAST	ALL	122	8.6		
3	EAST/ WEST	ALL	1106	77.6		

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		TOTALS	1814	127.3
LEVEL	0F	SERVICE	FAILURE	

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VERMONT EXISTING ANALYSIS VERMONT VERMONT MELROSE MELROSE ANY DAY P.M PEAK HOUR 1986

N0.46E/PM 6/12/86

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VOLUME ALLOCATION TO LANES

TRAFFIC	L	ANE 1		L	ANE 2		L	ANE 3	}	L	ANE 4	
FROM	L	S	R	Ļ	S	R	L	S	R	L	S	R
NORTH	30	480	0	0	589	71	0	0	0	0	0	0
EAST	65	325	80	0	0	0	0	0	Ō	Õ	õ	ŏ
SOUTH	200	0	0	0	690	0	0	589	101	Ō	ō	Ō
WEST	75	153	0	0	210	92	0	0	0	Ō	Õ	Õ

LEFT TURN CHECK

TRAFFIC FROM	LEFT CAPACITY	TURN VOLUME	PHASE NEEDED?
NORTH	1 2 0	30	N
EAST	120	65	N
SOUTH	120	200	Ŷ
WEST	147	75	Ň

YCLE LENGTH : 60 SECONDS

G/C	RATIO	:	NORTH/SOUTH	0.64
			EAST/WEST	0.36

PLANNING

PHASE	TRAFFIC FROM	MOVE MENT	CRITICAL VOLUME	PERCENT CAPACITY USED	EFFECTIVE GREEN TIME	AVERAGE DELAY
1	SOUTH	ALL	200	14.0	8	62
2	NORTH/SOUTH	ALL	66 0	46.3	26	28
3	EAST/ WEST	ALL	480	33.7	19	36

TOTALS	1340	94.0	53
LEVEL OF SERVICE	E		

.....

6/12/86

VOLUME ALLOCATION TO LANES

TRAFFIC	LANE 1			LANE 2			LANE 3			LANE 4		
FROM	L	S	R	L	S	R	L	S	R	L	S	R
NORTH	110	0	0	0	300	0	0	300	0	0	236	64
EAST	- 99	Ō	Ō	Ō	297	0	0	245	52	0 .	0	0
SOUTH	135	0	0	0	422	0	0	422	0	0	289	133
WEST	116	0	0	0	409	0	0	279	130	0	0	0

LEFT TURN CHECK

TRAFFIC	LEFT	TURN	PHASE
FROM	CAPACITY	VOLUME	NEEDED?
NORTH	120	110	N
EAST	120	99	N
SDUTH	120	135	Y
WEST	120	116	N

TYCLE LENGTH : 60 SECONDS

G/C	RATIO	:	NORTH/SOUTH	0.51
			EAST/WEST	0.49

Pl	LAN	ΝI	NG
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PHASE	TRAFFIC FROM	MOVE MENT	CRITICAL VOLUME	PERCENT CAPACITY USED	EFFECTIVE GREEN TIME	AVERAGE DELAY
1	SOUTH	ALL	135	9.5	7	40
2	NORTH/SOUTH	ALL	300	21.1	17	23
3	EAST/ WEST	ALL	508	35.6	28	15

		TOTALS	943	66.2	52
LEVEL	0F	SERVICE	В		

CAPACITY ANALYSES

YEAR 2000 BASE CONDITIONS

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CAPACITY ANALYSES

WITH PROJECT

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VOLUME ALLOCATION TO LANES

TRAFFIC	LANE 1			LANE 2		LANE 3			LANE 4			
FROM	L	S	R	L	S	R	· L	S	R	L	S	R
										+		
NORTH	132	Ø	Ø	Ø	558	Ø	ø	558	Ø	Ø	457	101
EAST	143	Ø	Ø	Ø	326	Ø	Ø	263	63	Ø	0	`Ø
SOUTH	99	0	Ø	Ø	693	Ø	Ø	693	Ø	Ø	608	85
WEST	197	Ø	Ø	Ø	400	Ø	0	303	97	Ø	Ø	0

