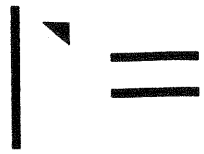
APPENDIX "D"



O'ROURKE ENGINEERING

TRAFFIC IMPACT ANALYSIS REPORT

for the

BRIDGESTONE/FIRESTONE PROJECT

in

ONTARIO, CALIFORNIA

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Prepared for

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Prepared by

O'ROURKE ENGINEERING

March 1997

TR97021.0

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March 24, 1997

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Mr. Curt Maggard
Bridgestone/Firestone, Inc.
West Coast Distribution Center
1392 Sarah Place
Ontario, CA 91761

Re: Traffic Impact Analysis Report for the Bridgestone/Firestone Project Located in Ontario, California

Dear Mr. Maggard:

O'Rourke Engineering has completed the above referenced Traffic Impact Analysis for the Bridgestone/Firestone Center located in Ontario, California. The results of the analyses are summarized herein.

It has been a pleasure working with you on this project and if you have any questions or comments, please do not hesitate to contact this office.

Very truly yours,
O'ROURKE ENGINEERING

Susan E. O'Rourke, P.E.
President

SO'R:pb
Attachment

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INTRODUCTION

O'Rourke Engineering was retained to prepare a Traffic Impact Analysis Report for the proposed development of the Bridgestone/Firestone project, located in the eastern portion of the City of Ontario in San Bernardino County. The purpose of the study is to assess the impacts of the proposed specific plan on the surrounding roadway network. In order to assess these impacts, an existing 1997 scenario, existing plus project and Future Year 2015 with and without project scenarios were analyzed. The land uses proposed in the Specific Plan exceed the trip generation threshold established by the San Bernardino County Congestion Management Plan (CMP) for requiring a Traffic Impact Analysis report. Therefore, this report was prepared to address the local and regional traffic impacts as necessary for a CMP.

It is important to note that there is an existing Bridgestone/Firestone warehouse facility located in east Ontario, therefore all project trips will be new to the local roadways, but not to the regional network. To be conservative, the analysis was conducted considering all traffic related to the new facility.

The proposed Specific Plan will consist of 1,810,126 square feet of Warehouse/Industrial facilities in three buildings as follows:

- Building 1 - Bridgestone Facilities (923,950 s.f.)
- Building 2 (336,600 s.f.)
- Building 3 (519,576 s.f.)

Access to the project will be provided from Mission Avenue, Milliken Avenue and driveways on Dupont Avenue and Doubleday Avenue. Figure 1 illustrates the project location.

This report summarizes the project study area, the existing conditions, future scenarios, project impacts, analyses and mitigation.

The traffic impact analysis was prepared in accordance with Appendix C of the CMP. The CMP requires the analysis of links and intersections that are included in the CMP network and are impacted by 80 or more peak hour project trips and freeway links that are impacted by 100 or more peak hour project trips up to five miles from the project site. In urban areas where traffic signals are prevalent (similar to our study area), arterial link analysis is not required since link requirements can be determined by the analysis of requirements at intersections. Intersections and freeway links level of service were mitigated to Level of Service E, or better. This criteria resulted in the analysis of eight (8) intersections and three (3) freeway segments.

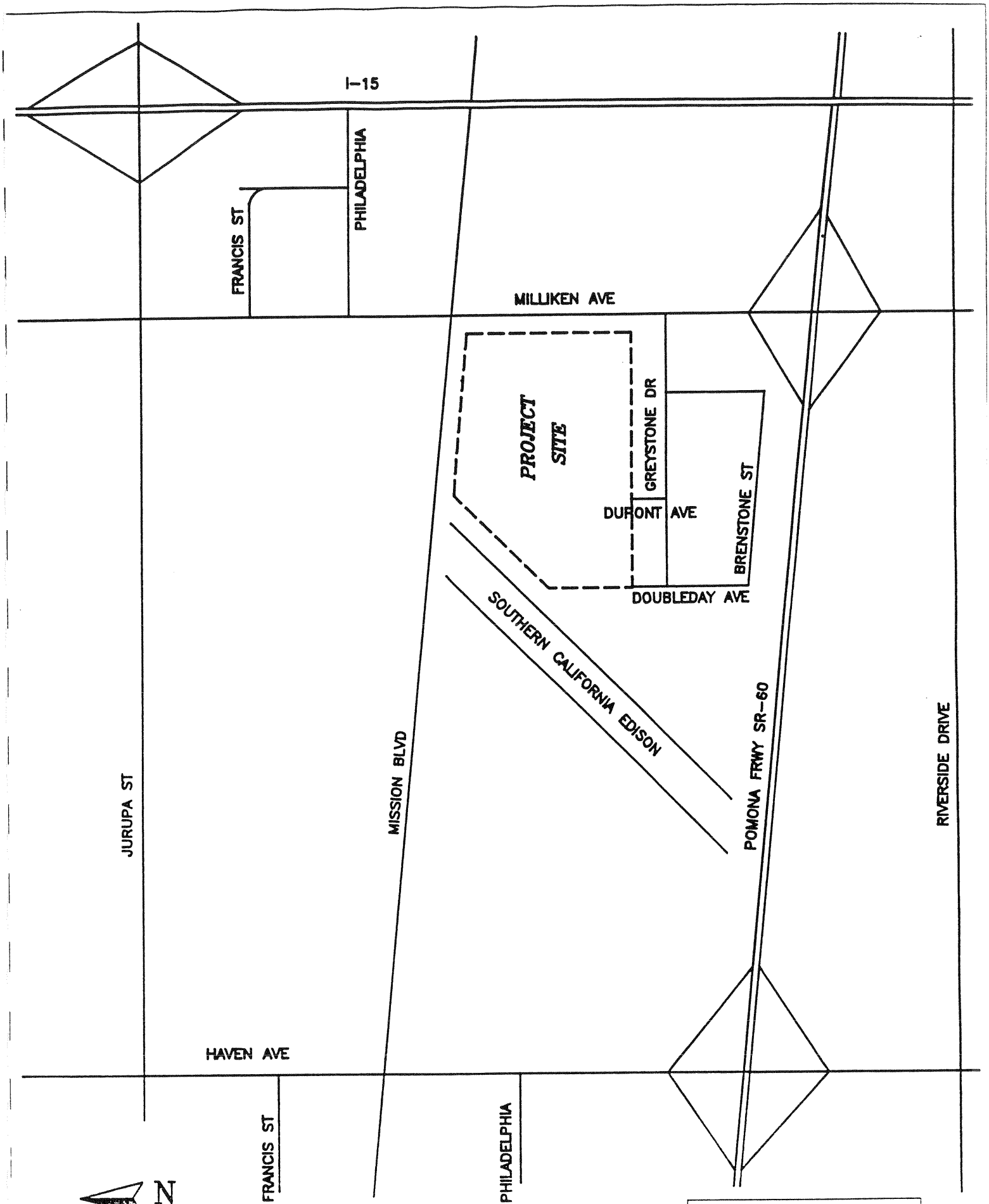

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FIGURE 1
PROJECT LOCATION
BRIDGESTONE

By determining the traffic impacts, roadway deficiencies were identified and mitigation recommended appropriately. Roadway needs were developed for each of the existing and future scenarios, if necessary. The estimated costs and project percentages of the impacts contributing to the roadway needs were prepared.

In addition to the typical roadway needs, the transit facilities were identified in the study area. Details on the project, the analysis and the resultant roadway needs are identified herein.

PROJECT DESCRIPTION

Location

The Bridgestone/Firestone project will be located on a 94.10 acre site in the southwest quadrant of Milliken Avenue/Mission Avenue. The site is currently vacant with the exception of vineyards. As illustrated in Figure 1, a Southern California Edison easement is located just west of the site. Railroad tracks from the Union Pacific Railroad lie north of the project, north of Mission Avenue. Access to the project will be provided from a right-in right out driveway on Mission Avenue, a left-in, right-in/right-out driveway on Milliken Avenue and at driveways on Dupont Avenue and Doubleday Avenue via Greystone Drive.

Land Use

The proposed Specific Plan will consist of 1,810,126 square feet of Warehouse/Industrial facilities in three buildings as follows:

- Building 1 - Bridgestone Facilities (923,950 s.f.)
- Building 2 (336,600 s.f.)
- Building 3 (519,576 s.f.)

The project traffic associated with the site, will have a certain level of truck traffic. The Therefore, the trip generation associated with these trucks is specifically addressed under the trip generation section of this report. The layout of the site is shown in Figure 2.

Project Phasing

The Bridgestone/Firestone project will be developed in two primary phases: the Bridgestone building for the Bridgestone/Firestone uses and the future buildings that will be developed for distribution/warehouse in the future. The first phase will consist of a 644,910 square feet of warehouse/distribution for Bridgestone that will be expandable to 923,950 square feet. For purposes of this study, the first phase was taken as the existing plus project scenario for the entire 923,950 square feet. The second phase is not time certain. The project traffic for the Year 2015 analysis consists of the 923,950 square feet plus the two additional buildings for a total of 1,810,126 square feet.

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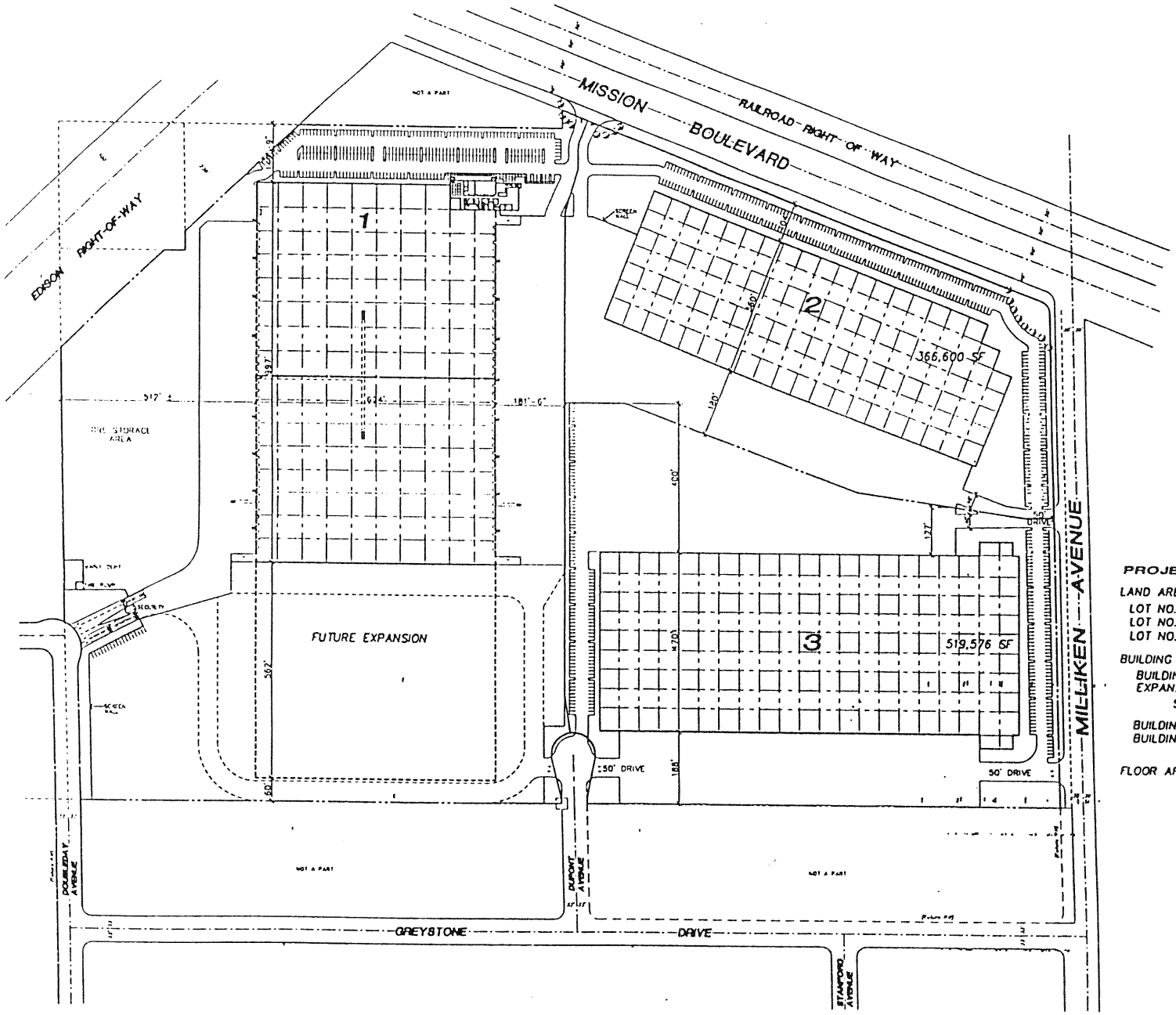

PROJECT DATA

LAND AREA	4,099,238.3 SF (94.10 AC)
LOT NO. 1	2,126,103.66 SF (48.80 AC)
LOT NO. 2	841,722.47 SF (19.32 AC)
LOT NO. 3	1,131,412.36 SF (25.97 AC)
BUILDING AREA	
BUILDING NO. 1	628,295 SF
EXPANSION AREA	350,688 SF
SUB TOTAL	978,983 SF
BUILDING NO. 2	366,600 SF
BUILDING NO. 3	519,576 SF
TOTAL	1,865,159 SF
FLOOR AREA RATIO	45.50 %

CONCEPTUAL SITE PLAN

FIGURE 2
SITE PLAN
BRIDGESTONE

APPROACH

The remaining sections of this report are best introduced by outlining the basic approach to the traffic analysis and the use of computer modelling as a tool in the analysis.

Traffic Significant Impact Criteria

Typical weekday traffic will consist of background traffic plus project traffic. The traffic impact analysis for a typical weekday was prepared in accordance with Appendix C of the San Bernardino County Congestion Management Plan. The CMP requires the analysis of links and signalized intersections that are included in the CMP network and are impacted by 80 or more peak hour project trips. In urban areas where traffic signals are prevalent (similar to our study area), link analysis is not required since link requirements can be determined by the analysis of lane requirements at intersections.

The CMP requires Level of Service E and volume to capacity ratio less than one (v/c < 1), unless the local agencies where the intersections are located, require a better level of service. The Bridgestone/Firestone project is located in the City of Ontario and the study area intersections analyzed are also located in the City of Ontario. The City of Ontario General Plan requires Level of Service E, or better. For the purpose of this CMP-TIA report, Level of Service E was used as the

minimum acceptable level of service. Any intersection that will operate at a lower level of service was mitigated to Level of Service E, using signalization, turn lane additions, or both.

A total of 8 intersections met the CMP thresholds or were significant to the City of Ontario and were analyzed under the existing and three future scenarios for both AM and PM peak hour operations.

The CMP also requires the analysis of freeway segments that are impacted by 100, or more, peak hour project trips (both directions). State Route 60 will require analysis for this project.

Traffic Analysis Modeling

To meet the data and analysis requirements of California Environmental Quality Act (CEQA), and the San Bernardino County Congestion Management Program (CMP), the traffic impact study relied on computer generated traffic volumes for future projections. The model used was the San Bernardino County Comprehensive Transportation Plan (CTP) Traffic Model.

The CTP model serves as the traffic model for the San Bernardino County CMP and is maintained at Southern California Associated Government (SCAG) offices in Riverside. The model is based on Tranplan software and runs on SCAG unix microstation platforms. The CTP model encompasses SCAG's five-county region in Southern California (San Bernardino, Riverside, Los Angeles, Orange, and Ventura Counties), but it is focused on San Bernardino and Riverside Counties.

Future Year 2015 background traffic forecasts (without project) -- were developed using the CTP model. The future forecasts were modified to reflect the variations in the baseline 1990 data with actual ground counts. The baseline to year 1997 was taken as a flat growth period, with the exception of Haven Avenue which accounts for 42% of projected growth currently. The methodology involved taking the 2015 peak hour forecasts and subtracting the 1990 baseline forecasts. The growth was then added to the year 1997 turning movement volumes to develop year 2015 peak hour turning movements.

Project traffic -- was developed by the select zone process. The distribution for the project was calculated from the model zone that incorporates the proposed project. The project trips were then distributed and assigned according to the select zone assignment. The project assignment is discussed and shown in the Project Traffic section.

Truck Percentages

Truck percentages at study area intersections were obtained from field counts and from data provided by the City of Ontario. Truck percentages for existing 1997 and 2015 background scenarios were assumed to be the same. The truck percentages for the project trips were developed based on trip generation rates from the City of Fontana.

STUDY AREA

The Bridgestone/Firestone Project study area was defined to satisfy the local concerns of the City of Ontario and the regional concerns of the CTP. The study area boundaries covers all CMP intersections that are impacted by 80 or more project trips and all freeway links that are impacted by 100 or more trips (up to five miles from project site).

The intersection included in the study area are:

- Milliken Avenue/SR 60 EB Ramps
- Milliken Avenue/SR 60 WB Ramps
- Milliken Avenue/Greystone Drive
- Milliken Avenue/Mission Boulevard
- Milliken Avenue/Philadelphia Street
- Milliken Avenue/Jurupa Street
- Milliken Avenue/Riverside Drive
- Haven Avenue/Mission Boulevard

The freeway links are:

- State Route 60 - Milliken to Haven
- State Route 60 - Haven to Archibald
- State Route 60 - Archibald to Vineyard

The justification for this study area is provided in the project traffic section of this report.

EXISTING CONDITIONS

The existing transportation conditions within the study area were reviewed and summarized to provide an existing data base and to serve as a basis for future analysis. Existing conditions include lane geometrics, traffic control, am and pm peak hour volumes and the resultant level of service. The level of service analysis of the existing conditions will be provided in the analysis section of this report.

Lane Geometrics

The existing study area lane geometrics were field surveyed to determine the number and type of lanes as well as the existing traffic control. A description of the lane geometrics on the study area roadways is provided below and illustrated in Figure 3.

Milliken Avenue is a four lane undivided arterial from Riverside Drive to Mission Boulevard with a diamond interchange with State Route 60. The intersections of Milliken Avenue with the Freeway ramps are signalized. From Mission Boulevard to Jurupa Street, Milliken is a six-lane divided arterial.

Greystone Drive is a two lane industrial collector roadway which will be an access point to the project site.

Mission Boulevard is a four lane, divided, limited access highway. There are signalized intersections with Haven Avenue and Milliken Avenue in the study area.

Haven Avenue is a six lane roadway from SR 60 to Philadelphia Street and has three northbound lanes and four southbound lanes from Philadelphia Street to Mission Avenue.

Transit

Local bus service is provided by Omnitrans and commuter rail service is provided by Metrolink. Bus service within the study area includes Route 70 along Riverside Drive and Route 71/20 along Jurupa Street. There are two commuter rail stations near the project site including the Rancho Cucamonga Station located at Milliken Avenue and 8th Street serving the San Bernardino line and the East Ontario Station located west of Haven Avenue south of Francis Street serving the Riverside line. Five morning trains and seven evening trains are available at the East Ontario Station. Nine morning trains and twelve evening trains are available at the Ranch Cucamonga Station. These stations provide commutes from Riverside to Ontario and back as well as limited commute service from Los Angeles to Ontario and back. These rail and Transit services are available to the employees at the Bridgestone site.

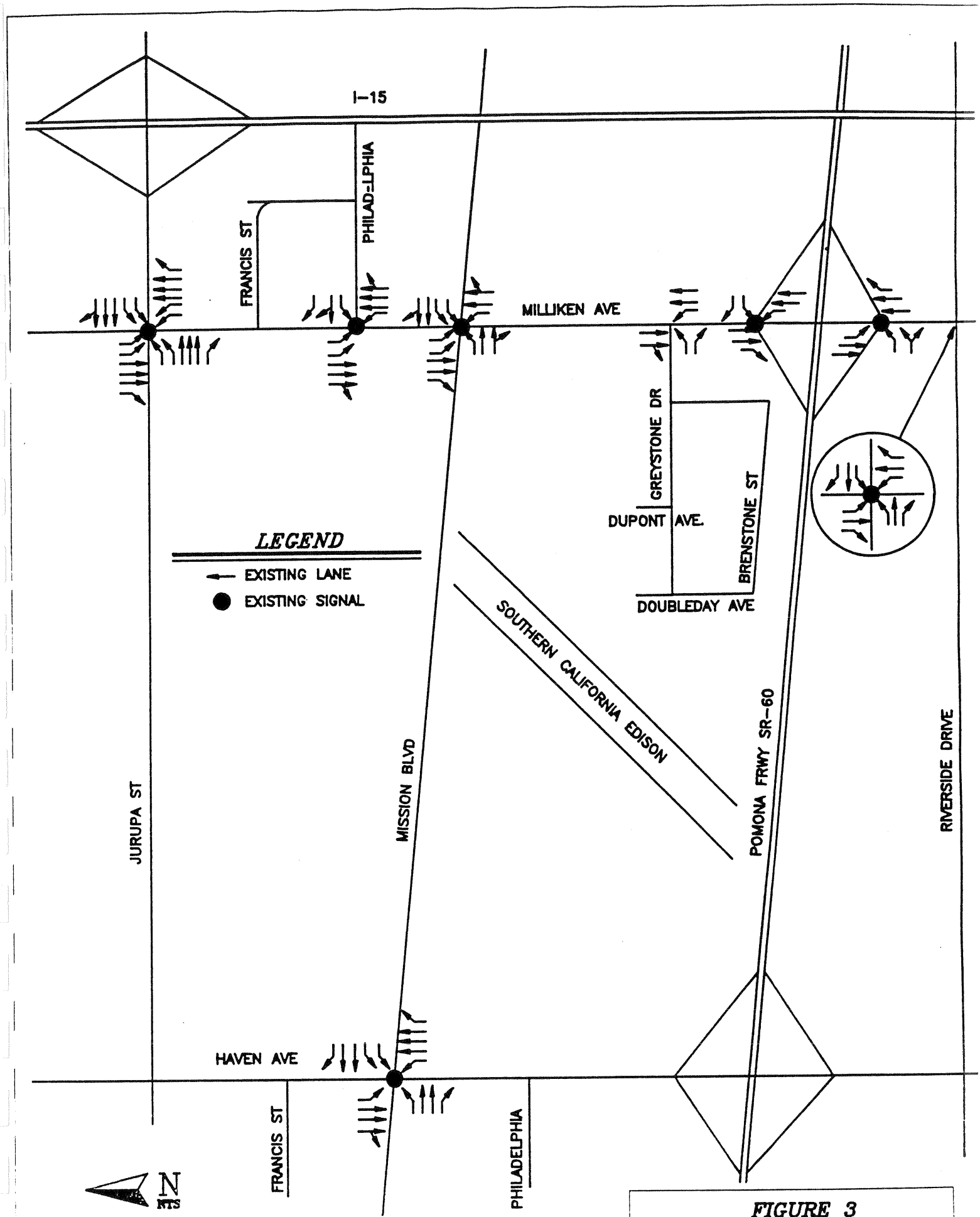

FIGURE 3
EXISTING LANE GEOMETRICS
BRIDGESTONE

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Traffic Volumes

Existing Year 1997 peak hour traffic volumes were counted in the field in February 1997. The counts were conducted form 7:00 am to 9:00 am and from 4:00 pm to 6:00 pm on February 25 and 26, 1997. One peak hour was determined form the two hours of counts. Figures 4 and 5 illustrate the existing traffic during the one hour am and pm peak hours, respectively.

Truck counts were made along Milliken Avenue and Mission Avenue and augmented with data from Ontario. The truck percentages of 18% on Milliken and 10% on Mission and Haven were calculated form the data and used throughout the study.

Existing traffic volumes on SR 60 were obtained from Caltrans 1995 Traffic Volumes. The peak hour volumes were developed based on CMP guidelines. The published PM peak hour two-way volume was split using a 55% peak direction factor. The AM peak hour volume was taken as 90% of the PM peak hour and assumes an opposite peak direction.

Analysis

Three types of analyses were conducted on the study area roadways: intersection level of service analysis (signalized and unsignalized), signal warrant analysis and freeway link level of service analysis. The details of the analysis are summarized in the Analysis Section of this report.

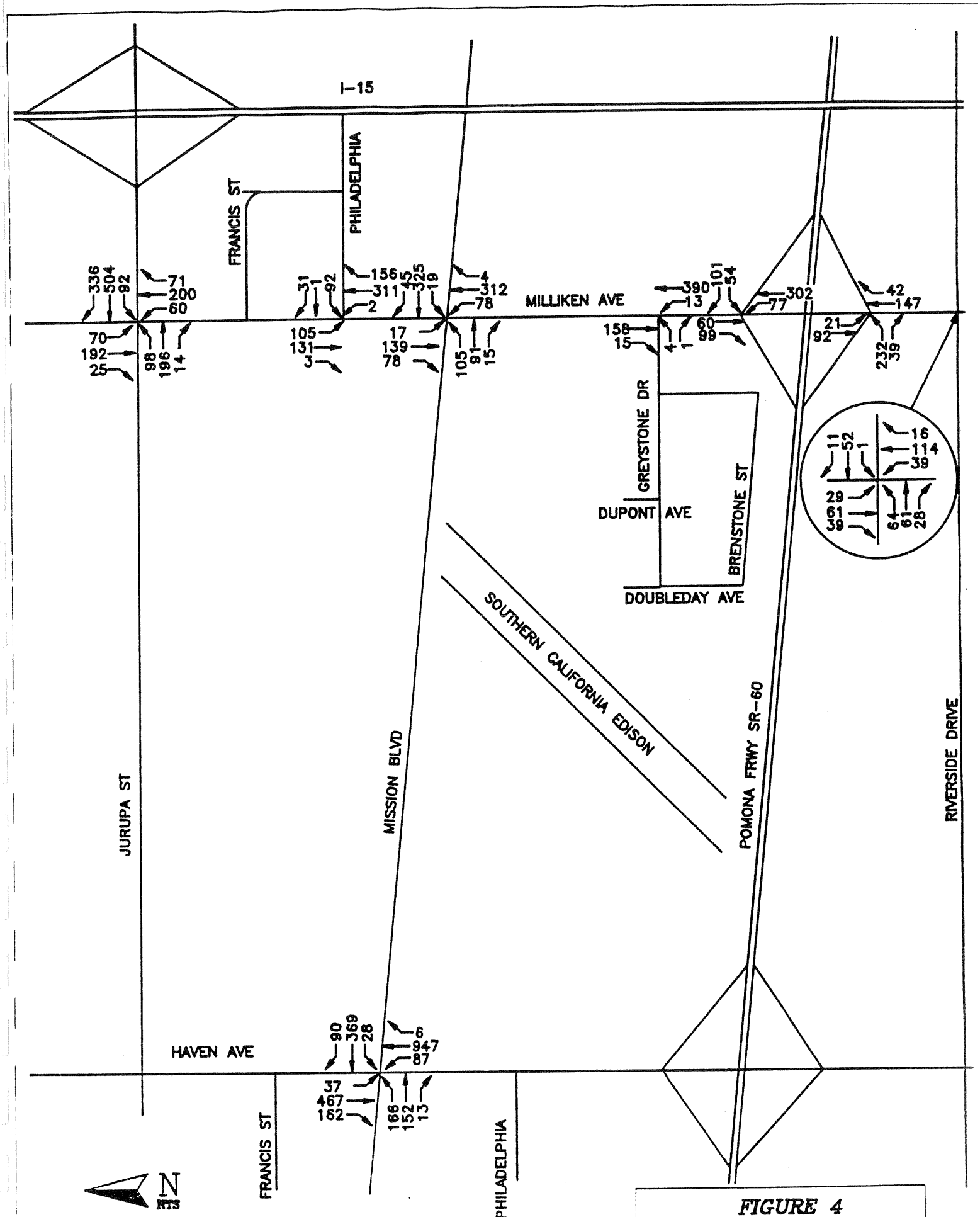

FIGURE 4

EXISTING AM PEAK HOUR

BRIDGESTONE

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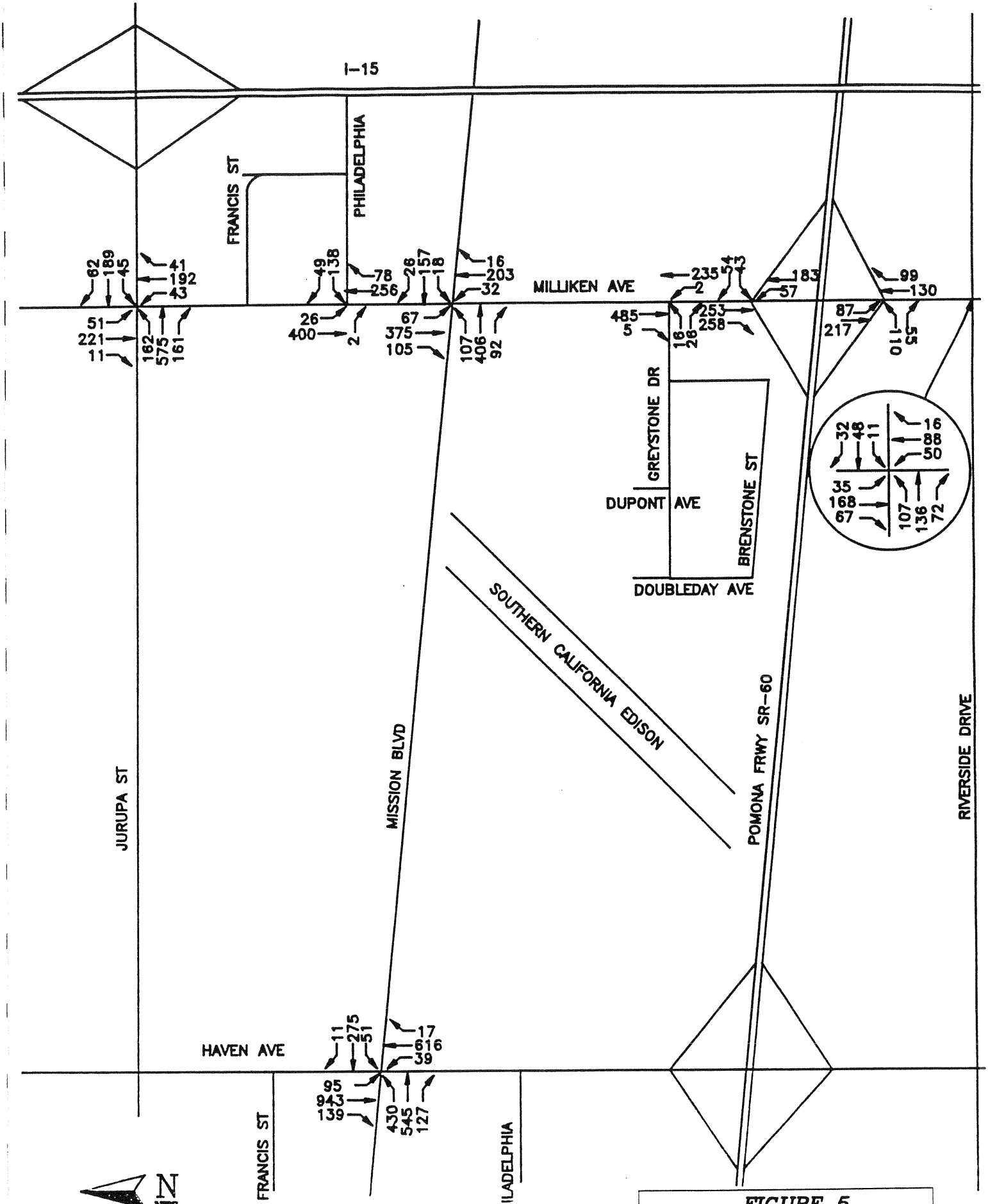

FIGURE 5

EXISTING PM PEAK HOUR

BRIDGESTONE

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PROJECT TRAFFIC

The project traffic was assessed in terms of trip generation distribution and assignment. Each of these components of the project traffic is discussed below.

Trip Generation

Project trip volumes for the proposed facility have been generated in order to assess the project's impacts. The trip generation potential of the proposed Bridgestone/Firestone Specific Plan was determined using rates published in the Institute of Transportation Engineers (ITE) Trip Generation, 5th Edition and rates obtained from the Trip Generation Study for Truck Uses in the City of Fontana conducted by BSI, August 1992. The use of these rates was suggested by the City of Ontario and is felt to be the most appropriate estimation for truck traffic generation related to warehousing and industrial uses in the San Bernardino area. The trip generation was stratified by truck trips and passenger car trips. Passenger car equivalents (PCE) were calculated for the truck trips based on a PCE factor of 3.0. The factor was applied to the project trips prior to establishing the study area. The factor for PCE's was then used as input in the intersection analysis.

An existing Bridgestone facility will be relocated at the proposed site. The existing facility totaling 550,000 square feet is located just east of I-15 on Jurupa Street. Applying the Fontana trip generation rates, the resultant trips are 55 AM, 83 PM and 887 daily existing vehicle trips and 81 AM, 97 PM existing passenger car equivalent trips. The CMP allows for a credit against new developments for existing uses to be replaced. However, since the new location is located west of I-15, and a significantly different trip assignment would be involved this credit was not taken, except at I-15 and Jurupa. The credit was taken at I-15 and Jurupa because those intersections are used for both the existing and proposed sites.

The rates used for this project include heavy warehousing for the Bridgestone Development and heavy warehousing and heavy industrial for the remaining future parcels. The trip generation in total vehicle trips is summarized in Table 1a. The trip generation calculated in passenger car equivalent volumes is summarized in Table 1b. Trip generation documentation is provided in Appendix A.

TABLE 1a: TRIP GENERATION

Land Use	Square Feet	Daily		AM Peak		PM Peak	
		Rate	Trips	Rate	Trips	Rate	Trips
Bridgestone Building - Heavy Warehousing	923,950	1.60	1,478	0.10	92	0.15	139
Buildings 2 & 3 - Heavy Warehousing	905,063	1.60	1,448	0.10	91	0.15	138
Buildings 2 & 3 - Heavy Industrial	905,063	3.07	2,779	0.23	208	0.24	217
TOTAL (IN/OUT)			**5,705** (2852/2853)		**391** (305/86)		**494** (123/371)

TABLE 1b: TRIP GENERATION IN PCEs

Land Use	Passenger Cars			Trucks			Total in PCEs		
	AM	PM	Daily	AM	PM	Daily	AM	PM	Daily
Bridgestone Building - Heavy Warehousing	70	126	1,168	22	13	310	136	165	2,098
Buildings 2 & 3 - Heavy Warehousing	69	126	1,144	22	12	304	135	162	2,056
Buildings 2 & 3 - Heavy Industrial	193	197	2,418	15	20	361	238	257	3,501
TOTAL (IN/OUT)	**332** (260/72)	**449** (112/337)	**4,730** (2365/2365)	**59** (44/15)	**45** (11/34)	**975** (487/488)	**509** (392/117)	**584** (145/439)	**7,655** (3827/3828)

As shown, the project will generate approximately 5,705 daily trips, 391 trips during the AM peak hour, and 391 trips during the PM peak hour. Which is equivalent to 7,655 daily PCEs, 509 PCEs during the AM peak hour, and 584 PCEs during the PM peak hour.

The proposed facility will replace the existing Bridgestone/Firestone facility located in east Ontario. Therefore, the traffic generated by the Bridgestone building will be new to the local roadways but not to the regional network.

Trip Distribution and Assignment

The distribution/assignment of the project vehicle trips were based on the select zone output and likely truck routes for the truck distribution. The trip distribution was obtained for the traffic originating from the traffic analysis zone that contains the project site in the CTP traffic model.

The project trips were assigned to the study area network based on the assignment from the CTP Select Zone model run. The project trips were assigned for the Bridgestone building only and then for the entire site. The am and pm peak hour actual vehicle traffic for the Bridgestone project are shown in Figure 6. The total project traffic (Bridgestone plus Building 2 and 3) volumes are shown in Figure 7. The PCEs are shown on the segments in Figure 7. These PCEs were used to define the study area. Note, the credit for existing trips was identified along Jurupa at the I-15 ramps. Intersection with greater than 80 peak hour trip (PCEs) were included in the study area. The percent trip assignment for the Bridgestone building project and the total project are displayed in Appendix E.

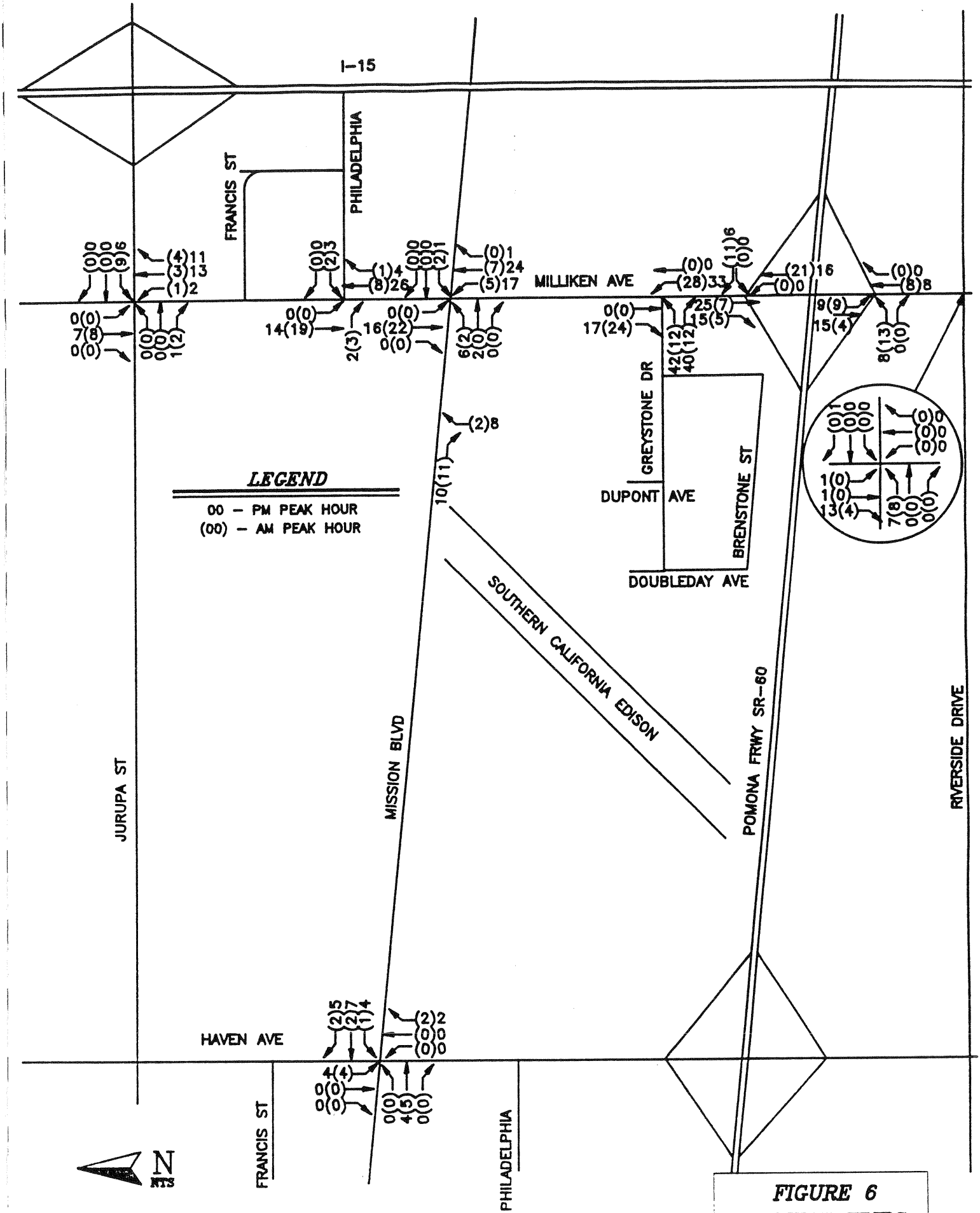

FIGURE 6
PROJECT TRIPS
BRIDGESTONE

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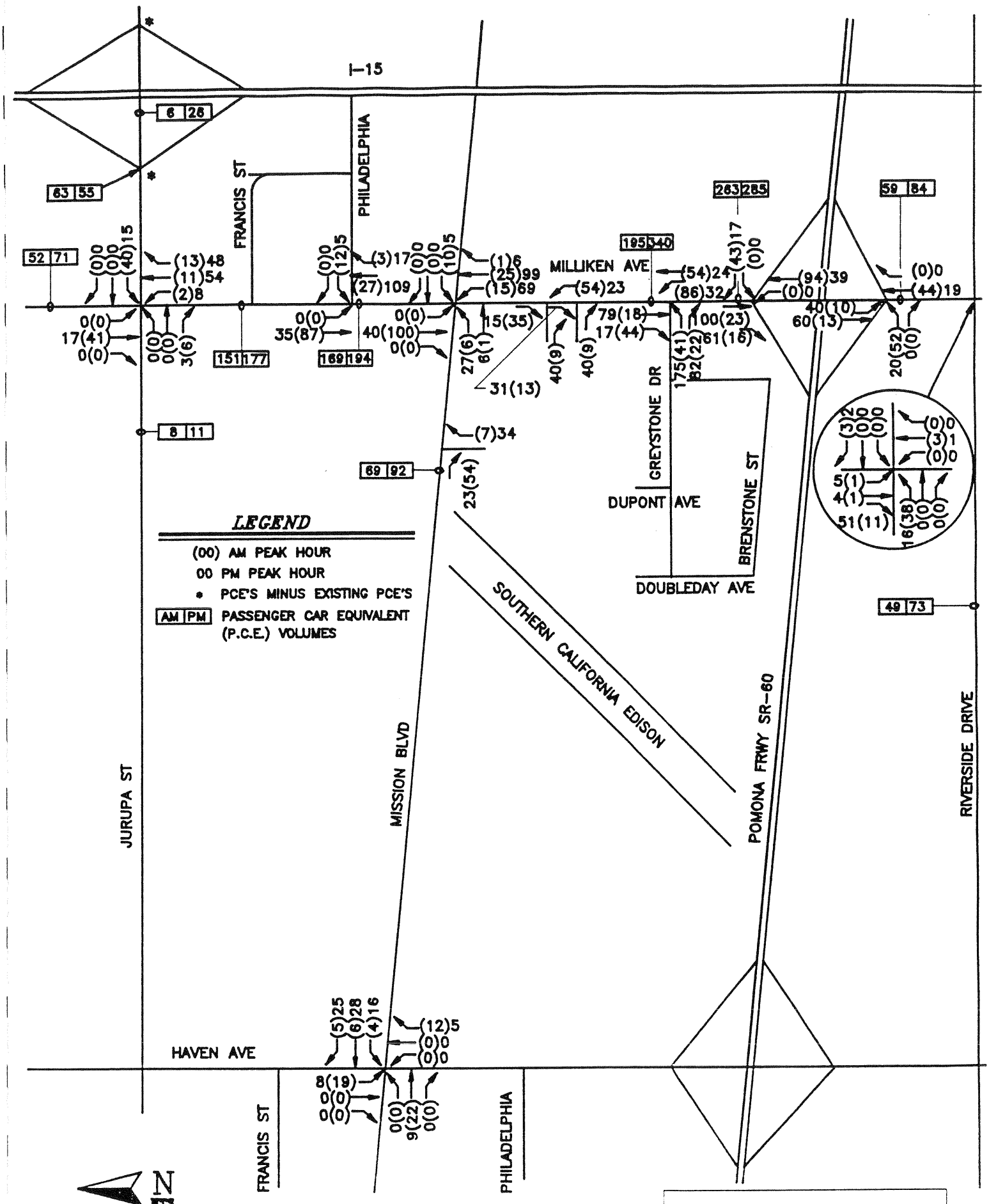

NOTE: STUDY AREA ESTABLISHED FROM PCE'S AS NOTED IN TEXT

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FIGURE 7
TOTAL PROJECT TRIPS
BRIDGESTONE

FUTURE TRAFFIC VOLUMES

As discussed, three future scenarios were analyzed: existing plus the Bridgestone Building only, Year 2015 traffic volumes without the project and Year 2015 with the total site project traffic. Project traffic was calculated based on the previously discussed distribution of project traffic.