LEFT TURN CHECK

ȚRAFFIC FROM	LEFT CAPACITY	TURN VOLUME	PHASE NEEDED?
NORTH	120	132	Y
EAST	120	143	Y
SOUTH	120	99	N
WEST	120	197	Y

CYCLE LENGTH : 60 SECONDS

G/C RATIO : NORTH/SOUTH 0.60 EAST/WEST 0.40

PLANNING

PHASE	TRAFFIC FROM	MOVE MENT	CRITICAL VOLUME	PERCENT CAPACITY USED	EFFECTIVE GREEN TIME	AVERAGE DELAY
1	NORTH	ALL	132	9.6		
2	NORTH/SOUTH	ALL	693	50.4		
3	EAST/ WEST	LEFT	143	10.4		
` 4	WEST	ALL	54	3.9		
5	EAST/ WEST	ALL	346	25.2		•
	LEVEL OF SI	TOTALS	1368 E	99.5		

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VOLUME ALLOCATION TO LANES

TRAFFIC	Lf	ANE 1		L	ANE 2	1	, L	ANE 3		L	ANE 4	
FROM	L	S	R	L	S	R	Ĺ	S	R	L	S	R
							-					
NORTH	149	Ø	ø	ø	664	ø	Ø	664	Ø	Ø	482	182
EAST	162	0	Ø	0	1416	199	Ø	Ø	0	0	0	Ø
SOUTH	139	Ø	Ø	Ø	565	Ø	Ø	565	Ø	Ø	421	144
WEST	117	Ø	ø	2	1070	127	Ø	Ø	Ø	Ø	Ø	Ø

LEFT TURN CHECK

LEFT CAPACITY	TURN VOLUME	PHASE NEEDED?
120	149	Ŷ
120	162	Y
120	139	Y
120	117	N
	LEFT CAPACITY 120 120 120 120	LEFT TURN CAPACITY VOLUME 120 149 120 162 120 139 120 117

CYCLE LENGTH : 60 SECONDS

G/C RATIO : NORTH/SOUTH 0.32 EAST/WEST 0.68

PL	.ANN	ING
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PHASE	TRAFFIC FROM	MOVE MENT	CRITICAL VOLUME	PERCENT CAPACITY USED	EFFECTIVE GREEN TIME	AVERAGE DELAY	1
			_ _				
1	NORTH/SOUTH	LEFT	139	10.1			
2	NORTH	ALL	10	0.7			
3	NORTH/SOUTH	ALL	654	47.6			
4	EAST	ALL	162	11.8			
5	EAST/ WEST	ALL	1453	105.7			
	-						
	LEVEL OF SE	TOTALS ERVICE	2418 FAILURE	175.9			

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	VERMONT	VERMONT	
•	MELROSE	MELROSE	
	ANY DAY	P.M FEAK HOUR	2000

VOLUME	ALLUCATI	CON TO	LANES
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TRAFFIC	LANE 1		LANE 2			LANE 3			LANE 4			
FROM	L	S	R	L	S	R	L	S	R	L	S	R
NORTH	39	635	Ó	Ö	766	103	0	0	0	Ō	0	0
ÉAST	95	449	111	0	Ō	Ō	0	0	Ó	0	Ō	0
SOUTH	206	Q	0	0	948	0	0	813	135	0	0	0
WEST	113	200	0	Õ	300	126	0	O	0	0	0	Ũ

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LEFT TURN CHECK

TRAFFIC FROM	LEFT CAPACITY	TURN VOLUME	PHASE NEEDED?
NORTH	120	39	N
EAST	120	52	[4
SOUTH	120	206	Y
WEST	120	113	N

TYCLE LENGTH : 60 SECONDS

G/C RATID : NORTH/SOUTH 0.61 EAST/WEST 0.39

PLANNING

PHASE	TRAFFIC FROM	MOVE MENT	CRITICAL VOLUME	FERCENT CAPACITY USED	EFFECTIVE GREEN TIME	AVERAGE DELAY
1	SOUTH	ALL	206	14.5		
2	NORTH/SOUTH	ALL	867	61.0		
3	EAST/ WEST	ALL	673	47.2		