Existing Traffic plus Bridgestone Traffic

The existing plus project traffic reflects the traffic conditions anticipated when the Bridgestone Building is opened. Although the initial building may only consist of 644,910 square feet, the analysis considered the entire building of 923,950 square feet. The existing traffic volumes presented earlier, were combined with the project trips associated with the Bridgestone Building only. The resultant volumes are shown in Figures 8 and 9 for the am and pm peak hours respectively.

Year 2015 Without and With Project Traffic

The CTP traffic model adjusted projections were used to develop traffic volumes without the project traffic for the Year 2015. As discussed previously, the output from the CTP model was adjusted. The adjustments were made by taking the 2015 output and subtracting the 1990 output for each roadway link, for each peak hour. The difference between the two numbers was then added to the turning movement volumes in the 1997 condition, to develop 2015 peak hour turning movement volumes. This approach was followed for all links, except Haven Avenue, assuming no growth between 1990 and 1997. However, on Haven Avenue, 42% of the future forecast was assumed to be there based on the growth between 1990 and 1997 of 42% of 2015. Therefore, the remaining 58% of the future forecast was added to the 1997 traffic volumes. The resultant 2015 traffic volumes are shown in Figures 10 and 11 for the am and pm peak hours without the project traffic.

Freeway volumes for SR 60 were taken from the 2015 peak hour model. The two-way volume for each of the analyzed segments was given a directional distribution of 55% and 45% as outlined in the CMP for consistency with the methodology used in developing the existing freeway volumes.

The project traffic was added to the year 2015 without project traffic to develop 2015 with project traffic conditions. The resultant traffic volumes are shown in Figures 12 and 13 for the am and pm peak hours, respectively.

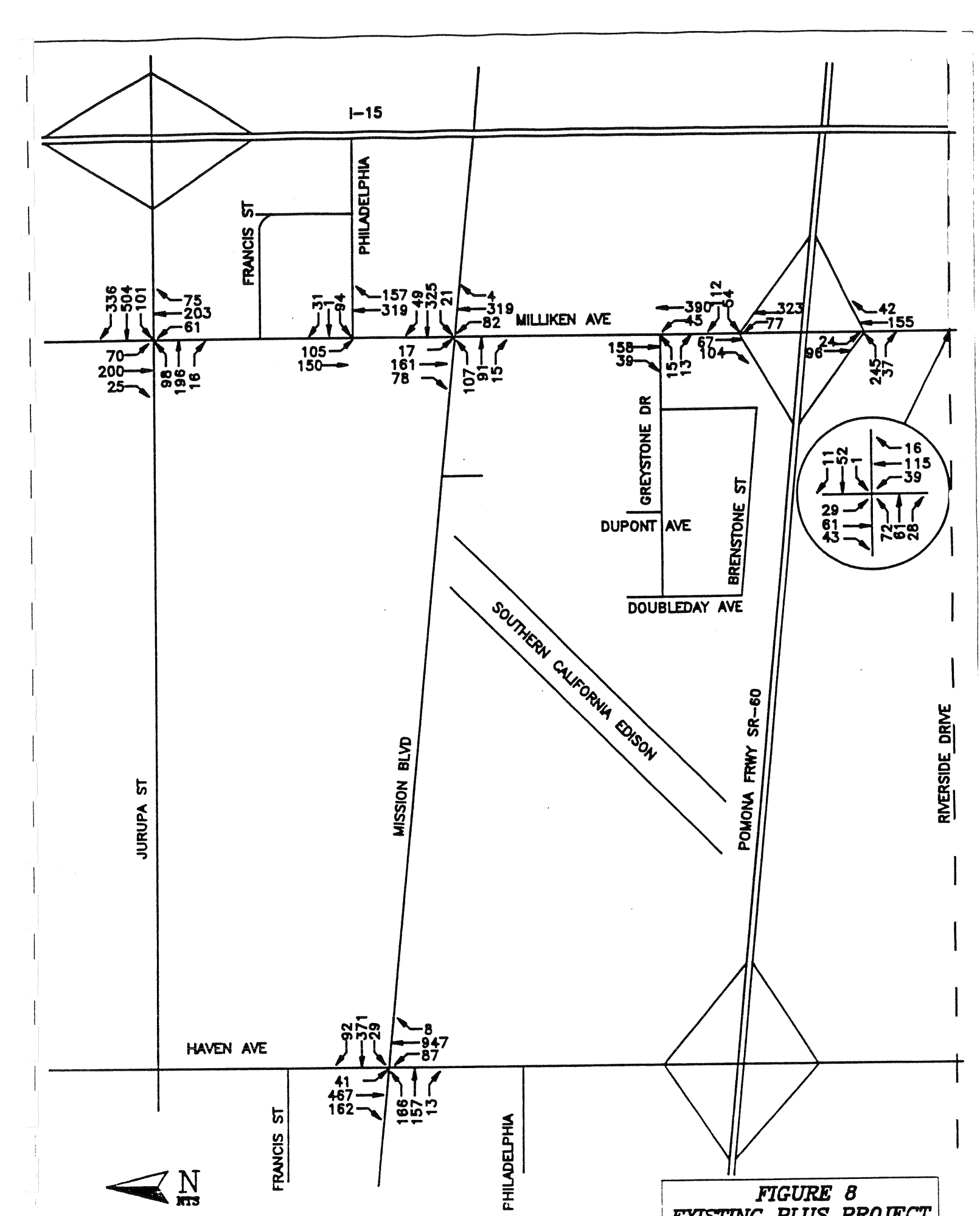

FIGURE 8
EXISTING PLUS PROJECT
AM PEAK HOUR
BRIDGESTONE

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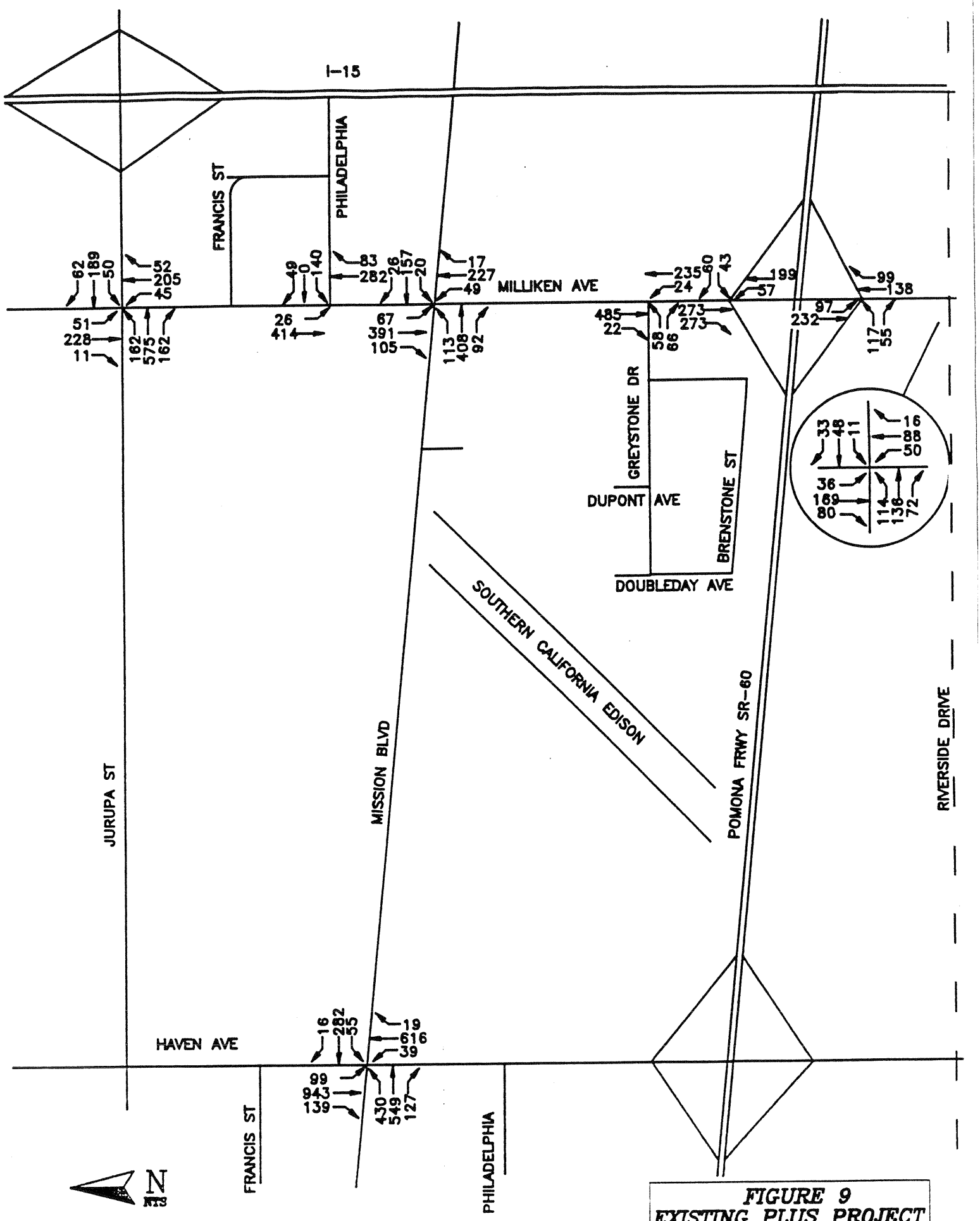

FIGURE 9
EXISTING PLUS PROJECT
PM PEAK HOUR
BRIDGESTONE

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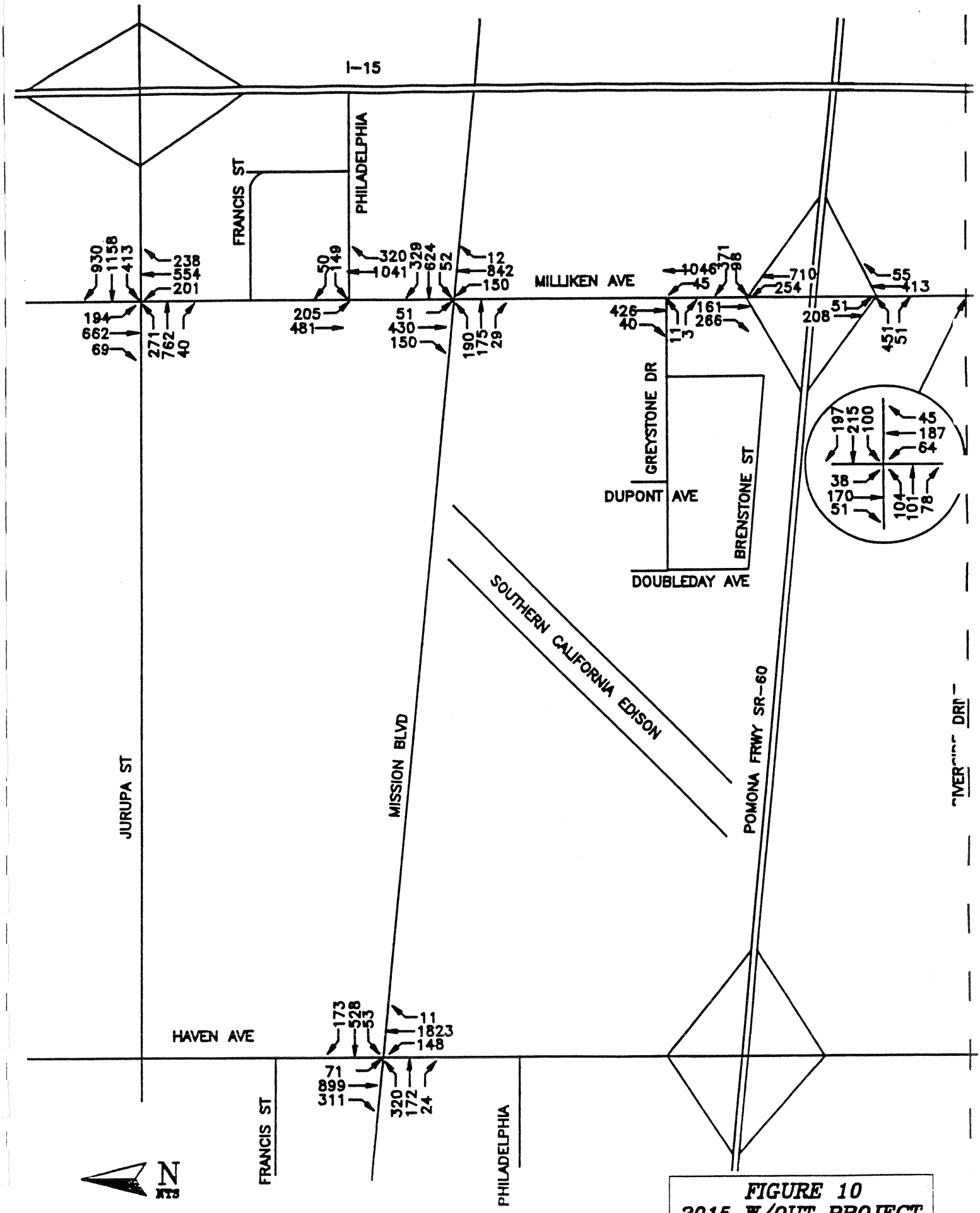

FIGURE 10
2015 W/OUT PROJECT
AM PEAK HOUR
BRIDGESTONE

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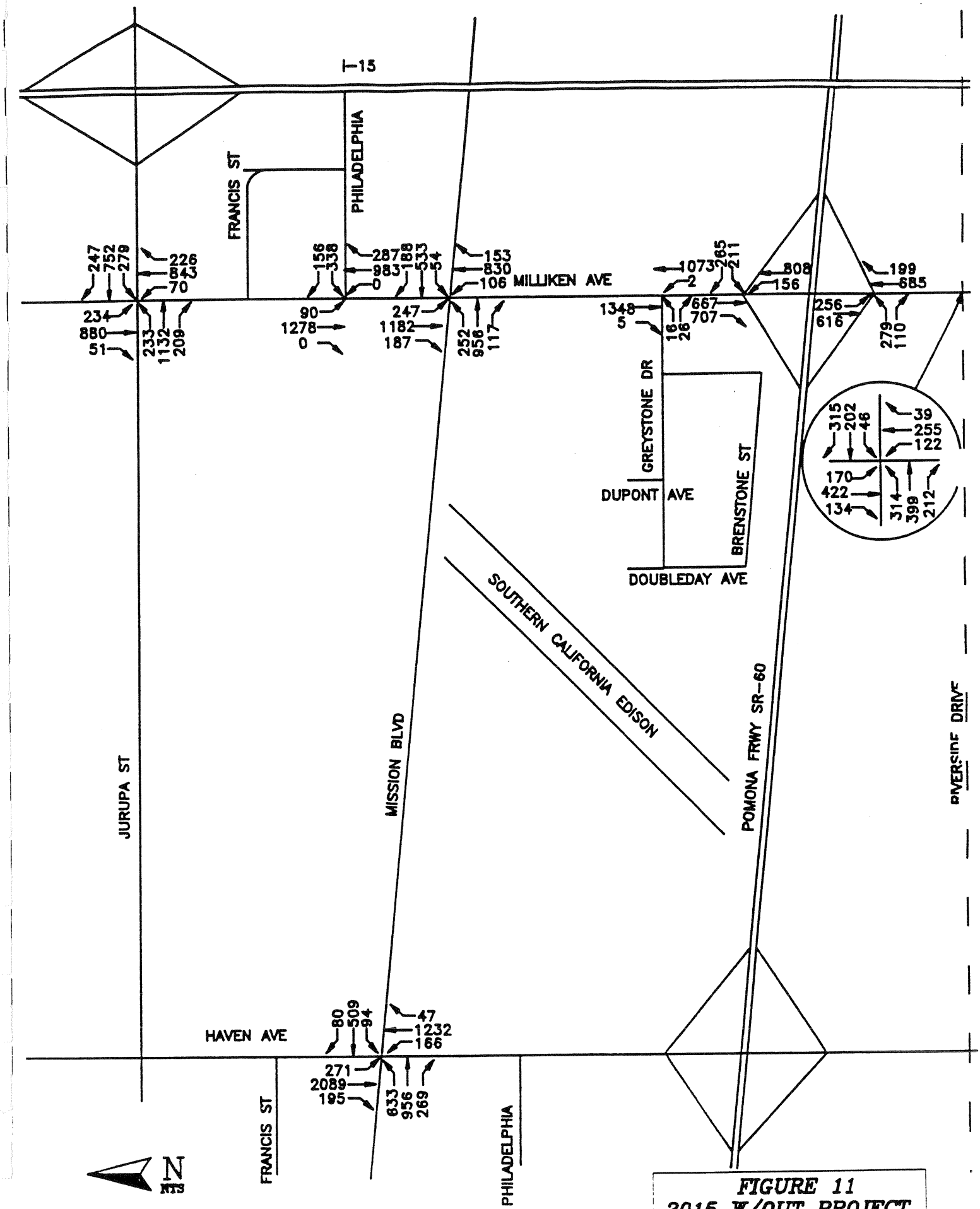

FIGURE 11
2015 W/OUT PROJECT
PM PEAK HOUR

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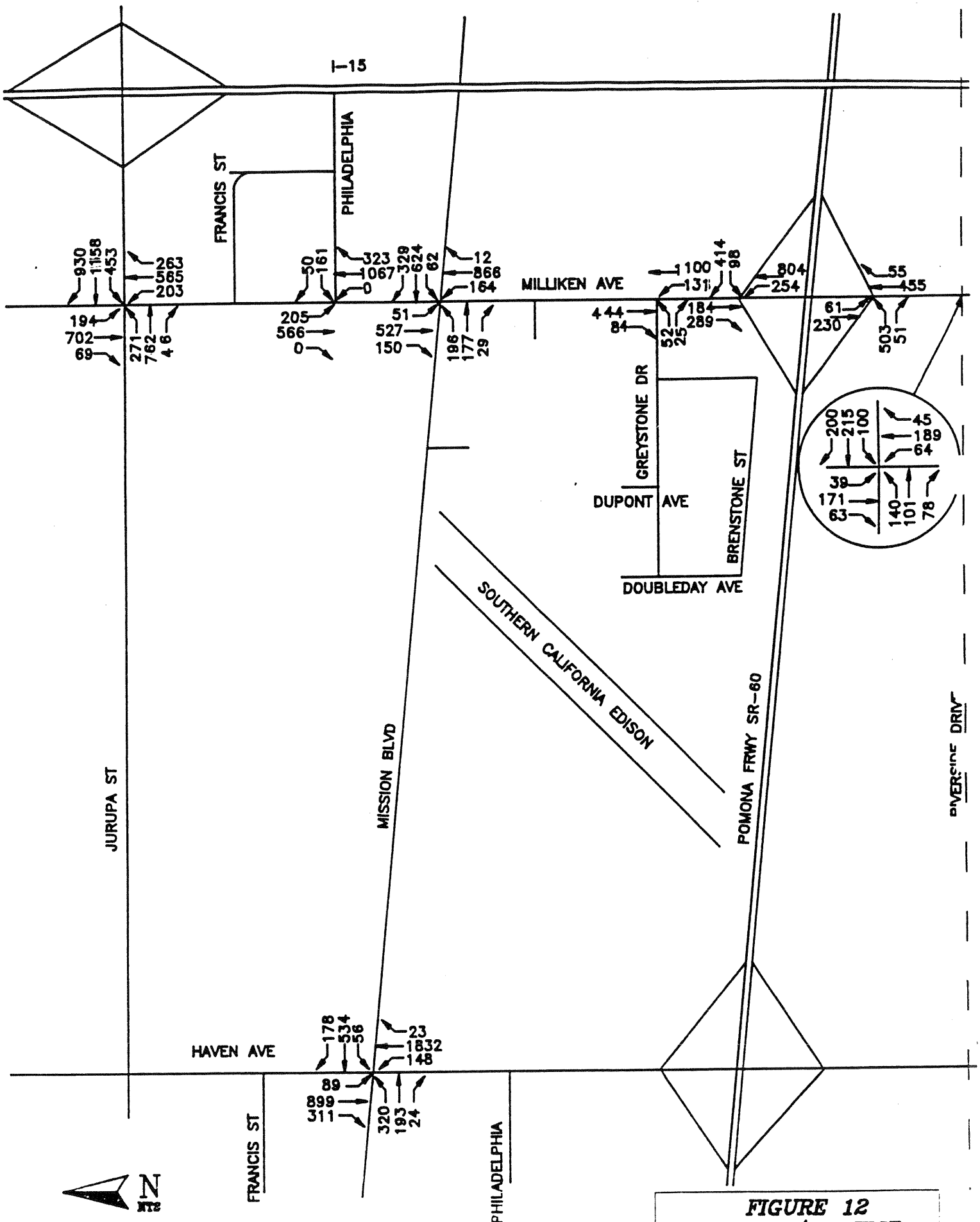