		TOTALS	1748	122.7
LEVE	EL OF	SERVICE	FAILURE	

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VOLUME ALLOCATION TO LANES

TRAFFIC	LANE 1		LANE 2		LANE 3			LANE 4				
FROM	L	S	R	L	S	R	L	S	R	L	S	R
					· · ·							
NORTH	164	0	0	0	452	0	0	452	0	0	357	95
EAST	140	0	0	0	430	Ó	0	356	74	0	0	0
SOUTH	244	0	0	0	548	0	Ō	548	0	0	377	171
WEST	183	0	0	0	610	0	0	419	191	0	Ō	0

LEFT TURN CHECK

TRAFFIC FROM	LEFT CAPACITY	TURN VOLUME	PHASE NEEDED?
NORTH	120	164	Y
EAST	120	140	Y
SOUTH	120	244	Y
WEST	120	183	Y

CYCLE LENGTH : 60 SECONDS

G/C RATIO : NORTH/SOUTH 0.49 EAST/WEST 0.51

PLANNING

PHASE	TRAFFIC MOVE (FROM MENT		CRITICAL VOLUME	PERCENT CAPACITY USED	EFFECTIVE GREEN TIME	AVERAGE DELAY		
1	NORTH/SOUTH	LEFT	164	11.9				
2	SOUTH	ALL	80	5.8				
3	NORTH/SOUTH	ALL	468	34.0				
4	EAST/ WEST	LEFT	140	10.2				
5	WEST	ALL	43	3.1				
6	EAST/ WEST	ALL	567	41.2				
	LEVEL OF SI	TOTALS ERVICE	1462 FAILURE	106.2				

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ANY DAY P.M. PEAK HOUR 2000

VOLUME ALLOCATION TO LANES

TRAFFIC	LANE 1		LANE 2			L	LANE 3		LANE 4			
FROM	L	S	R	L	S	R	L	S	R	L	S	R
NORTH	123	0	0	Ó	553	0	0	553	Ó	0	452	101
EAST	107	Ō	0	Ó	326	Ŭ	0	263	63	Û	0	Ŭ.
SOUTH	99	Ó	0	0	687	0	Õ	687	0	0	602	85
WEST	197	0	0	0	399	0	0	302	97	Ŭ	Û	0

LEFT TURN CHECK

TRAFFIC FROM	LEFT CAFACITY	TURN VOLUME	PHASE NEEDED?			
NORTH	120	123	Y			
EAST	120	107	N			
SOUTH	120	99	N			
WEST	120	197	Ϋ́			
CYCLE LENG	TH : 60	SECONDS				

G/C RATIO : NORTH/SOUTH 0.61 EAST/WEST 0.39

PLANNING

PHASE	TRAFFIC FRDM	MOVE MENT	CRITICAL VOLUME	PERCENT CAFACITY USED	EFFECTIVE GREEN TIME	AVERAGE DELAY
1	NORTH	ALL	123	8.9	5	61
2	NORTH/SOUTH	ALL	687	50.0	26	32
3	WEST	ALL	197	14.3	7	155
4	EAST/ WEST	ALL	326	23.7	12	71

TOTALS	1333	96.9	50
LEVEL OF SERVICE	Е		

LA CORE STUDY -- NO BUILD VERMONT VERMONT BEVERLY BEVERLY ANY DAY P.M PEAK HOUR 2000 NO.44/PM 6/12/86

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VOLUME ALLOCATION TO LANES

TRAFFIC LANE 1			1	LANE 2		L	LANE 3		LANE 4			
FROM	L	S	R	L	S	R	L	S	R	L	S	R

NORTH	149	0	0	0	660	0	0	660	0	0	478	182
EAST	162	Ō	Ō	Ó	1379	199	0	0	0	0	0	0
SOUTH	117	Ō	Ő	0	561	0	0	561	0	0	417	144
WEST	104	Ŏ	Ō	Ó	1039	127	0	0	0	0	0	0

LEFT TURN CHECK

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TRAFFIC FROM	LEFT CAPACITY	TURN VOLUME	PHASE NEEDED?		
NORTH	120	149	Y		
EAST	120	162	Y		
SOUTH	120	117	N		
WEST	120	104	N		
JYCLE LE	NGTH : 60	SECONDS			