FIGURE 12
2015 W/PROJECT
AM PEAK HOUR

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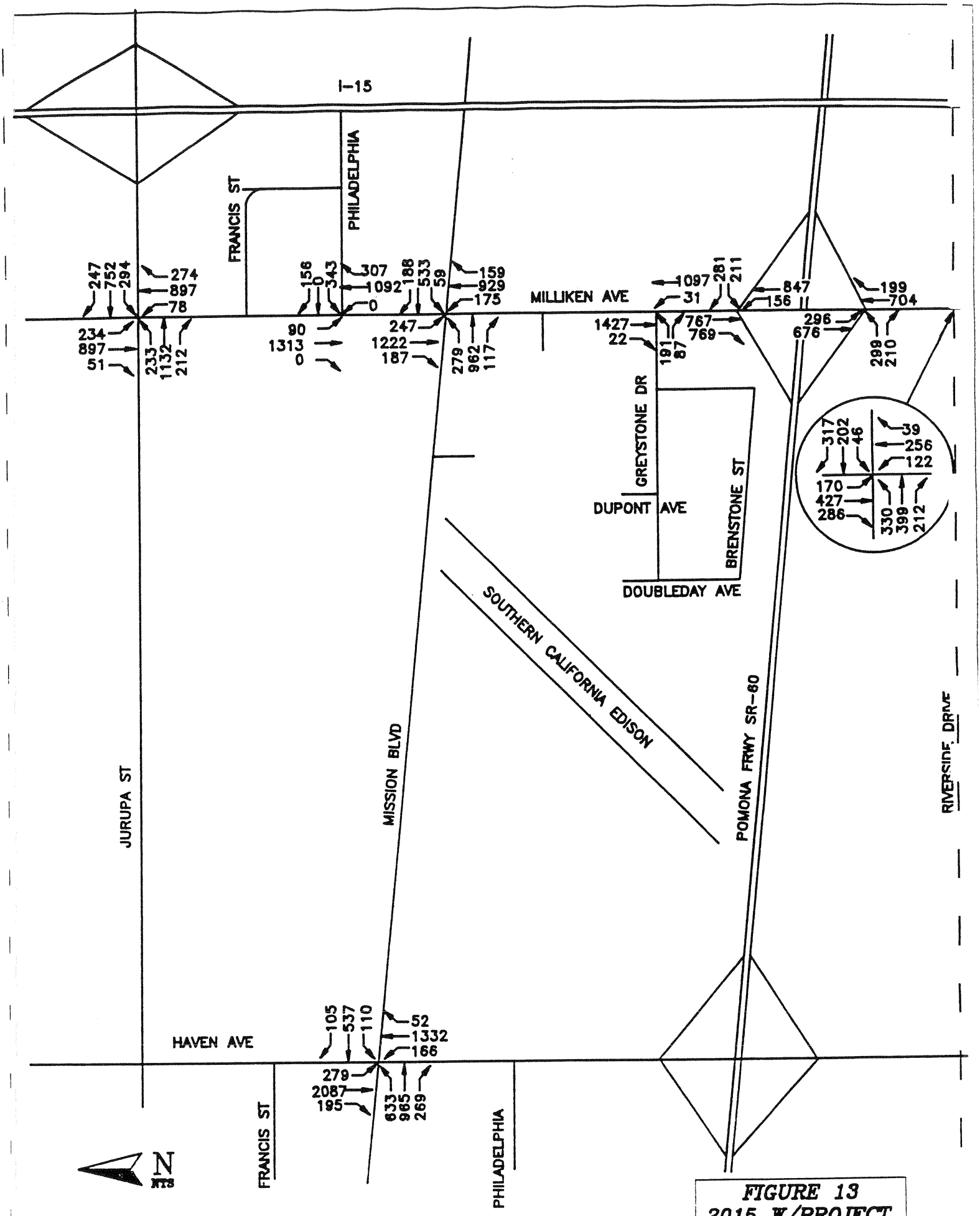

FIGURE 13
2015 W/PROJECT
PM PEAK HOUR
BRIDGESTONE

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ROADWAY ANALYSES

The study adhered to CMP requirements in the data development and analysis for project relatec impacts. CMP criteria and analysis were applicable to Year 1997, Existing Plus Project and Year 2015 without and with project traffic. All CMP and other major intersections on these roadway links that have a weekday project traffic in excess of 80 vehicles, or PCEs, were analyzed as required by the CMP.

Signal warrant analysis and intersection level of service analysis were conducted for the existing, existing plus project, 2015 without project traffic and 2015 with project traffic. Each of these analyses are discussed below.

Signal Warrant Analyses

There are two unsignalized intersections in the study area. The project driveway on Milliken Avenue and Greystone/Milliken. The peak hour warrant was used to test the need for signalization at these two intersection for each of the study scenarios. The results of the analyses show that the intersection of Greystone/Milliken will require signalization for the 2015 without project PM peak hour. The project driveway will not require signalization. The signal warrant worksheets are provided in Appendix B.

Intersection Level of Service Analysis

The study area intersections were analyzed for the AM and PM peak hours to determine intersection level of service for existing conditions, Project Opening Year 1997(existing plus project) and Future Year 2015 scenarios. The analyses were based on the methodology presented in the 1994 Highway Capacity Manual (HCM) for signalized and unsignalized intersections.

The following assumptions were made for the intersection level of service analysis.

Lane Geometrics -- The existing roadway network was used for each of the scenarios. If unacceptable levels of service were attained, then mitigation measures were prepared and the intersection re-analyzed.

Truck Percentage -- The truck percentage was used as discussed previously. For the signalized intersections, the Highway Capacity Manual methodology adjusts the capacity based on a factor that is determined from the percentage of trucks and a default PCE of 2.0. The factor was recalculated using the truck percentages and a PCE of 3.0. The City of Ontario wished to show the project trips as PCE instead of as a component of the truck percentage. Therefore, the PCEs were calculated and the truck percentage shown was adjusted so as not to double count. Spreadsheets are included in Appendix C to show the PCE calculations.

Peak Hour Factor -- A peak hour factor of .95 was used in all scenarios.

Signal Timing/Phasing -- The signal timing and phasing were input based on the existing filed conditions. Significant modifications to the timing or the phasing were noted as mitigation.

Levels of Service (LOS) are reported as "A" through "F". The acceptable level of service during the peak hour for the City of Ontario and the CMP is LOS "E". Table 2 illustrates the calculated delay, volume to capacity ratio and level of service at study intersections for existing conditions. As illustrated in Table 2, all study intersections currently operate at level of service "E" or better under existing conditions. Table 2 summarizes the levels of service for the existing conditions and each of the future study scenarios. HCM worksheets are contained in Appendix D, along with definitions and explanations of the unsignalized intersections levels of service.

The results of the analysis indicate that all study intersection operate at level of service C or better for the existing and existing plus project scenarios. The intersections of Mission/Milliken, Mission/Haven, and Milliken/Jurupa operate at LOS F for the 2015 without project scenario with the existing lane geometrics. The intersection of Milliken/Greystone operates at unacceptable level of service for the minor approach under 2015 without project scenario. These intersections were reanalyzed with improvements necessary to obtain acceptable levels of service (LOS E or better). The improvements assumed for these intersections are as follows:

Milliken/Mission	One additional eastbound and westbound through lane
Milliken/Jurupa	Restripe the westbound approach to include two through lanes and one exclusive right turn lane
Milliken/Greystone	Signal
Haven/Mission	One additional eastbound and westbound through lane

These improvements are discussed in more detail in the Roadway Needs section of this report.

Freeway Link Analysis

Freeway link analyses were conducted for the segments of Route 60 from Milliken Avenue Vineyard Avenue. The analysis was conducted utilizing the volume to capacity (v/c) ratio for AM and PM peak hour scenarios. The segments that were analyzed include Milliken to Haven, Haven to Archibald, and Archibald and Vineyard.

The results of the analysis, as summarized in Table 3, indicate that all freeway segments will operate at Level of Service "E" or better with the exception of SR 60 eastbound from Vineyard to Milliken which will operate at Level of Service "F". In order to obtain an acceptable level of service an additional mixed use lane will be required.

TABLE 2: INTERSECTION LEVELS OF SERVICE

Intersection	Existing		Existing plus Project		2015 without project		2015 with project	
	am peak	pm peak	am peak	pm peak	am peak	pm peak	am peak	pm peak
	v/c/delay/LOS	v/c/delay/LOS	v/c/delay/LOS	v/c/delay/LOS	v/c/delay/LOS	v/c/delay/LOS	v/c/delay/LOS	v/c/delay/LOS
Milliken/Jurupa	.423/20.5/C	.408/14.7/B	.430/20.4/C	.317/12.5/B	** (.909/31.0/D)	.820/17.6/C (.825/19.2/C)	* (.760/24.8/C)	* (.919/31.4/D)
Milliken/Philadelphia	.247/8.7/C	.200/8.2/B	.250/8.7/B	.204/8.2/B	.575/11.8/B	.574/11.4/B	.580/11.7/B	.618/12.5/B
Milliken/Mission	.482/20.5/C	.479/14.9/B	.487/14.9/B	.554/20.2/C	* (.898/35.4/D)	* (.941/37.8/D)	* (.911/31.1/D)	* (.999/442.9/E)
Milliken/Greystone	5.2/B	6.4/B	5.3/B	7.2/B	*	*	* (.484/6.0/B)	* (.814/14.3/B)
Milliken/Sr 60 WB	.263/7.1/B	.354/9.4/B	.279/7.2/B	.382/9.8/B	.744/11.9/B	.910/20.2/C	.824/14.2/B	.681/12.3/B
Milliken/SR 60 EB	.275/8.0/B	.282/10.6/B	.299/11.0/B	.289/8.0/B	.615/12.1/B	.780/12.5/B	.706/15.4/C	.799/13.1/B
Milliken/Riverside	.166/10.4/B	.270/11.0/B	.175/10.5/B	.281/11.2/B	.494/10.6/B	.960/44.0/E	.932/27.1/D	.999/52.0/E
Haven/Mission	.556/17.1/C	.789/23.3/C	.569/17.3/C	.809/24.9/C	.930/26.8/D	* (.957/41.5/E)	.605/12.4/B	* (.964/43.0/E)

* Exceeds reasonable values - existing geometrics
( ) operation with mitigation

TABLE 3: FREEWAY LINK ANALYSIS

Segment	No. Lanes**	Capacity*	am peak volume	pm peak volume	f_{HV}	am peak v/c	am peak LOS	pm peak v/c	pm peak LOS
EXISTING CONDITIONS									
SR 60 Westbound									
Milliken to Haven	**4+1**	**10,400**	**5,890**	**5,355**	**0.967**	**0.616**	**B**	**0.561**	**A**
Haven to Archibald	**4+1**	**10,400**	**6,039**	**5,490**	**0.967**	**0.632**	**B**	**0.574**	**A**
Archibald to Vineyard	**4+1**	**10,400**	**5,940**	**5,400**	**0.967**	**0.622**	**B**	**0.565**	**A**
SR 60 Eastbound									
Milliken to Haven	**4+1**	**10,400**	**4,820**	**6,545**	**0.967**	**0.505**	**A**	**0.685**	**B**
Haven to Archibald	**4+1**	**10,400**	**4,951**	**6,710**	**0.967**	**0.518**	**A**	**0.702**	**C**
Archibald to Vineyard	**4+1**	**10,400**	**4,860**	**6,600**	**0.967**	**0.509**	**A**	**0.691**	**B**

Segment	No. Lanes**	Capacity*	am peak volume	pm peak volume	f_{HV}	am peak v/c	am peak LOS	pm peak v/c	pm peak LOS
2015 WITHOUT PROJECT CONDITIONS									
SR 60 Westbound									
Milliken to Haven	4+1	10,400	8,653	8,954	0.967	0.906	E	0.937	D
Haven to Archibald	4+1	10,400	8,053	8,518	0.967	0.843	D	0.892	C
Archibald to Vineyard	4+1	10,400	8,167	8,531	0.967	0.855	D	0.893	D
SR 60 Eastbound									
Milliken to Haven	4+1	10,400	7,079	10,944	0.967	0.741	C	1.145	F
Haven to Archibald	4+1	10,400	6,588	10,412	0.967	0.690	B	1.090	F
Archibald to Vineyard	4+1	10,400	6,682	10,426	0.967	0.699	B	1.091	F
2015 WITH PROJECT CONDITIONS									
SR 60 Westbound									
Milliken to Haven	4+1	10,400	8,676	9,036	0.967	0.908	E	0.945	E
Haven to Archibald	4+1	10,400	8,076	8,600	0.967	0.845	D	0.900	D
Archibald to Vineyard	4+1	10,400	8,190	8,613	0.967	0.857	D	0.901	E
SR 60 Eastbound									
Milliken to Haven	4+1	10,400	7,157	10,970	0.967	0.749	C	1.148	F
Haven to Archibald	4+1	10,400	6,666	10,438	0.967	0.698	B	1.093	F
Archibald to Vineyard	4+1	10,400	6,760	10,452	0.967	0.708	C	1.094	F

c:\wp51\projects\tr97021.0\bridgeta

*** Capacity = 2200 vphpl for mixed use lanes and 1600 for HOV lanes.**

**** SR 60 currently has 4 mixed use lanes plus 1 HOV lane in each direction.**

ROADWAY NEEDS

As determined in the roadway analysis, mitigation will be required at four study intersections and thre freeway links to obtain acceptable operating levels of service. The individual roadway needs are summarized below.

- Mission Boulevard
  - Add one through lane in each direction from Haven Avenue to Milliken Avenu including intersection approach.

- Milliken Avenue/Jurupa Street
  - Add an exclusive westbound right turn lane on Jurupa Street at Milliken Avenue.

The Mission Boulevard improvement is consistent with the Mission Boulevard plan of works date August 20, 1993. Based on the 2015 model volumes, an exclusive westbound right turn lane on Jurupa at Milliken will be required. This can be achieved without widening Jurupa, which is currently at the ultimate width, by restriping the approach to include two through lanes and one right turn lane. Ther are currently three through lanes on Jurupa. The analysis indicates that the intersection will operate at acceptable level of service with the striping modification for the modeled year 2015 traffic volume. It is recommended that this intersection be reanalyzed when area buildout occurs to determine the actu needs.

Mitigation for the freeway segments includes an additional mixed use lane eastbound from Millike Avenue to Vineyard Avenue and one lane westbound from Milliken Avenue to Haven Avenue. These future roadway needs are shown in Figure 14.

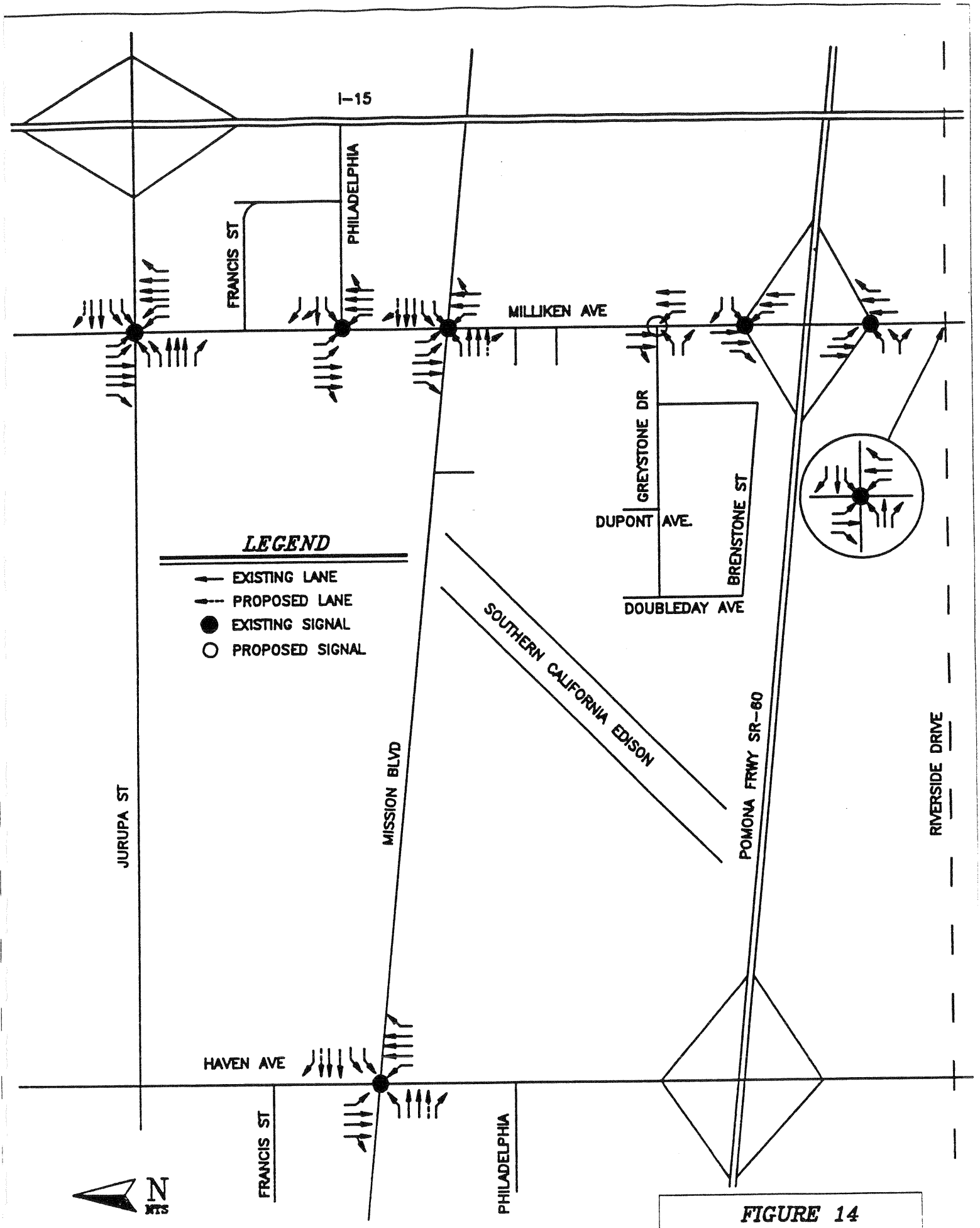


FIGURE 14
2015 ROADWAY NEEDS
BRIDGESTONE

O'ROURKE ENGINEERING

COST ESTIMATES

Cost estimates were prepared for each intersection and freeway link based on the improvements recommended. The improvements are provided to comply with CMP requirements. The costs will be off-set by actual improvements being constructed as part of the project. The improvements will likely include widening the west side of Milliken Avenue from Mission Boulevard to Greystone Drive and widening the south side of Mission Boulevard along the project frontage.

Unit Costs

The following unit cost estimates from SANBAG were used in the development of the cost estimates of improvements:

- Signing & Striping = $2.25 per LF
- New Traffic Signal = $100,000.00
- Add one mixed use freeway lane in each direction = $2,000,000.00/mile

The costs for widening Mission Boulevard were taken directly from the Mission Boulevard Plan of Works, a project report prepared for the City of Ontario for improvements on Mission Boulevard. One-half of the total cost was applied to each of the intersections (Haven and Milliken) to establish the projects fair share contribution.

Project Fair Share

The CMP outlines a methodology for calculating a project's contribution to future improvements. That methodology involves identifying the project's percent impact on a segment or at an intersection and applying that percent to the total cost of the improvement. The project percentage is calculated as project percent of total traffic less existing traffic. The project's fair is shown to comply with the CMP guidelines only. Actual improvements and fees will be determined by the City.

The percentage contribution of traffic associated with the Bridgestone/Firestone Project to the total Year 2015 new traffic was calculated based on San Bernardino CMP methodology on all intersections that require improvements and are impacted by 80 or more project trips and all freeway links that require improvements and are impacted by 100 or more project trips.

The project fair-share contribution would be $217,983.00 ($175,983.00 for local roadway improvements and $42,000 for freeway improvements).

The estimated cost of improvements and the calculated project percent contribution are summarized in Table 4.

Table 4: Project Fair-Share Contribution

Location	Improvement	Percent Fair Share	Total Cost	Project Fair Share Contribution
Mission Boulevard **@ Milliken** **@ Haven**	add one lane each direction	7.9% 3.1%	$1,460,255 $1,460,255	$115,360 $45,268
Jurupa/Milliken	Restripe westbound approach (600')	4.1%	$1,350	$55
SR 60 - Vineyard to Milliken	add one mixed use lane eastbound (3 mi.)	0.7%	$6,000,000	$42,000
Milliken/Greystone	add traffic signal	15.3%	$100,000	$15,300
Total				$217,983

CONCLUSION

The Bridgestone/Firestone development will be located in Ontario at the Southwest corner of Milliken Avenue and Mission Boulevard. The project will be developed in two primary phases: the Bridgestone building and future buildings (buildings 2 and 3) that will be developed for warehouse/industrial use. The Bridgestone building is proposed to be 644,910 square feet. The analysis assumes the first phase of the project to include the entire 923,950 square feet for Bridgestone. Buildings 2 and 3 will consist of 336,600 square feet and 519,576 square feet for each of the future buildings respectively. The year 2015 analysis includes all of the proposed uses for a total of 1,810,126 square feet of building area.

Traffic generated by the Bridgestone building will be new to the local roadways but not to the regional network. There is an existing Bridgestone/Firestone facility located in east Ontario that will be replaced by the proposed facility.

The following traffic analysis scenarios and horizon years were included in the study to address City of Ontario and CMP requirements:

- Existing Weekday (AM and PM peak hours)
- Existing Weekday (AM and PM peak hours) with project
- CTP Horizon Year 2015 - (AM and PM peak hours) without project
- CTP Horizon Year 2015 - (AM and PM peak hours) with project

Intersections and freeway links level of service were mitigated to Level of Service "E", or better. This criteria is consistent with both the CMP-TIA requirement and the City of Ontario requirement. This criteria resulted in the analysis of 8 intersections and 3 freeway links.

Due to study area characteristics, truck percentages at study area intersections were obtained from field counts. For the scenarios without project traffic, truck percentages were assumed to be 18% on Milliken Avenue and 10% on all remaining study area roadways. The project truck percentages and trip generation rates were obtained from the Study for Truck Uses in the City of Fontana prepared by BSI, August, 1992. The analyses were conducted using adjustment factors reflecting a passenger car equivalent of 3.0 for all truck traffic.

The results of the analysis indicate that no improvements will be necessary for the existing and existing plus project conditions. For the 2015 without project scenario, improvements were necessary as follows

Milliken/Mission - add one eastbound and one westbound through lane
Haven/Mission - add one eastbound and one westbound through lane
Milliken Greystone - add traffic signal
Milliken/Jurupa - restripe westbound approach to include two through lane and one exclusive right turn lane
SR 60 westbound - Milliken to Haven, add one mixed use lane

No additional improvements were required in subsequent scenarios.

The estimated construction costs for the recommended improvements were prepared to establish the project's fair-share contribution. The projects percent contribution to total growth was calculated for each intersection and freeway segment and applied to the total cost of improvements. The total cost o improvements was estimated to be $9,021,861. The projects fair-share contribution to the total cost is $217,983.

The improvements discussed here are provided to comply with CMP requirements. These costs will be off-set by actual improvements being constructed as part of the project. These improvements will likel include widening the west side of Milliken Avenue from Mission Boulevard to Greystone Drive an widening the south side of Mission Boulevard along the project frontage.

APPENDIX A
TRIP GENERATION RATES
Study for Truck Uses in the City of Fontana, August 1992

March, 1992 CITY OF FONTANA TABLE 6

TRIP GENERATION STUDY FOR TRUCK USES IN FONTANA

LAND USE CATEGORY: WAREHOUSING, HEAVY

INDEPENDENT VARIABLE: THOUSAND GROSS SQUARE FEET

	TRIP RATES - 24 HOUR WEEKDAY						
SITE	ADT	AUTOS	2-AXLE	3-AXLE	4-AXLE	5-AXLE	6+AXLE
TARGET			0.051	0.086	0.025	0.171	0.002
THRIFTY/BIG5	1.135	0.88	0.073	0.03	0.09	0.025	0.04
TAB	2.062	1.525	0.069	0.062	0.069	0.341	0
AVERAGE	1.599	1.203	0.064	0.059	0.061	0.179	0.014

	TRIP RATES - AM PEAK HOUR WEEKDAY						
SITE	PK HR	AUTOS	2-AXLE	3-AXLE	4-AXLE	5-AXLE	6+AXLE
TARGET			0.001	0.007	0.002	0.012	0
THRIFTY/BIG5	0.085	0.058	0.015	0	0.01	0	0.003
TAB	0.105	0.076	0	0.004	0	0.025	0
AVERAGE	0.095	0.067	0.005	0.004	0.004	0.012	0.001

.072/.095 = 76% auto

24% HV

	TRIP RATES - PM PEAK HOUR WEEKDAY						
SITE	PK HR	AUTOS	2-AXLE	3-AXLE	4-AXLE	5-AXLE	6+AXLE
TARGET			0.001	0.003	0.001	0.007	0.001
THRIFTY/BIG5	0.033	0.028	0.003	0.003	0	0	0
TAB	0.265	0.236	0.004	0	0.004	0.022	0
AVERAGE	0.149	0.132	0.003	0.002	0.002	0.010	0.000

.135

91%

.014

9%

PM PEAK AVG.

SITE	PK HR	AUTOS	2-AXLE	3-AXLE	4-AXLE	5-AXLE	6+AXLE
TARGET			0.004	0.011	0.004	0.021	0
THRIFTY/BIG5	0.367	0.352	0.007	0	0.004	0.004	0
TAB	0.28	0.24	0	0.004	0.007	0.029	0
AVERAGE	0.324	0.296	0.004	0.005	0.005	0.018	0.000

March, 1992 CITY OF FONTANA TABLE 9

TRIP GENERATION STUDY FOR TRUCK USES IN FONTANA

LAND USE CATEGORY: INDUSTRIAL, HEAVY

INDEPENDENT VARIABLE: THOUSAND GROSS SQUARE FEET

	TRIP RATES - 24 HOUR WEEKDAY						
SITE	ADT	AUTOS	2-AXLE	3-AXLE	4-AXLE	5-AXLE	6+AXLE
JAMES HARDY	3.716	3.274	0.126	0	0	0.2	0.105
J.M. MFG.	2.417	1.736	0.222	0.014	0	0.375	0.069
AVERAGE	3.067	2.505	0.174	0.007	0.000	0.288	0.087

	TRIP RATES - AM PEAK HOUR WEEKDAY						
SITE	PK HR	AUTOS	2-AXLE	3-AXLE	4-AXLE	5-AXLE	6+AXLE
JAMES HARDY	0.232	0.211	0	0	0.011	0.011	
J.M. MFG.	0.236	0.222	0	0	0	0.014	0
AVERAGE	0.234	0.217	0.000	0.000	0.006	0.013	0.000

93% auto | 7% trucks

	TRIP RATES - PM PEAK HOUR WEEKDAY						
SITE	PK HR	AUTOS	2-AXLE	3-AXLE	4-AXLE	5-AXLE	6+AXLE
JAMES HARDY	0.295	0.232	0.032	0	0	0.032	0
J.M. MFG.	0.181	0.139	0.028	0	0	0	0.014
AVERAGE	0.238	0.186	0.030	0.000	0.000	0.016	0.007

91% auto | 9% trucks

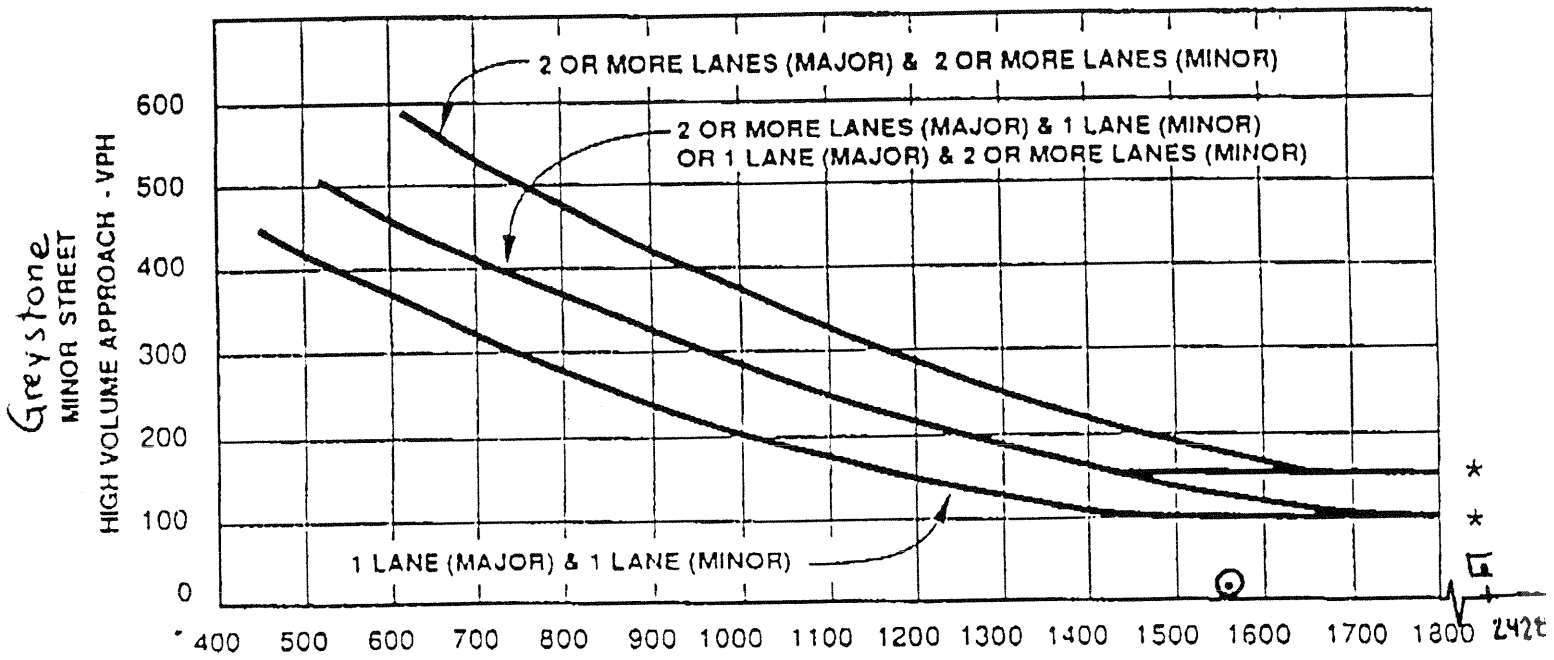
	TRIP RATES - SITE PEAK HOUR WEEKDAY						
SITE	PK HR	AUTOS	2-AXLE	3-AXLE	4-AXLE	5-AXLE	6+AXLE
JAMES HARDY	0.295	0.232	0.032	0	0	0.032	0
J.M. MFG.	0.333	0.306	0	0	0	0.028	0
AVERAGE	0.314	0.269	0.016	0.000	0.000	0.030	0.000

APPENDIX B
Signal Warrants

Figure 9-8
PEAK HOUR VOLUME WARRANT
(Urban Areas)

2015 without Project

Milliken Ave / Greystone Dr.



⊙ AM (1557, 14)

⊡ PM (2428, 42)

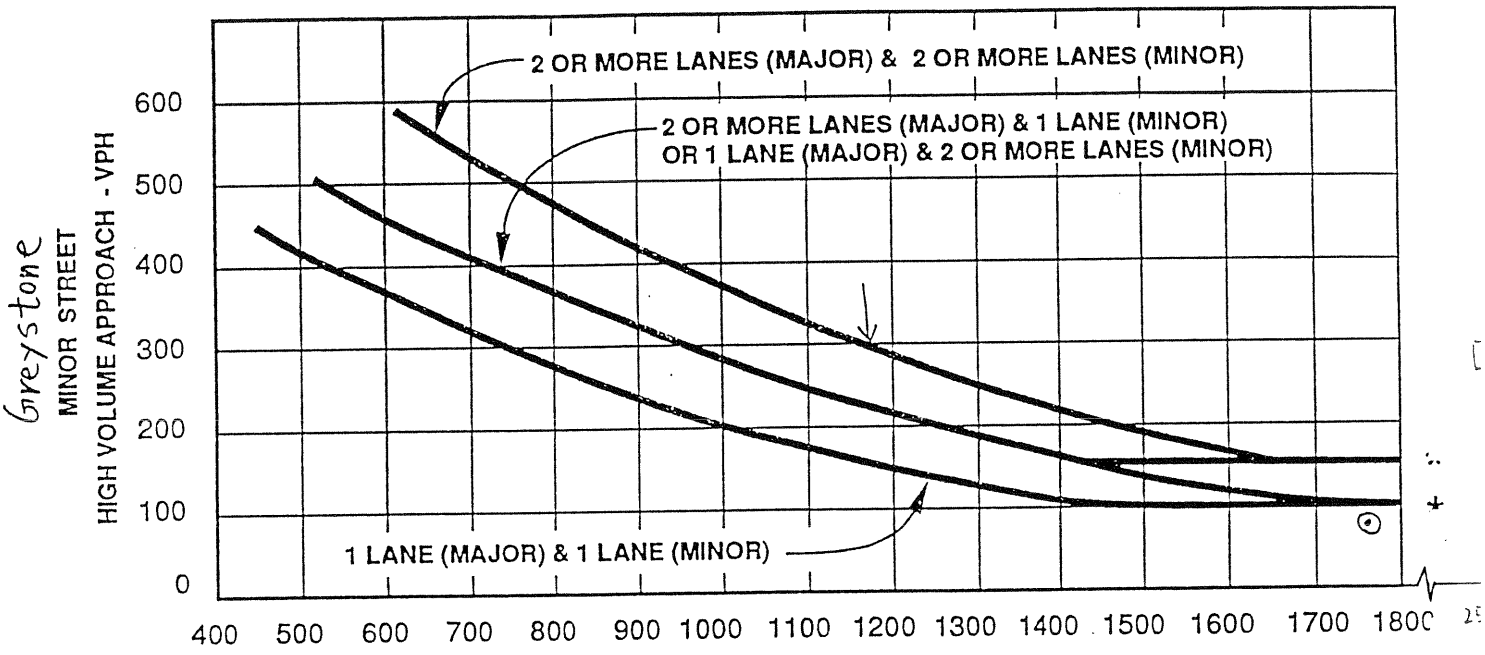
* NOTE:

150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 9-8
PEAK HOUR VOLUME WARRANT
(Urban Areas)

2015 with project

Milliken Ave/Greystone Dr.



MAJOR STREET - TOTAL OF BOTH APPROACHES - VPH

Milliken

⊙ AM (1759, 77)

⊡ PM (2580, 278)

* NOTE:

150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

APPENDIX C
PCE Spreadsheets

Intersection MILLIKEN/SR 60 EB PM PEAK HOUR

	BACKGROUND				BRIDGESTONE				TOTAL
	TOTAL	%TRUCKS	TRUCK VOL	c+=t	CARtrucks		PCES	TOTAL	TRAFFIC
NBL	0	0.18	0	0	0	0	0	0	0
NBT	130	0.18	23	9	8	0	0	8	138
NBR	99	0.18	18	0	0	0	0	0	99
			0		0		0	0	0
SBL	87	0.18	16	9	8	2	6	14	101
SBT	217	0.18	39	15	14	1	3	17	234
SBR	0	0.18	0	0	0	0	0	0	0
			0		0		0	0	0
EBL	110	0.10	11	7	6	1	3	9	119
EBT	0	0.10	0	0	0	0	0	0	0
EBR	55	0.10	6	0	0	0	0	0	55
			0		0		0	0	0
WBL	0	0.10	0	0	0	0	0	0	0
WBT	0	0.10	0	0	0	0	0	0	0
WBR	0	0.10	0	0	0	0	0	0	0
	698 0	2	112	40	36	4	12	48	746

HV%= 0.15

AM PEAK HOUR

	BACKGROUND				BRIDGESTONE				TOTAL
	TOTAL	%TRUCKS	TRUCK VOL	TOTAL	CARtrucks		PCES	TOTAL	TRAFFIC
NBL	0	0.18	0	0	0	0	0	0	0
NBT	147	0.18	26	11	8	0	0	8	155
NBR	42	0.18	8	0	0	0	0	0	42
			0		0		0	0	0
SBL	21	0.18	4	3	2	1	3	5	26
SBT	92	0.18	17	4	3	1	3	6	98
SBR	0	0.18	0	0	0	0	0	0	0
			0		0		0	0	0
EBL	232	0.10	23	10	8	5	15	23	255
EBT	0	0.10	0	0	0	0	0	0	0
EBR	39	0.10	4	0	0	0	0	0	39
			0		0		0	0	0
WBL	0	0.10	0	0	0	0	0	0	0
WBT	0	0.10	0	0	0	0	0	0	0
WBR	0	0.10	0	0	0	0	0	0	0
	573 0	2	81	28	21		21	42	615

HV%= 0.13

Intersection MILLIKEN/SR 60 WB PM PEAK HOUR

	BACKGROUND			BRIDGESTONE					TOTAL
	TOTAL	%TRUCKS	TRUCK VOL	c+t	CARtrucks		PCES	TOTAL	TRAFFIC
NBL	57	0.18	10	0	0	0	0	0	57
NBT	183	0.18	33	16	15	1	3	18	201
NBR	0	0.18	0	0	0	0	0	0	0
			0		0		0	0	0
SBL	0	0.18	0	0	0	0	0	0	0
SBT	253	0.18	46	24	22	3	9	31	284
SBR	~~250~~ 254	0.18	45	14	13	2	6	19	269
			0		0		0	0	0
EBL	0	0.10	0	0	0	0	0	0	0
EBT	0	0.10	0	0	0	0	0	0	0
EBR	0	0.10	0	0	0	0	0	0	0
			0		0		0	0	0
WBL	43	0.10	4	0	0	0	0	0	43
WBT	0	0.10	0	0	0	0	0	0	0
WBR	54	0.10	5	5	5	1	3	8	62
	840 0	2	143	59	54	7	21	75	915

HV%= 0.15

AM PEAK HOUR

	BACKGROUND			BRIDGESTONE					TOTAL
	TOTAL	%TRUCKS	TRUCK VOL	TOTAL	CARtrucks		PCES	TOTAL	TRAFFIC
NBL	77	0.18	14	0	0	0	0	0	77
NBT	302	0.18	54	21	16	5	15	31	333
NBR	0	0.18	0	0	0	0	0	0	0
			0		0		0	0	0
SBL	0	0.18	0	0	0	0	0	0	0
SBT	60	0.18	11	7	5	2	6	11	71
SBR	99	0.18	18	4	3	2	6	9	108
			0		0		0	0	0
EBL	0	0.10	0	0	0	0	0	0	0
EBT	0	0.10	0	0	0	0	0	0	0
EBR	0	0.10	0	0	0	0	0	0	0
			0		0		0	0	0
WBL	54	0.10	5	0	0	0	0	0	54
WBT	0	0.10	0	0	0	0	0	0	0
WBR	101	0.10	10	6	5	6	18	23	124
	693 0	2	112	38	29	15	45	74	767

HV%= 0.14

Intersection MILLIKEN/GREYSTONE PM PEAK HOUR

	BACKGROUND			BRIDGESTONE						TOTAL
	TOTAL	%TRUCKS	TRUCK VOL	TOTAL	CARtrucks		PCES	TOTAL		TRAFFIC
NBL	2	0.18	0	21	19	2	6	25	**	27
NBT	235	0.18	42	0	0	0	0	0	0	235
NBR	0	0.18	0	0	0	0	0	0	0	0
			0		0		0	0		0
SBL	0	0.18	0	0	0	0	0	0	0	0
SBT	485	0.18	87	0	0	0	0	0	0	485
SBR	5	0.18	1	18	16	1	3	19	**	24
			0		0		0	0		0
EBL	16	0.10	2	43	39	3	9	48	**	64
EBT	0	0.10	0	0	0	0	0	0	0	0
EBR	26	0.10	3	38	35	5	15	50	**	76
			0		0		0	0		0
WBL	0	0.10	0	0	0	0	0	0	0	0
WBT	0	0.10	0	0	0	0	0	0	0	0
WBR	0	0.10	0	0	0	0	0	0	0	0
	769		135	120	109		0	142	**	911

HV%= 0.15

AM PEAK HOUR

	BACKGROUND			BRIDGESTONE						
	TOTAL	%TRUCKS	TRUCK VOL	TOTAL	CARtrucks		PCES	TOTAL		
NBL	13	0.18	2	28	21	11	33	54	2	67
NBT	390	0.18	70	0	0	0	0	0	**	390
NBR	0	0.18	0	0	0	0	0	0	9	0
			0	0	0		0	0		0
SBL	0	0.18	0	0	0	0	0	0	0	0
SBT	158	0.18	28	0	0	0	0	0	**	158
SBR	15	0.18	3	25	19	5	15	34	0	49
			0		0		0	0		0
EBL	4	0.10	0	12	9	2	6	15	0	19
EBT	0	0.10	0	0	0	0	0	0	0	0
EBR	1	0.10	0	11	8	4	12	20	7	21
			0		0		0	0		0
WBL	0	0.10	0	0	0	0	0	0	**	0
WBT	0	0.10	0	0	0	0	0	0	0	0
WBR	0	0.10	0	0	0	0	0	0	0	0
	581 0		104	76	58		0	124	**	705

HV%= 0.14

Intersection MILLIKEN/MISSION PM PEAK HOUR

	BACKGROUND			BRIDGESTONE				TOTAL	
	TOTAL	%TRUCKS	TRUCK VOL	c +t	CARtrucks		PCES	TOTAL	TRAFFIC
NBL	32	0.18	6	19	17	0	0	17	49
NBT	203	0.18	37	23	21	3	9	30	233
NBR	16	0.18	3	1	1	0	0	1	17
			0		0		0	0	0
SBL	67	0.18	12	0	0	0	0	0	67
SBT	375	0.18	68	16	15	1	3	18	393
SBR	105	0.18	19	0	0	0	0	0	105
			0		0		0	0	0
EBL	107	0.10	11	7	6	0	0	6	113
EBT	406	0.10	41	2	2	0	0	2	408
EBR	92	0.10	9	0	0	0	0	0	92
			0		0		0	0	0
WBL	18	0.10	2	2	2	0	0	2	20
WBT	157	0.10	16	0	0	0	0	0	157
WBR	26	0.10	3	0	0	0	0	0	26
	1604 0	2	224	70	64		0	76	1680

HV%= 0.13

AM PEAK HOUR

	BACKGROUND			BRIDGESTONE				TOTAL	
	TOTAL	%TRUCKS	TRUCK VOL	TOTAL	CARtrucks		PCES	TOTAL	TRAFFIC
NBL	78	0.18	14	5	4	0	0	4	82
NBT	312	0.18	56	7	5	2	6	11	323
NBR	4	0.18	1	0	0	0	0	0	4
			0		0		0	0	0
SBL	17	0.18	3	0	0	0	0	0	17
SBT	139	0.18	25	22	17	5	15	32	171
SBR	78	0.18	14	0	0	0	0	0	78
			0		0		0	0	0
EBL	105	0.10	11	2	2	0	0	2	107
EBT	91	0.10	9	0	0	0	0	0	91
EBR	15	0.10	2	0	0	0	0	0	15
			0		0		0	0	0
WBL	19	0.10	2	3	2	0	0	2	21
WBT	325	0.10	33	0	0	0	0	0	325
WBR	49	0.10	5	0	0	0	0	0	49
	1232 0	2	173	39	30		0	51	1283