G/C RATIO : NORTH/SOUTH 0.32 EAST/WEST 0.68

PLANNING

PHASE	TRAFFIC FROM	MOVE MENT	CRITICAL VOLUME	PERCENT CAPACITY USED	EFFECTIVE GREEN TIME	AVERAGE DELAY
1	NORTH	ALL	149	10.8		
2	NORTH/SOUTH	ALL	561	40.8		
3	EAST	ALL	162	11.8		
4	EAST/ WEST	ALL	1416	103.0		

TOTALS 2288 166.4 LEVEL OF SERVICE FAILURE /

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VERMONT VERMONT MELROSE MELROSE ANY DAY P.M PEAK HOUR 2000

VOLUME ALLOCATION TO LANES

TRAFFIC	C LANE 1			L	ANE 2	•	LANE 3			LANE 4		
FROM	L	S	R	L	S	R	L	S	R	L	S	R
NORTH	36	639	0	0	762	93	0	0	0	0	0	0
EAST	90	449	111	0	0	0	0	0	0	0	0	0
SOUTH	206	0	0	0	948	0	0	813	135	0	0	0
WEST	103	210	Ō	Ō	290	126	0	0	0	0	0	0

LEFT	TURN	CHECK	

TRAFFIC	LEFT	TURN	PHASE
FROM	CAPACITY	Volume	NEEDED?
NORTH	120	36	N
EAST	120	90	N
SOUTH	120	206	Y
WEST	120	103	N

GYCLE LENGTH : 60 SECONDS G/C RATIO : NORTH/SOUTH 0.62 EAST/WEST 0.38

	PLANNING										
PHASE	TRAFFIC FROM	MOVE MENT	CRITICAL VOLUME	PERCENT CAPACITY USED	EFFECTIVE GREEN TIME	AVERAGE DELAY					
1	SOUTH	ALL	206	14.5							
2	NORTH/SOUTH	ALL	855	60.0							
3	EAST/ WEST	ALL	663	46.5							
••											

		TOTALS	1724	121.0
LEVEL	0F	SERVICE	FAILURE	

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LA CORE STUDY -- NO BUILD VERMONT VERMONT

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SANTA MONICA SANTA MONICA ANY DAY P.M. PEAK HOUR 2000

VOLUME ALLOCATION TO LANES . . .

TRAFFIC	FFIC LANE 1			L	ANE 2		LANE 3			LANE 4		
FROM	L	S	R	L	S	R	L	S	R	L	S	R
NORTH	164	0	0	0	445	0	0	445	0	0	350	95
EAST	140	ŏ	ō	Ō	420	Ō	0	346	74	0	0	0
SOUTH	174	Ō	Ō	0	542	0	0	542	0	0	371	171
WEST	170	Õ	Ō	0	600	0	0	409	191	0	0	0

LEFT TURN CHECK

TRAFFIC FROM	LEFT CAPACITY	TURN VOLUME	PHASE NEEDED?
	*		
NORTH	120	164	Y
EAST	120	140	Y
SOUTH	120	174	Y
WEST	120	170	Y

{ YCLE LENGTH : 60 SECONDS

G/C RATIO : NORTH/SOUTH 0.49 EAST/WEST 0.51

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PHASE	TRAFFIC FROM	MOVE MENT	CRITICAL VOLUME	PERCENT CAPACITY USED	EFFECTIVE AVERAGE GREEN TIME DELAY
1	NORTH/SOUTH	LEFT	164	11.9	
2	SOUTH	ALL	10	0.7	
3	NORTH/SOUTH	ALL	532	38.7	
4	EAST/ WEST	LEFT	140	10.2	
5	WEST _	ALL	30	2.2	
6.	EAST/ WEST	ALL	570	41.5	800-
	LEVEL OF SI	T OTALS ERVICE	1446 FAILURE	105.2	425 SOUTH MAIN LOS ANGELES, CA. 90013

PLANNING

SCHIMPELER-CORRADINO ASSOCIATES