HV%= 0.13

Intersection MILLIKEN/PHILADEL. PM PEAK HOUR

	BACKGROUND			BRIDGESTONE				TOTAL	
	TOTAL	%TRUCKS	TRUCK VOL	c+t	CAR	truck	pce's	TOTAL	TRAFFIC
NBL	0	0.18	0	0	0	0	0	0	0
NBT	256	0.18	46	25	23	3	9	26	282
NBR	78	0.18	14	5	5	0	0	5	83
			0		0		0	0	0
SBL	26	0.18	5	0	0	0	0	0	26
SBT	400	0.18	72	14	13	1	3	14	414
SBR	0	0.18	0	0	0	0	0	0	0
			0		0		0	0	0
EBL	0	0.10	0	0	0	0	0	0	0
EBT	0	0.10	0	0	0	0	0	0	0
EBR	2	0.10	0	0	0	0	0	0	2
			0		0		0	0	0
WBL	138	0.10	14	2	2	0	0	2	140
WBT	0	0.10	0	0	0	0	0	0	0
WBR	49	0.10	5	0	0	0	0	0	49
	949	0	156	46	42	4	12	46	995

HV%= 0.15

AM PEAK HOUR

	BACKGROUND			BRIDGESTONE				TOTAL	
	TOTAL	%TRUCKS	TRUCK VOL	TOTAL	CAR	truck	pce's	TOTAL	TRAFFIC
NBL	2	0.18	0	0	0	0	0	0	2
NBT	311	0.18	56	8	6	2	6	8	319
NBR	156	0.18	28	1	1	0	0	1	157
			0		0		0	0	0
SBL	105	0.18	19	0	0	0	0	0	105
SBT	131	0.18	24	19	14	5	15	19	150
SBR	3	0.18	1	0	0	0	0	0	3
			0	0	0		0	0	0
EBL	0	0.10	0	0	0	0	0	0	0
EBT	0	0.10	0	0	0	0	0	0	0
EBR	0	0.10	0	0	0	0	0	0	0
			0		0		0	0	0
WBL	92	0.10	9	3	2	0	0	2	94
WBT	1	0.10	0	0	0	0	0	0	1
WBR	31	0.10	3	0	0	0	0	0	31
	832	0	140	31	24	7	21	31	863

HV%= 0.16

Intersection MILLIKEN/JURUPA PM PEAK HOUR

	BACKGROUND			BRIDGESTONE				TOTAL	
	TOTAL	%TRUCKS	TRUCK VOL	c+t	CAR	trucks	PCES	TOTAL	TRAFFIC
NBL	43	0.18	8	2	2	0	0	2	45
NBT	192	0.18	35	14	13	0	0	13	205
NBR	41	0.18	7	9	8	3	9	17	58
			0		0		0	0	0
SBL	51	0.18	9	0	0	0	0	0	51
SBT	221	0.18	40	8	7	0	0	7	228
SBR	11	0.18	2	0	0	0	0	0	11
			0		0		0	0	0
EBL	45	0.10	5	0	0	0	0	0	45
EBT	189	0.10	19	0	0	0	0	0	189
EBR	62	0.10	6	1	1	0	0	1	63
			0		0			0	0
WBL	162	0.10	16	0	0	0	0	0	162
WBT	575	0.10	58	0	0	0	0	0	575
WBR	161	0.10	16	5	5	1	3	8	169
	1753		220	39	35	4	11	47	1800

HV%= 0.12

AM PEAK HOUR

	BACKGROUND			BRIDGESTONE				TOTAL	
	TOTAL	%TRUCKS	TRUCK VOL	TOTAL	CAR	trucks	PCES	TOTAL	TRAFFIC
NBL	60	0.18	11	1	1	0	0	1	61
NBT	200	0.18	36	4	3	0	0	3	203
NBR	71	0.18	13	3	2	2	6	8	79
			0		0		0	0	0
SBL	70	0.18	13	0	0	0	0	0	70
SBT	192	0.18	35	10	8	0	0	8	200
SBR	25	0.18	5	0	0	0	0	0	25
			0		0		0	0	0
EBL	98	0.10	10	0	0	0	0	0	98
EBT	196	0.10	20	0	0	0	0	0	196
EBR	14	0.10	1	2	2	0	0	2	16
			0		0		0	0	0
WBL	92	0.10	9	5	4	5	15	19	111
WBT	504	0.10	50	0	0	0	0	0	504
WBR	336	0.10	34	0	0	0	0	0	336
	1858 0		235	25	19	7	21	40	1898

HV%= 0.12

Intersection MILLIKEN/RIVERSIDE PM PEAK HOUR

	BACKGROUND			BRIDGESTONE				TOTAL	
	TOTAL	%TRUCKS	TRUCK VOL	TOTAL	CARtrucks		PCES	TOTALTRAFFIC	
NBL	50	0.04	2	0	0	0	0	0	50
NBT	88	0.04	4	0	0	0	0	0	88
NBR	16	0.04	1	0	0	0	0	0	16
			0		0		0	0	0
SBL	35	0.04	1	1	1	0	0	1	36
SBT	168	0.04	7	1	1	0	0	1	169
SBR	67	0.04	3	13	12	1	3	15	82
			0		0		0	0	0
EBL	107	0.04	4	8	7	0	0	7	114
EBT	136	0.04	5	0	0	0	0	0	136
EBR	72	0.04	3	0	0	0	0	0	72
			0		0		0	0	0
WBL	11	0.04	0	0	0	0	0	0	11
WBT	48	0.04	2	0	0	0	0	0	48
WBR	32	0.04	1	1	1	0	0	1	33
	830 0	0	33	24	22		3	25	855

HV%= 0.04

AM PEAK HOUR

	BACKGROUND			BRIDGESTONE				TOTAL	
	TOTAL	%TRUCKS	TRUCK VOL	TOTAL	CARtrucks		PCES	TOTALTRAFFIC	
NBL	39	0.04	2	0	0	0	0	0	39
NBT	114	0.04	5	1	1	0	0	1	115
NBR	16	0.04	1	0	0	0	0	0	16
		0.04	0		0		0	0	0
SBL	29	0.04	1	0	0	0	0	0	29
SBT	61	0.04	2	0	0	0	0	0	61
SBR	39	0.04	2	4	3	1	3	6	45
		0.04	0		0		0	0	0
EBL	64	0.04	3	10	8	0	0	8	72
EBT	61	0.04	2	0	0	0	0	0	61
EBR	28	0.04	1	0	0	0	0	0	28
		0.04	0		0		0	0	0
WBL	1	0.04	0	0	0	0	0	0	1
WBT	52	0.04	2	0	0	0	0	0	52
WBR	11	0.04	0	0	0	0	0	0	11
	515 0	1	21	15	11		3	14	529

HV%= 0.04

Intersection HAVEN/MISSION PM PEAK HOUR

	BACKGROUND				BRIDGESTONE				TOTAL
	TOTAL	%TRUCKS	TRUCK VOL	c+=t	CARtrucks	PCES	TOTAL		TRAFFIC
NBL	39	0.10	4	0	0	0	0	0	39
NBT	616	0.10	62	0	0	0	0	0	616
NBR	17	0.10	2	2	2	0	0	2	19
			0				0	0	0
SBL	95	0.10	10	4	4		0	4	99
SBT	943	0.10	94	0	0	0	0	0	943
SBR	139	0.10	14	0	0	0	0	0	139
			0		0		0	0	0
EBL	430	0.10	43	0	0	0	0	0	430
EBT	545	0.10	55	4	4	0	0	4	549
EBR	127	0.10	13	0	0	0	0	0	127
			0				0	0	0
WBL	51	0.10	5	4	4	0	0	4	55
WBT	275	0.10	28	8	7	0	0	7	282
WBR	11	0.10	1	7	5	0	5	10	21
	3288 0	1	329	29	25	0	5	30	3318

HV%= 0.10

AM PEAK HOUR

	BACKGROUND				BRIDGESTONE				TOTAL
	TOTAL	%TRUCKS	TRUCK VOL	c+t	CARtrucks	PCES	TOTAL		TRAFFIC
NBL	87	0.10	9	0	0	0	0	0	87
NBT	947	0.10	95	0	0	0	0	0	947
NBR	6	0.10	1	3	2	0	0	2	8
			0		0		0	0	0
SBL	37	0.10	4	5	4	0	0	4	41
SBT	467	0.10	47	0	0	0	0	0	467
SBR	162	0.10	16	0	0	0	0	0	162
			0		0		0	0	0
EBL	166	0.10	17	0	0	0	0	0	166
EBT	152	0.10	15	6	5	0	0	5	157
EBR	13	0.10	1	0	0	0	0	0	13
			0		0		0	0	0
WBL	28	0.10	3	1	1	0	0	1	29
WBT	369	0.10	37	2	2	0	0	2	371
WBR	90	0.10	9	2	2	0	0	2	92
	2524 0	1	252	19	14		0	14	2538

HV%= 0.10

Intersection haven/mission PM PEAK HOUR

	TOTAL	BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T		CARTRUCKS		TOTALveh PCES volumes		PROJ TOTAL	INTER TOTAL	
NBL	166	0.10	17	0	0	0	0	0	0	0	0	0	0	166	NBL
NBT	1232	0.10	123	0	0	0	0	0	0	0	0	0	0	1232	NBT
NBR	47	0.10	5	2	2	6	4	4	0	0	5	5	52	NBR	
		0.10			0			0		0	0	0			
SBL	271	0.10	27	4	4	9	5	5	0	0	8	8	279	SBL	
SBT	2089	0.10	209	0	0	0	0	0	0	0	0	0	2089	SBT	
SBR	195	0.10	20	0	0	0	0	0	0	0	0	0	195	SBR	
		0.10	0		0			0		0	0	0			
EBL	633	0.10	63	0	0	0	0	0	0	0	0	0	633	EBL	
EBT	956	0.10	96	4	4	10	6	5	0	0	9	9	965	EBT	
EBR	269	0.10	27	0	0	0	0	0	0	0	0	0	269	EBR	
		0.10			0			0			0				
WBL	94	0.10	9	4	4	18	14	13	0	0	16	16	110	WBL	
WBT	509	0.10	51	8	7	31	23	21	0	0	28	28	537	WBT	
WBR	80	0.10	8	7	6	27	20	18	0	0	25	25	105	WBR	
	6541	2	654	29	26	0 101	72	66	0	0	92	92	6633		

HV%= 0.10

AM PEAK HOUR

	TOTAL	BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T		CARTRUCKS		TOTALveh PCES volumes		PROJ TOTAL	INTER TOTAL	
NBL	148	0.10	15	0	0	0	0	0	0	0	0	0	0	148	NBL
NBT	1823	0.10	182	0	0	0	0	0	0	0	0	0	0	1823	NBT
NBR	11	0.10	1	3	2	15	12	10	0	0	12	12	23	NBR	
		0.10			0			0		0	0	0			
SBL	71	0.10	7	5	4	22	17	14	0	0	18	18	89	SBL	
SBT	899	0.10	90	0	0	0	0	0	0	0	0	0	899	SBT	
SBR	311	0.10	31	0	0	0	0	0	0	0	0	0	311	SBR	
		0.10	0		0			0		0	0	0			
EBL	320	0.10	32	0	0	0	0	0	0	0	0	0	320	EBL	
EBT	172	0.10	17	6	5	26	20	17	0	0	21	21	193	EBT	
EBR	24	0.10	2	0	0	0	0	0	0	0	0	0	24	EBR	
		0.10	0		0			0		0	0	0			
WBL	53	0.10	5	1	1	4	3	3	0	0	3	3	56	WBL	
WBT	528	0.10	53	2	2	7	5	4	0	0	6	6	534	WBT	
WBR	173	0.10	17	2	2	6	4	3	0	0	5	5	178	WBR	
	4533 0	2	453	19	14	0 80	61	52	0	0		66	4599		

HV%= 0.10

Intersection MILLIKEN/JURUPA PM PEAK HOUR

	TOTAL	BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T	CARTRUCKS		TOTALveh PCES volumes		PROJ TOTAL	INTER TOTAL	
NBL	70	0.18	13	2	2	9	7	6	0	0	8	8	78	NBL
NBT	843	0.18	152	14	13	59	45	41	0	0	54	54	897	NBT
NBR	226	0.18	41	9	8	38	29	26	13	39	48	74	300	NBR
					0		0	0		0	0	0		
SBL	234	0.18	42	0	0	0	0	0	0	0	0	0	234	SBL
SBT	880	0.18	158	8	7	19	11	10	0	0	17	17	897	SBT
SBR	51	0.18	9	0	0	0	0	0	0	0	0	0	51	SBR
			0		0		0	0		0	0	0		
EBL	233	0.10	23	0	0	0	0	0	0	0	0	0	233	EBL
EBT	1132	0.10	113	0	0	0	0	0	0	0	0	0	1132	EBT
EBR	209	0.10	21	1	1	3	2	2	0	0	3	3	212	EBR
					0			0			0			
WBL	279	0.10	28	5	5	13	8	7	3	9	15	21	300	WBL
WBT	752	0.10	75	0	0	0	0	0	0	0	0	0	752	WBT
WBR	247	0.10	25	0	0	0	0	0	0	0	0	0	247	WBR
	5156	2	700	39	35	0 141	102	93	16	48	144	176	5332	

HV%= 0.13

AM PEAK HOUR

	TOTAL		BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T	CARTRUCKS		TOTALveh PCES volumes		PROJ TOTAL	INTER TOTAL	
NBL	201	0	0.18	0	1	1	2	1	1	0	0	2	2	2	NBL
NBT	554	0	0.18	0	4	3	14	10	8	0	0	11	11	11	NBT
NBR	238	0	0.18	0	3	2	9	6	5	6	18	13	25	25	NBR
						0		0	0		0	0	0	0	
SBL	194	0	0.18	0	0	0	0	0	0	0	0	0	0	0	SBL
SBT	662	0	0.18	0	10	8	48	38	32	0	0	40	40	40	SBT
SBR	69	0	0.18	0	0	0	0	0	0	0	0	0	0	0	SBR
				0		0		0	0		0	0	0	0	
EBL	271	0	0.10	0	0	0	0	0	0	0	0	0	0	0	EBL
EBT	562	0	0.10	0	0	0	0	0	0	0	0	0	0	0	EBT
EBR	48	0	0.10	0	2	2	31	29	25	0	0	26	26	26	EBR
				0		0		0	0		0	0	0	0	
WBL	413	0	0.10	0	7	5	7	0	0	13	39	18	44	44	WBL
WBT	1358	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBT
WBR	930	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBR
		0 0	2	0	27	21	0 111	84	71	19	57		149	149	

HV%= 0.00

Intersection MILLIKEN/PHILADELPH PM PEAK HOUR

	TOTAL	BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T	CARTRUCKS		TOTALveh PCES volumes		PROJ TOTAL	INTER TOTAL	
NBL	0	0.18	0	0	0	0	0	0	0	0	0	0	0	NBL
NBT	983	0.18	177	25	23	106	81	74	13	39	109	135	1118	NBT
NBR	287	0.18	52	5	5	19	14	13	0	0	17	17	304	NBR
					0		0	0		0	0	0		
SBL	90	0.18	16	0	0	0	0	0	0	0	0	0	90	SBL
SBT	1278	0.18	230	14	13	35	21	19	3	9	35	41	1319	SBT
SBR	0	0.18	0	0	0	0	0	0	0	0	0	0	0	SBR
			0		0		0	0		0	0	0		
EBL	0	0.10	0	0	0	0	0	0	0	0	0	0	0	EBL
EBT	0	0.10	0	0	0	0	0	0	0	0	0	0	0	EBT
EBR	0	0.10	0	0	0	0	0	0	0	0	0	0	0	EBR
					0			0			0			
WBL	338	0.10	34	2	2	6	4	4	0	0	5	5	343	WBL
WBT	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBT
WBR	156	0.10	16	0	0	0	0	0	0	0	0	0	156	WBR
	3132	2	524	46	42	0 166	120	109	16	48	167	199	3331	

HV%= 0.16

AM PEAK HOUR

	TOTAL	BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T	CARTRUCKS		TOTALveh PCES volumes		PROJ TOTAL	INTER TOTAL	
NBL	0	0.18	0	0	0	0	0	0	0	0	0	0	0	NBL
NBT	1041	0.18	187	8	6	25	17	14	6	18	26	38	1079	NBT
NBR	320	0.18	58	1	1	4	3	3	0	0	3	3	323	NBR
					0	0	0	0		0	0	0	0	
SBL	205	0.18	37	0	0	0	0	0	0	0	0	0	205	SBL
SBT	481	0.18	87	19	14	87	68	57	13	39	85	111	592	SBT
SBR	0	0.18	0	0	0	0	0	0	0	0	0	0	0	SBR
			0		0		0	0		0	0	0	0	
EBL	0	0.10	0	0	0	0	0	0	0	0	0	0	0	EBL
EBT	0	0.10	0	0	0	0	0	0	0	0	0	0	0	EBT
EBR	0	0.10	0	0	0	0	0	0	0	0	0	0	0	EBR
			0		0		0	0		0	0	0	0	
WBL	149	0.10	15	3	2	15	12	10	0	0	12	12	161	WBL
WBT	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBT
WBR	50	0.10	5	0	0	0	0	0	0	0	0	0	50	WBR
	2246 0	2	388	31	24	0 131	100	85	19	57		165	2411	

HV%= 0.16

Intersection MILLIKEN/GREYSTONE PM PEAK HOUR

	TOTAL	BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T	CARTRUCKS		TOTALveh PCES	volumes	PROJ TOTAL	INTER TOTAL	
NBL	5	0.18	1	21	19	26	5	5	8	24	32	48	53	NBL
NBT	1073	0.18	193	0	0	0	0	0	0	0	0	0	1073	NBT
NBR	0	0.18	0	0	0	0	0	0	0	0	0	0	0	NBR
					0		0	0		0	0	0		
SBL	0	0.18	0	0	0	0	0	0	0	0	0	0	0	SBL
SBT	1348	0.18	243	0	0	0	0	0	0	0	0	0	1348	SBT
SBR	10	0.18	2	17	15	17	0	0	3	9	18	24	34	SBR
			0		0		0	0		0	0	0		
EBL	16	0.10	2	43	39	178	135	123	13	39	175	201	217	EBL
EBT	0	0.10	0	0	0	0	0	0	~~20~~	~~60~~ 0	~~20~~	60	60	EBT
EBR	26	0.10	3	38	35	67	29	26	20	~~0~~ 60 81	~~64~~	61	~~87~~	EBR
					0			0			0			
WBL	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBL
WBT	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBT
WBR	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBR
	2478	2	443	119	108	0 288	169	154	44	132	306	394	2872	

Project

59

HV%= 0.15

AM PEAK HOUR

	TOTAL	BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T	CARTRUCKS		TOTALveh PCES	volumes	PROJ TOTAL	INTER TOTAL	
NBL	45	0.18	8	28	21	64	36	30	31	93	83	145	190	NBL
NBT	1046	0.18	188	0	0	0	0	0	0	0	0	0	1046	NBT
NBR	0	0.18	0	0	0	0	0	0	0	0	0	0	0	NBR
					0		0	0		0	0	0	0	
SBL	0	0.18	0	0	0	0	0	0	0	0	0	0	0	SBL
SBT	426	0.18	77	0	0	0	0	0	0	0	0	0	426	SBT
SBR	40	0.18	7	25	19	37	12	10	13	39	42	68	108	SBR
			0		0		0	0		0	0	0	0	
EBL	11	0.10	1	12	9	41	29	25	6	18	40	52	63	EBL
EBT	0	0.10	0	0	0	0	0	0	0	0	0	0	0	EBT
EBR	3	0.10	0	11	8	15	4	3	8	24	20	36	39	EBR
			0		0		0	0		0	0	0	0	
WBL	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBL
WBT	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBT
WBR	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBR
	1571 0	2	282	76	58	0 157	81	68	58	174		300	1871	

HV%= 0.15

Intersection MILLIKEN/SR 60 WB PM PEAK HOUR

	TOTAL	BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T		CARTRUCKS		TOTALveh PCES volumes		PROJ TOTAL	INTER TOTAL	
NBL	156	0.18	28	0	0	0	0	0	0	0	0	0	0	156	NBL
NBT	808	0.18	145	16	15		40	24	22	3	9		39	45	853	NBT
NBR	0	0.18	0	0	0		0	0	0	0	0		0	0	0	NBR
					0						0		0	0		
SBL	0	0.18	0	0	0		0	0	0	0	0		0	0	0	SBL
SBT	667	0.18	120	24	22		99	75	68	10	30		100	120	787	SBT
SBR	707	0.18	127	14	13		57	43	39	10	30		62	82	789	SBR
			0		0				0		0		0	0		
EBL	0	0.10	0	0	0		0	0	0	0	0		0	0	0	EBL
EBT	0	0.10	0	0	0		0	0	0	0	0		0	0	0	EBT
EBR	0	0.10	0	0	0		0	0	0	0	0		0	0	0	EBR
					0				0				0			
WBL	211	0.10	21	0	0		0	0	0	0	0		0	0	211	WBL
WBT	0	0.10	0	0	0		0	0	0	0	0		0	0	0	WBT
WBR	265	0.10	27	5	5		12	7	6	5	15		16	26	291	WBR
	2814	2	468	59	54	0	208	149	136	28	84		217	273	3087	

HV%= 0.15

AM PEAK HOUR

	TOTAL	BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T		CARTRUCKS		TOTALveh PCES volumes		PROJ TOTAL	INTER TOTAL	
NBL	254	0.18	46	0	0	0	0	0	0	0	0	0	0	254	NBL
NBT	710 ~~820~~	0.18	128 ~~133~~	21	16		98	77	65	13	39		94	120	930	NBT
NBR	0	0.18	0	0	0		0	0	0	0	0		0	0	0	NBR
					0				0		0		0	0		
SBL	0	0.18	0	0	0		0	0	0	0	0		0	0	0	SBL
SBT	161	0.18	29	7	5		23	16	14	4	12		23	31	192	SBT
SBR	266	0.18	48	4	3		13	9	8	4	12		15	23	289	SBR
			0		0				0		0		0	0		
EBL	0	0.10	0	0	0		0	0	0	0	0		0	0	0	EBL
EBT	0	0.10	0	0	0		0	0	0	0	0		0	0	0	EBT
EBR	0	0.10	0	0	0		0	0	0	0	0		0	0	0	EBR
			0		0				0		0		0	0		
WBL	98	0.10	10	0	0		0	0	0	0	0		0	0	98	WBL
WBT	371	0.10	37	0	0		0	0	0	0	0		0	0	371	WBT
WBR	0	0.10	0	6	5		30	24	20	18	54		43	79	79	WBR
	1960 0	2	315	38	29	0	164	126	106	39	117			252	2212	

HV%= 0.14

Intersection MILLIKEN/RIVERSIDE PM PEAK HOUR

	TOTAL	BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T	CARTRUCKS		TOTALveh PCES	volumes	PROJ TOTAL	INTER TOTAL	
NBL	122	0.04	5	0	0	0	0	0	0	0	0	0	122	NBL
NBT	255	0.04	10	0	0	1	1	1	0	0	1	1	256	NBT
NBR	39	0.04	2	0	0	0	0	0	0	0	0	0	39	NBR
		0.04			0					0	0	0		
SBL	170	0.04	7	1	1	5	4	4	0	0	5	5	175	SBL
SBT	422	0.04	17	1	1	~~44~~	~~43~~	~~39~~	0	0	~~45~~ 5	~~40~~	462	SBT
SBR	234	0.04	9	13	12	54	41	37	3	9	52	58	292	SBR
		0.04	0		0			0		0	0	0		
EBL	314	0.04	13	8	7	18	10	9	0	0	16	16	330	EBL
EBT	399	0.04	16	0	0	0	0	0	0	0	0	0	399	EBT
EBR	212	0.04	8	0	0	0	0	0	0	0	0	0	212	EBR
		0.04			0			0			0			
WBL	46	0.04	2	0	0	0	0	0	0	0	0	0	46	WBL
WBT	202	0.04	8	0	0	0	0	0	0	0	0	0	202	WBT
WBR	315	0.04	13	1	1	2	1	1	0	0	2	2	317	WBR
	2730	1	109	24	22	0 124	100	91	3	9	116	122	2852	

HV%= 0.04

AM PEAK HOUR

	TOTAL	BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T	CARTRUCKS		TOTALveh PCES	volumes	PROJ TOTAL	INTER TOTAL	
NBL	64	0.04	3	0	0	0	0	0	0	0	0	0	64	NBL
NBT	187	0.04	7	1	1	3	2	2	0	0	2	2	189	NBT
NBR	45	0.04	2	0	0	0	0	0	0	0	0	0	45	NBR
		0.04			0		0	0		0	0	0	0	
SBL	38	0.04	2	0	0	1	1	1	0	0	1	1	39	SBL
SBT	170	0.04	7	0	0	1	1	1	0	0	1	1	171	SBT
SBR	51	0.04	2	4	3	13	9	8	1	3	12	14	65	SBR
		0.04	0		0		0	0		0	0	0	0	
EBL	104	0.04	4	10	8	44	34	29	0	0	36	36	140	EBL
EBT	101	0.04	4	0	0	0	0	0	0	0	0	0	101	EBT
EBR	78	0.04	3	0	0	0	0	0	0	0	0	0	78	EBR
		0.04	0		0		0	0		0	0	0	0	
WBL	100	0.04	4	0	0	0	0	0	0	0	0	0	100	WBL
WBT	215	0.04	9	0	0	0	0	0	0	0	0	0	215	WBT
WBR	197	0.04	8	0	0	4	4	3	0	0	3	3	200	WBR
	1350 0	1	54	15	11	0 66	51	43	1	3		57	1407	

HV%= 0.04

Intersection MILLIKEN/SR 60 EB PM PEAK HOUR

	TOTAL	BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T		CARTRUCKS		TOTALveh PCES volumes		PROJ TOTAL	INTER TOTAL	
NBL	0	0.18	0	0	0	0	0	0	0	0	0	0	0	0	NBL
NBT	685	0.18	123	9	8	21	12	11	0	0	19	19	704	NBT	
NBR	199	0.18	36	0	0	0	0	0	0	0	0	0	199	NBR	
					0					0	0	0			
SBL	256	0.18	46	9	8	36	27	25	7	21	40	54	310	SBL	
SBT	616	0.18	111	15	14	63	48	44	3	9	60	66	682	SBT	
SBR	0	0.18	0	0	0	0	0	0	0	0	0	0	0	SBR	
			0		0			0		0	0	0			
EBL	279	0.10	28	7	6	19	12	11	3	9	20	26	305	EBL	
EBT	0	0.10	0	0	0	0	0	0	0	0	0	0	0	EBT	
EBR	210	0.10	21	0	0	0	0	0	0	0	0	0	210	EBR	
					0			0			0				
WBL	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBL	
WBT	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBT	
WBR	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBR	
	2245	2	365	40	36	0 139	99	90	13	39	139	165	2410		

HV%= 0.15

AM PEAK HOUR

	TOTAL	BACKGROUND %TRUCKS	TRUCK VOL	BRIDGESTONE C+T	CARS		BLDGS 2&3 TOTAL C+T		CARTRUCKS		TOTALveh PCES volumes		PROJ TOTAL	INTER TOTAL	
NBL	0	0.18	0	0	0	0	0	0	0	0	0	0	0	NBL	
NBT	413	0.18	74	11	8	51	40	34	0	0	42	42	455	NBT	
NBR	55	0.18	10	0	0	0	0	0	0	0	0	0	55	NBR	
					0			0		0	0	0	0		
SBL	51	0.18	9	3	2	8	5	4	3	9	10	16	67	SBL	
SBT	208	0.18	37	4	3	15	11	9	10	30	22	42	250	SBT	
SBR	0	0.18	0	0	0	0	0	0	~~13~~	~~39~~	~~13~~	~~39~~	~~39~~	SBR	
			0		0			0		0	0	0	0		
EBL	451	0.10	45	10	8	47	37	31	13	39	52	78	529	EBL	
EBT	0	0.10	0	0	0	0	0	0	0	0	0	0	0	EBT	
EBR	51	0.10	5	0	0	0	0	0	0	0	0	0	51	EBR	
			0		0			0		0	0	0	0		
WBL	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBL	
WBT	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBT	
WBR	0	0.10	0	0	0	0	0	0	0	0	0	0	0	WBR	
	1229 0	2	181	28	21	0 121	93	79	39	117		217	1446		

HV%= 0.13

APPENDIX D
HCM Worksheets

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Jurupa Street (N-S) Milliken Avenue
Analyst: SV File Name: EMILJURA.HC9
Area Type: Other 3-11-97 ~~pm~~ am peak
Comment: existing conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	<	2	3	1	2	3	1
Volumes	98	196	14	92	504	336	60	200	71	70	192	25
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4
EB Left	*			
Thru		*		
Right		*		
Peds				
WB Left	*			
Thru		*		
Right		*		
Peds				
NB Right	*			
SB Right	*			
Green	11.0A	14.0A		
Yellow/AR	3.0	3.0		

	5	6	7	8
NB Left	*			
Thru		*		
Right		*		
Peds				
SB Left	*			
Thru		*		
Right		*		
Peds				
EB Right	*			
WB Right				
Green	12.0A	11.0A		
Yellow/AR	3.0	3.0		

Cycle Length: 60 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	534	2910	0.199	0.183	13.4	B	12.1	B
	T	1072	4594	0.212	0.233	12.0	B		
	R	629	1302	0.024	0.483	5.2	B		
WB	L	534	2910	0.187	0.183	13.4	B	28.5	D
	TR	1008	4319	0.966	0.233	30.0	D		
NB	L	582	2910	0.112	0.200	12.7	B	12.1	B
	T	842	4594	0.275	0.183	13.7	B		
	R	542	1302	0.138	0.417	7.0	B		
SB	L	582	2910	0.131	0.200	12.7	B	12.9	B
	T	842	4594	0.264	0.183	13.6	B		
	R	542	1302	0.048	0.417	6.7	B		

Intersection Delay = 20.5 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.423

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Milliken Avenue
Analyst: SV File Name: EMILMISA.HC9
Area Type: Other 11-18-96 am peak
Comment: existing conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	2	2	<	1	2	<	2	2	
Volumes	105	91	15	19	325	49	78	312	4	17	139	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	11.0A	13.0A			Green	10.0A	19.0A	
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0	

Cycle Length: 65 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	243	1433	0.458	0.169	16.7	C	15.3	C
	TR	591	2957	0.200	0.200	14.0	B		
WB	L	485	2866	0.043	0.169	14.6	B	18.0	C
	TR	591	2957	0.700	0.200	18.2	C		
NB	L	220	1433	0.372	0.154	16.5	C	12.9	B
	TR	882	3017	0.396	0.292	12.1	B		
SB	L	441	2866	0.043	0.154	15.1	C	11.5	B
	T	882	3017	0.173	0.292	11.1	B		

Intersection Delay = 14.9 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.479

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Philadelphia Street (N-S) Milliken Avenue
Analyst: SV File Name: EMILPHIA.HC9
Area Type: Other 11-18-96 am peak
Comment: existing conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes		> 1	<	1	> 1	1	1	3	<	2	3	<
Volumes	1	1	1	92	1	31	2	311	156	105	139	3
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4	5	6	7	8
EB	Left	*				NB Left *			
	Thru	*				Thru	*		
	Right	*				Right	*		
	Peds					Peds			
WB	Left	*				SB Left *			
	Thru	*				Thru	*		
	Right	*				Right	*		
	Peds					Peds			
NB	Right					EB Right			
SB	Right					WB Right			
Green		16.0A				Green 10.0A	25.0A		
Yellow/AR		3.0				Yellow/AR 3.0	3.0		

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	LTR	320	1200	0.009	0.267	10.4	B	10.4	B
WB	L	361	1354	0.133	0.267	10.8	B	10.8	B
	LT	365	1368	0.137	0.267	10.8	B		
	R	326	1224	0.101	0.267	10.7	B		
NB	L	228	1368	0.009	0.167	13.5	B	7.7	B
	TR	1710	4105	0.316	0.417	7.6	B		
SB	L	456	2736	0.250	0.167	14.1	B	9.8	B
	TR	1800	4321	0.091	0.417	6.9	B		

Intersection Delay = 8.7 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.247

****

File Name EMIKGREA.HC0
Streets: (N-S) Milliken (E-W) Greystone
Major Street Direction.... EW
Length of Time Analyzed... 60 (min)
Analyst..... SV
Date of Analysis..... 2/25/97
Other Information..... existing, am peak volumes

Two-way Stop-controlled Intersection

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	1	2	0	0	2	1
Stop/Yield			N			N						
Volumes				4		1	13	390			158	15
PHF				.95		.95	.95	.95			.95	.95
Grade		0			0			0			0	
MC's (%)				0		0	0	0			0	0
SU/RV's (%)				0		0	0	0			0	0
CV's (%)				14		14	0	14			14	14
PCE's				1.14		1.14	1.1	1.14			1.14	1.14

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

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WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	NB	SB
Conflicting Flows: (vph)		0
Potential Capacity: (pcph)		1385
Movement Capacity: (pcph)		1385
Prob. of Queue-free State:		0.99

Step 2: LT from Major Street	WB	EB
Conflicting Flows: (vph)	0	
Potential Capacity: (pcph)	1714	
Movement Capacity: (pcph)	1714	
Prob. of Queue-free State:	1.00	

Step 3: TH from Minor Street	NB	SB
Conflicting Flows: (vph)	5	4
Potential Capacity: (pcph)	1084	1085
Capacity Adjustment Factor due to Impeding Movements	1.00	1.00
Movement Capacity: (pcph)	1081	1082
Prob. of Queue-free State:	0.57	0.83

Step 4: LT from Minor Street	NB	SB
Conflicting Flows: (vph)	90	
Potential Capacity: (pcph)	927	
Major LT, Minor TH Impedance Factor:	0.82	
Adjusted Impedance Factor:	0.86	
Capacity Adjustment Factor due to Impeding Movements	0.85	
Movement Capacity: (pcph)	790	

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Intersection Performance Summary

Movement		FlowRate v(pcph)	MoveCap Cm(pcph)	SharedCap Csh(pcph)	Avg.Total Delay	LOS	Delay By App
NB	L	15	790		4.6	A	
NB	T	469	1081		5.9	B	5.8
SB	T	189	1082		4.0	A	3.9
SB	R	18	1385		2.6	A	
WB	L	5	1714		2.1	A	1.7

Intersection Delay = 5.2

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 WB ramps (N-S) Milliken Avenue
Analyst: SV File Name: EMIL60WA.HC9
Area Type: Other 11-18-96 am peak
Comment: existing conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes				1		1	1	2			2	1
Volumes				54		101	72	302			60	99
Lane Width				12.0		12.0	12.0	12.0			12.0	12.0
RTOR Vols						0			0			0
Lost Time				3.00		3.00	3.00	3.00			3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left *			
Thru					Thru *	*		
Right					Right *			
Peds					Peds			
WB Left	*				SB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	15.0A	20.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
WB	L	370	1388	0.154	0.267	10.9	B	11.3	B
	R	331	1242	0.320	0.267	11.6	B		
NB	L	347	1388	0.219	0.250	11.6	B	4.5	A
	T	1851	2922	0.180	0.633	2.9	A		
SB	T	974	2922	0.068	0.333	8.8	B	9.2	B
	R	414	1242	0.251	0.333	9.5	B		

Intersection Delay = 7.1 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.263

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 EB ramps (N-S) Milliken Avenue
Analyst: SV File Name: EMIL60EA.HC9
Area Type: Other 11-18-96 am peak
Comment: existing conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	>	< 1					2	1	1	2	
Volumes	232		39					147	42	21	92	
Lane Width	12.0	12.0	12.0					12.0	12.0	12.0	12.0	
RTOR Vols			0						0			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru								
Right	*							
Peds								
WB Left								
Thru								
Right								
Peds								
NB Right								
SB Right								
Green	16.0A				20.0A	15.0A		
Yellow/AR	3.0				3.0	3.0		

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	382	1433	0.639	0.267	15.0	B	14.4	B
	LR	402	1509	0.000	0.267	0.0	A		
	R	342	1282	0.120	0.267	10.8	B		
NB	T	1006	3017	0.162	0.333	9.1	B	9.1	B
	R	427	1282	0.103	0.333	8.9	B		
SB	L	358	1433	0.061	0.250	11.1	B	4.2	A
	T	1911	3017	0.053	0.633	2.7	A		

Intersection Delay = 10.6 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.282

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Riverside (N-S) Milliken Avenue
Analyst: SV File Name: EMILRIVA.HC9
Area Type: Other 3-12-97 am peak
Comment: EXISTING TRAFFIC VOLUMES

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 <		1	1 <		1	1	1	1	2 <	
Volumes	64	61	28	1	52	11	39	114	16	29	61	39
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left *			
Thru	*				Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left	*				SB Left *			
Thru	*				Thru	*		
Right	*				Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	17.0A 18.0A		
Yellow/AR	3.0				Yellow/AR	3.0 3.0		

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	378	1418	0.177	0.267	11.0	B	11.0	B
	TR	469	1759	0.198	0.267	11.0	B		
WB	L	352	1319	0.003	0.267	10.4	B	10.8	B
	TR	479	1795	0.140	0.267	10.8	B		
NB	L	496	1752	0.083	0.283	10.2	B	10.1	B
	T	554	1845	0.217	0.300	10.2	B		
	R	470	1568	0.036	0.300	9.6	B		
SB	L	496	1752	0.062	0.283	10.1	B	9.9	B
	TR	1042	3473	0.106	0.300	9.8	B		

Intersection Delay = 10.4 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.166

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Haven Avenue
Analyst: SV File Name: EHAVMISA.HC9
Area Type: Other 11-18-96 am peak
Comment: existing conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	1	1	3	1	1	3	<
Volumes	166	152	13	28	369	90	87	947	6	37	467	162
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds					Peds				
WB Left	*				SB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds					Peds				
NB Right	*				EB Right	*			
SB Right					WB Right	*			
Green	18.0A	15.0A			Green	10.0A	25.0A		
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0		

Cycle Length: 80 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	688	3058	0.262	0.225	16.5	C	17.0	C
	T	604	3219	0.278	0.188	18.1	C		
	R	479	1368	0.029	0.350	11.0	B		
WB	L	688	3058	0.044	0.225	15.7	C	19.5	C
	T	604	3219	0.674	0.188	21.6	C		
	R	479	1368	0.198	0.350	11.8	B		
NB	L	191	1529	0.481	0.125	22.6	C	17.4	C
	T	1509	4828	0.727	0.313	17.1	C		
	R	787	1368	0.008	0.575	4.7	A		
SB	L	191	1529	0.204	0.125	20.4	C	15.0	B
	TR	1448	4635	0.503	0.313	14.7	B		

Intersection Delay = 17.1 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.556

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-19-1997
Center For Microcomputers In Transportation

Streets: (E-W) Jurupa Street (N-S) Milliken Avenue
Analyst: SV File Name: EMILJURP.HC9
Area Type: Other 3-11-97 pm peak
Comment: existing conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	<	2	3	1	2	3	1
Volumes	162	575	161	45	189	62	43	192	41	51	221	11
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4	5	6	7	8
EB	Left	*				NB Left	*		
	Thru		*			Thru		*	
	Right		*			Right		*	
	Peds					Peds			
WB	Left	*				SB Left	*		
	Thru		*			Thru		*	
	Right		*			Right		*	
	Peds					Peds			
NB	Right	*				EB Right	*		
SB	Right	*				WB Right			
Green		11.0A	14.0A			Green	12.0A	11.0A	
Yellow/AR		3.0	3.0			Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	602	3282	0.293	0.183	13.7	B	12.3	B
	T	1209	5182	0.551	0.233	13.5	B		
	R	710	1468	0.238	0.483	5.9	B		
WB	L	602	3282	0.080	0.183	13.1	B	12.3	B
	TR	1164	4988	0.249	0.233	12.1	B		
NB	L	612	3059	0.075	0.200	12.6	B	12.5	B
	T	886	4831	0.251	0.183	13.6	B		
	R	570	1369	0.075	0.417	6.8	B		
SB	L	612	3059	0.092	0.200	12.6	B	13.3	B
	T	886	4831	0.289	0.183	13.7	B		
	R	570	1369	0.021	0.417	6.7	B		

Intersection Delay = 12.5 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.317

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Philadelphia Street (N-S) Milliken Avenue
Analyst: SV File Name: EMILPHIP.HC9
Area Type: Other 11-18-96 pm peak
Comment: existing conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes		> 1	<	1	> 1	1	1	3	<	2	3	<
Volumes	1	1	1	138	1	49	1	256	78	26	400	1
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	10.0A	25.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	LTR	321	1205	0.009	0.267	10.4	B	10.4	B
WB	L	366	1373	0.197	0.267	11.0	B	11.0	B
	LT	366	1373	0.202	0.267	11.1	B		
	R	331	1242	0.157	0.267	10.9	B		
NB	L	231	1388	0.004	0.167	13.5	B	7.3	B
	TR	1753	4208	0.220	0.417	7.3	B		
SB	L	463	2776	0.061	0.167	13.6	B	7.7	B
	TR	1826	4383	0.254	0.417	7.4	B		

Intersection Delay = 8.2 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.200

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Milliken Avenue
Analyst: SV File Name: EMILMISP.HC9
Area Type: Other 11-18-96 pm peak
Comment: existing conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	2	2	<	1	2	<	2	2	
Volumes	107	406	92	18	157	26	32	203	16	67	275	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	11.0A	13.0A			Green	10.0A	19.0A	
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0	

Cycle Length: 65 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	243	1433	0.466	0.169	16.8	C	30.6	D
	TR	585	2927	0.940	0.200	33.5	D		
WB	L	485	2866	0.041	0.169	14.6	B	14.6	B
	TR	591	2957	0.342	0.200	14.6	B		
NB	L	220	1433	0.154	0.154	15.4	C	12.0	B
	TR	873	2987	0.278	0.292	11.5	B		
SB	L	441	2866	0.166	0.154	15.4	C	12.5	B
	T	882	3017	0.344	0.292	11.8	B		

Intersection Delay = 20.5 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.482

****

File Name EMILGREP.HC0
Streets: (N-S) Milliken (E-W) Greystone
Major Street Direction.... EW
Length of Time Analyzed... 60 (min)
Analyst..... SV
Date of Analysis..... 2/25/97
Other Information..... existing pm peak hour

Two-way Stop-controlled Intersection

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	1	2	0	0	2	1
Stop/Yield			N			N						
Volumes				16		26	2	235			485	5
PHF				.95		.95	.95	.95			.95	.95
Grade		0			0			0			0	
MC's (%)				0		0	0	0			0	0
SU/RV's (%)				0		0	0	0			0	0
CV's (%)				15		15	15	15			15	15
PCE's				1.15		1.15	1.15	1.15			1.15	1.15

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

****

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	NB	SB
Conflicting Flows: (vph)		0
Potential Capacity: (pcph)		1385
Movement Capacity: (pcph)		1385
Prob. of Queue-free State:		1.00

Step 2: LT from Major Street	WB	EB
Conflicting Flows: (vph)	0	
Potential Capacity: (pcph)	1714	
Movement Capacity: (pcph)	1714	
Prob. of Queue-free State:	0.99	

Step 3: TH from Minor Street	NB	SB
Conflicting Flows: (vph)	42	16
Potential Capacity: (pcph)	1031	1068
Capacity Adjustment Factor due to Impeding Movements	0.99	0.99
Movement Capacity: (pcph)	1019	1056
Prob. of Queue-free State:	0.72	0.44

Step 4: LT from Minor Street	NB	SB
Conflicting Flows: (vph)	261	
Potential Capacity: (pcph)	721	
Major LT, Minor TH Impedance Factor:	0.44	
Adjusted Impedance Factor:	0.55	
Capacity Adjustment Factor due to Impeding Movements	0.55	
Movement Capacity: (pcph)	398	

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Intersection Performance Summary

Movement		FlowRate v(pcph)	MoveCap Cm(pcph)	SharedCap Csh(pcph)	Avg.Total Delay	LOS	Delay By App
NB	L	2	398		9.1	B	
NB	T	284	1019		4.9	A	4.9
SB	T	588	1056		7.7	B	7.6
SB	R	6	1385		2.6	A	
WB	L	20	1714		2.1	A	0.8

Intersection Delay = 6.4

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 WB ramps (N-S) Milliken Avenue
Analyst: SV File Name: EMIL60WP.HC9
Area Type: Other 11-18-96 pm peak
Comment: existing conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes				1		1	1	2			2	1
Volumes				43		54	57	183			253	250
Lane Width				12.0		12.0	12.0	12.0			12.0	12.0
RTOR Vols						0			0			0
Lost Time				3.00		3.00	3.00	3.00			3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left *			
Thru					Thru *	*		
Right					Right *			
Peds					Peds			
WB Left	*				SB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	15.0A	20.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
WB	L	370	1388	0.122	0.267	10.8	B	10.9	B
	R	331	1242	0.172	0.267	10.9	B		
NB	L	347	1388	0.173	0.250	11.4	B	4.8	A
	T	1851	2922	0.110	0.633	2.8	A		
SB	T	974	2922	0.286	0.333	9.6	B	11.3	B
	R	414	1242	0.635	0.333	13.2	B		

Intersection Delay = 9.4 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.354

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 EB ramps (N-S) Milliken Avenue
Analyst: SV File Name: EMIL60EP.HC9
Area Type: Other 11-18-96 pm peak
Comment: existing conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	>	< 1					2	1	1	2	
Volumes	110		55					130	99	87	217	
Lane Width	12.0	12.0	12.0					12.0	12.0	12.0	12.0	
RTOR Vols			0						0			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru								
Right	*							
Peds								
WB Left								
Thru								
Right								
Peds								
NB Right								
SB Right								
Green	16.0A				20.0A	15.0A		
Yellow/AR	3.0				3.0	3.0		
NB Left								
Thru					*			
Right					*			
Peds								
SB Left						*		
Thru					*	*		
Right								
Peds								
EB Right								
WB Right								

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	370	1388	0.313	0.267	11.5	B	11.3	B
	LR	390	1461	0.000	0.267	0.0	A		
	R	331	1242	0.175	0.267	11.0	B		
NB	T	974	2922	0.148	0.333	9.1	B	9.2	B
	R	414	1242	0.251	0.333	9.5	B		
SB	L	347	1388	0.265	0.250	11.8	B	5.3	B
	T	1851	2922	0.129	0.633	2.8	A		

Intersection Delay = 8.0 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.275

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Riverside (N-S) Milliken Avenue
Analyst: SV File Name: EMILRIVP.HC9
Area Type: Other 3-12-97 pm peak
Comment: EXISTING TRAFFIC VOLUMES

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 <		1	1 <		1	1	1	1	2 <	
Volumes	82	136	72	11	48	24	50	64	16	35	168	67
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left	*			
	Thru	*					Thru		*		
	Right	*					Right		*		
	Peds						Peds				
WB	Left	*				SB	Left	*			
	Thru	*					Thru		*		
	Right	*					Right		*		
	Peds						Peds				
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		16.0A				Green		17.0A	18.0A		
Yellow/AR		3.0				Yellow/AR		3.0	3.0		

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	369	1382	0.233	0.267	11.2	B	12.1	B
	TR	466	1748	0.470	0.267	12.5	B		
WB	L	204	766	0.059	0.267	10.6	B	10.9	B
	TR	467	1753	0.163	0.267	10.9	B		
NB	L	496	1752	0.107	0.283	10.3	B	10.0	B
	T	554	1845	0.121	0.300	9.9	B		
	R	470	1568	0.036	0.300	9.6	B		
SB	L	496	1752	0.075	0.283	10.2	B	10.3	B
	TR	1059	3529	0.246	0.300	10.3	B		

Intersection Delay = 11.0 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.270

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Haven Avenue
Analyst: SV File Name: EHAVMISP.HC9
Area Type: Other 11-18-96 pm peak
Comment: existing conditions

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	1	1	3	1	1	3	<
Volumes	430	545	127	51	275	11	39	616	17	95	943	139
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4	5	6	7	8
EB	Left	*				NB Left	*		
	Thru		*			Thru		*	
	Right		*			Right		*	
	Peds					Peds			
WB	Left	*				SB Left	*		
	Thru		*			Thru		*	
	Right		*			Right		*	
	Peds					Peds			
NB	Right	*				EB Right	*		
SB	Right					WB Right	*		
Green		18.0A	15.0A			Green	10.0A	25.0A	
Yellow/AR		3.0	3.0			Yellow/AR	3.0	3.0	

Cycle Length: 80 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	688	3058	0.679	0.225	20.2	C	33.7	D
	T	604	3219	0.999	0.188	48.9	E		
	R	479	1368	0.280	0.350	12.2	B		
WB	L	688	3058	0.081	0.225	15.8	C	18.6	C
	T	604	3219	0.502	0.188	19.4	C		
	R	479	1368	0.025	0.350	11.0	B		
NB	L	193	1541	0.213	0.125	20.4	C	14.6	B
	T	1509	4828	0.473	0.313	14.5	B		
	R	787	1368	0.023	0.575	4.7	A		
SB	L	191	1529	0.523	0.125	23.2	C	20.3	C
	TR	1478	4731	0.848	0.313	20.0	C		

Intersection Delay = 23.3 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.789

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Jurupa Street (N-S) Milliken Avenue
Analyst: SV File Name: EMILJURA.HC9
Area Type: Other 3-11-97 am peak
Comment: existing plus project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	<	2	3	1	2	3	1
Volumes	98	196	16	111	504	336	61	203	79	70	200	25
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4	5	6	7	8
EB	Left	*				NB Left	*		
	Thru		*			Thru		*	
	Right		*			Right		*	
	Peds					Peds			
WB	Left	*				SB Left	*		
	Thru		*			Thru		*	
	Right		*			Right		*	
	Peds					Peds			
NB	Right	*				EB Right	*		
SB	Right	*				WB Right			
Green		11.0A	14.0A			Green	12.0A	11.0A	
Yellow/AR		3.0	3.0			Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	534	2910	0.199	0.183	13.4	B	12.1	B
	T	1072	4594	0.212	0.233	12.0	B		
	R	629	1302	0.027	0.483	5.2	B		
WB	L	534	2910	0.227	0.183	13.5	B	28.2	D
	TR	1008	4319	0.966	0.233	30.0	D		
NB	L	582	2910	0.113	0.200	12.7	B	12.1	B
	T	842	4594	0.279	0.183	13.7	B		
	R	542	1302	0.153	0.417	7.1	B		
SB	L	582	2910	0.131	0.200	12.7	B	12.9	B
	T	842	4594	0.275	0.183	13.7	B		
	R	542	1302	0.048	0.417	6.7	B		

Intersection Delay = 20.4 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.430

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-19-1997
Center For Microcomputers In Transportation

Streets: (E-W) Philadelphia Street (N-S) Milliken Avenue
Analyst: SV File Name: PMILPHIA.HC9
Area Type: Other 11-18-96 am peak
Comment: existing plus project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes		> 1	<	1	> 1	1	1	3	<	2	3	<
Volumes	1	1	1	94	1	31	2	319	157	105	150	3
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	10.0A	25.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	LTR	324	1214	0.009	0.267	10.4	B	10.4	B
WB	L	361	1354	0.138	0.267	10.8	B	10.8	B
	LT	365	1368	0.137	0.267	10.8	B		
	R	326	1224	0.101	0.267	10.7	B		
NB	L	228	1368	0.009	0.167	13.5	B	7.7	B
	TR	1710	4105	0.322	0.417	7.7	B		
SB	L	456	2736	0.250	0.167	14.1	B	9.7	B
	TR	1800	4321	0.098	0.417	6.9	B		

Intersection Delay = 8.7 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.250

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-19-1997
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Milliken Avenue
Analyst: SV File Name: PMILMISA.HC9
Area Type: Other 11-18-96 am peak
Comment: existing plus project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	<	2	2	<	1	2	<	2	2	
Volumes	107	91	15	21	325	49	82	319	4	17	161	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	11.0A	13.0A			Green	10.0A	19.0A	
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0	

Cycle Length: 65 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	243	1433	0.466	0.169	16.8	C	15.4	C
	TR	591	2957	0.200	0.200	14.0	B		
WB	L	485	2866	0.047	0.169	14.6	B	18.0	C
	TR	591	2957	0.700	0.200	18.2	C		
NB	L	220	1433	0.390	0.154	16.6	C	13.0	B
	TR	882	3017	0.405	0.292	12.1	B		
SB	L	441	2866	0.043	0.154	15.1	C	11.6	B
	T	882	3017	0.201	0.292	11.2	B		

Intersection Delay = 14.9 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.487

****

File Name PMILGREA.HC0
Streets: (N-S) Milliken (E-W) Greystone
Major Street Direction.... EW
Length of Time Analyzed... 60 (min)
Analyst..... SV
Date of Analysis..... 2/25/97
Other Information..... existing plus project, am peak hour

Two-way Stop-controlled Intersection

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	1	2	0	0	2	1
Stop/Yield			N			N						
Volumes				15		13	45	390			158	39
PHF				.95		.95	.95	.95			.95	.95
Grade		0			0			0			0	
MC's (%)				0		0	0	0			0	0
SU/RV's (%)				0		0	0	0			0	0
CV's (%)				14		14	14	14			14	14
PCE's				1.14		1.14	1.14	1.14			1.14	1.14

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

****

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	NB	SB
Conflicting Flows: (vph)		0
Potential Capacity: (pcph)		1385
Movement Capacity: (pcph)		1385
Prob. of Queue-free State:		0.97

Step 2: LT from Major Street	WB	EB
Conflicting Flows: (vph)	0	
Potential Capacity: (pcph)	1714	
Movement Capacity: (pcph)	1714	
Prob. of Queue-free State:	0.99	

Step 3: TH from Minor Street	NB	SB
Conflicting Flows: (vph)	28	15
Potential Capacity: (pcph)	1051	1069
Capacity Adjustment Factor due to Impeding Movements	0.99	0.99
Movement Capacity: (pcph)	1040	1058
Prob. of Queue-free State:	0.55	0.82

Step 4: LT from Minor Street	NB	SB
Conflicting Flows: (vph)	114	
Potential Capacity: (pcph)	895	
Major LT, Minor TH Impedance Factor:	0.81	
Adjusted Impedance Factor:	0.86	
Capacity Adjustment Factor due to Impeding Movements	0.83	
Movement Capacity: (pcph)	740	

****

Intersection Performance Summary

Movement	FlowRate v(pcph)	MoveCap Cm(pcph)	SharedCap Csh(pcph)	Avg.Total Delay	LOS	Delay By App
NB L	54	740		5.2	B	
NB T	469	1040		6.3	B	6.2
SB T	189	1058		4.1	A	3.9
SB R	47	1385		2.7	A	
WB L	18	1714		2.1	A	1.1

Intersection Delay = 5.3

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-19-1997
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 WB ramps (N-S) Milliken Avenue
Analyst: SV File Name: PMIL60WA.HC9
Area Type: Other 11-18-96 am peak
Comment: existing plus project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes				1		1	1	2			2	1
Volumes				54		112	77	323			67	104
Lane Width				12.0		12.0	12.0	12.0			12.0	12.0
RTOR Vols						0			0			0
Lost Time				3.00		3.00	3.00	3.00			3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left *			
Thru					Thru *	*		
Right					Right *			
Peds					Peds			
WB Left	*				SB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	15.0A	20.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
WB	L	376	1410	0.152	0.267	10.9	B	11.5	B
	R	336	1261	0.351	0.267	11.8	B		
NB	L	352	1410	0.230	0.250	11.6	B	4.6	A
	T	1880	2968	0.190	0.633	3.0	A		
SB	T	989	2968	0.076	0.333	8.8	B	9.2	B
	R	420	1261	0.259	0.333	9.5	B		

Intersection Delay = 7.2 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.279

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-19-1997
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 EB ramps (N-S) Milliken Avenue
Analyst: SV File Name: PMIL60EA.HC9
Area Type: Other 11-18-96 am peak
Comment: existing plus project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	>	< 1					2	1	1	2	
Volumes	245		39					155	42	24	96	
Lane Width	12.0	12.0	12.0					12.0	12.0	12.0	12.0	
RTOR Vols			0						0			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru								
Right	*							
Peds								
WB Left								
Thru								
Right								
Peds								
NB Right								
SB Right								
NB Left								
Thru					*			
Right					*			
Peds								
SB Left						*		
Thru					*	*		
Right								
Peds								
EB Right								
WB Right								
Green	16.0A				20.0A	15.0A		
Yellow/AR	3.0				3.0	3.0		

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	382	1433	0.675	0.267	15.9	C	15.2	C
	LR	402	1509	0.000	0.267	0.0	A		
	R	342	1282	0.120	0.267	10.8	B		
NB	T	1006	3017	0.170	0.333	9.1	B	9.1	B
	R	427	1282	0.103	0.333	8.9	B		
SB	L	358	1433	0.070	0.250	11.1	B	4.3	A
	T	1911	3017	0.055	0.633	2.7	A		

Intersection Delay = 11.0 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.299

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Riverside (N-S) Milliken Avenue
Analyst: SV File Name: PMILRIVA.HC9
Area Type: Other 3-12-97 am peak
Comment: EXISTING PLUS PROJECT

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 <		1	1 <		1	1	1	1	2 <	
Volumes	72	61	28	1	52	11	39	115	16	29	61	45
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left *			
Thru	*				Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left	*				SB Left *			
Thru	*				Thru	*		
Right	*				Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	17.0A 18.0A		
Yellow/AR	3.0				Yellow/AR	3.0 3.0		

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	363	1361	0.209	0.267	11.1	B	11.1	B
	TR	448	1679	0.208	0.267	11.1	B		
WB	L	335	1255	0.003	0.267	10.4	B	10.9	B
	TR	457	1714	0.147	0.267	10.9	B		
NB	L	476	1679	0.086	0.283	10.2	B	10.2	B
	T	530	1767	0.228	0.300	10.2	B		
	R	451	1502	0.038	0.300	9.6	B		
SB	L	476	1679	0.065	0.283	10.1	B	9.9	B
	TR	997	3322	0.117	0.300	9.8	B		

Intersection Delay = 10.5 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.175

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Haven Avenue
Analyst: SV File Name: PHAVMISA.HC9
Area Type: Other 11-18-96 am peak
Comment: existing plus project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	1	1	3	1	1	3	<
Volumes	166	157	13	29	371	92	87	947	8	41	467	162
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left	*			
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds						Peds				
WB	Left	*				SB	Left	*			
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds						Peds				
NB	Right	*				EB	Right	*			
SB	Right					WB	Right	*			
Green		18.0A	15.0A			Green		10.0A	25.0A		
Yellow/AR		3.0	3.0			Yellow/AR		3.0	3.0		

Cycle Length: 80 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	674	2996	0.267	0.225	16.6	C	17.1	C
	T	591	3154	0.293	0.188	18.1	C		
	R	469	1340	0.030	0.350	11.0	B		
WB	L	674	2996	0.047	0.225	15.7	C	19.8	C
	T	591	3154	0.695	0.188	22.1	C		
	R	469	1340	0.207	0.350	11.8	B		
NB	L	187	1498	0.491	0.125	22.7	C	17.7	C
	T	1478	4731	0.742	0.313	17.3	C		
	R	770	1340	0.010	0.575	4.7	A		
SB	L	187	1498	0.230	0.125	20.5	C	15.1	C
	TR	1419	4542	0.514	0.313	14.8	B		

Intersection Delay = 17.3 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.569

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-19-1997
Center For Microcomputers In Transportation

Streets: (E-W) Jurupa Street (N-S) Milliken Avenue
Analyst: SV File Name: PMILJURP.HC9
Area Type: Other 3-11-97 pm peak
Comment: existing plus project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	<	2	3	1	2	3	1
Volumes	162	575	161	50	189	62	45	205	58	51	228	11
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4	5	6	7	8
EB	Left	*							
	Thru		*						
	Right		*						
	Peds								
WB	Left	*							
	Thru		*						
	Right		*						
	Peds								
NB	Right	*							
SB	Right	*							
Green		11.0A	14.0A						
Yellow/AR		3.0	3.0						

NB	Left	*			
	Thru		*		
	Right		*		
	Peds				
SB	Left	*			
	Thru		*		
	Right		*		
	Peds				
EB	Right	*			
WB	Right				
Green		12.0A	11.0A		
Yellow/AR		3.0	3.0		

Cycle Length: 60 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	602	3282	0.293	0.183	13.7	B	12.3	B
	T	1209	5182	0.551	0.233	13.5	B		
	R	710	1468	0.238	0.483	5.9	B		
WB	L	602	3282	0.091	0.183	13.1	B	12.3	B
	TR	1164	4988	0.249	0.233	12.1	B		
NB	L	612	3059	0.078	0.200	12.6	B	12.3	B
	T	886	4831	0.269	0.183	13.6	B		
	R	570	1369	0.107	0.417	6.9	B		
SB	L	612	3059	0.092	0.200	12.6	B	13.3	B
	T	886	4831	0.298	0.183	13.7	B		
	R	570	1369	0.021	0.417	6.7	B		

Intersection Delay = 12.4 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.319

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-19-1997
Center For Microcomputers In Transportation

Streets: (E-W) Philadelphia Street (N-S) Milliken Avenue
Analyst: SV File Name: PMILPHIP.HC9
Area Type: Other 11-18-96 pm peak
Comment: existing plus project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes		> 1	<	1	> 1	1	1	3	<	2	3	<
Volumes	1	1	1	140	1	49	1	282	83	26	414	1
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left *			
Thru	*				Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left	*				SB Left *			
Thru	*				Thru	*		
Right	*				Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green 10.0A	25.0A		
Yellow/AR	3.0				Yellow/AR 3.0	3.0		

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	LTR	325	1219	0.009	0.267	10.4	B	10.4	B
WB	L	366	1373	0.202	0.267	11.1	B	11.0	B
	LT	366	1373	0.202	0.267	11.1	B		
	R	331	1242	0.157	0.267	10.9	B		
NB	L	231	1388	0.004	0.167	13.5	B	7.3	B
	TR	1772	4252	0.238	0.417	7.3	B		
SB	L	463	2776	0.061	0.167	13.6	B	7.8	B
	TR	1826	4383	0.263	0.417	7.4	B		

Intersection Delay = 8.2 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.204

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-19-1997
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Milliken Avenue
Analyst: SV File Name: PMILMISP.HC9
Area Type: Other 11-18-96 pm peak
Comment: existing plus project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2 <		2	2 <		1	2 <		2	2	
Volumes	113	408	92	20	157	26	49	227	17	67	391	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	11.0A	13.0A			Green	10.0A	19.0A	
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0	

Cycle Length: 65 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	242	1431	0.491	0.169	17.1	C	31.2	D
	TR	585	2923	0.944	0.200	34.2	D		
WB	L	485	2863	0.045	0.169	14.6	B	14.6	B
	TR	591	2953	0.342	0.200	14.6	B		
NB	L	220	1431	0.236	0.154	15.7	C	12.3	B
	TR	872	2983	0.310	0.292	11.6	B		
SB	L	440	2863	0.166	0.154	15.4	C	13.0	B
	T	881	3013	0.492	0.292	12.6	B		

Intersection Delay = 20.2 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.554

****

File Name PMILGREP.HC0
Streets: (N-S) Milliken (E-W) Greystone
Major Street Direction.... EW
Length of Time Analyzed... 60 (min)
Analyst..... SV
Date of Analysis..... 2/25/97
Other Information..... existing plus project, pm peak hour

Two-way Stop-controlled Intersection

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	0	0	1	0	1	1	2	0	0	2	1
Stop/Yield			N			N						
Volumes				58		66	24	235			485	22
PHF				.95		.95	.95	.95			.95	.95
Grade		0			0			0			0	
MC's (%)				0		0	0	0			0	0
SU/RV's (%)				0		0	0	0			0	0
CV's (%)				15		15	15	15			15	15
PCE's				1.15		1.15	1.15	1.15			1.15	1.15

Adjustment Factors

Vehicle Maneuver	Critical Gap (tg)	Follow-up Time (tf)
Left Turn Major Road	5.50	2.10
Right Turn Minor Road	5.50	2.60
Through Traffic Minor Road	6.50	3.30
Left Turn Minor Road	7.00	3.40

****

WorkSheet for TWSC Intersection

Step 1: RT from Minor Street	NB	SB
Conflicting Flows: (vph)		0
Potential Capacity: (pcph)		1385
Movement Capacity: (pcph)		1385
Prob. of Queue-free State:		0.98

Step 2: LT from Major Street	WB	EB
Conflicting Flows: (vph)	0	
Potential Capacity: (pcph)	1714	
Movement Capacity: (pcph)	1714	
Prob. of Queue-free State:	0.96	

Step 3: TH from Minor Street	NB	SB
Conflicting Flows: (vph)	124	58
Potential Capacity: (pcph)	923	1009
Capacity Adjustment Factor due to Impeding Movements	0.96	0.96
Movement Capacity: (pcph)	885	968
Prob. of Queue-free State:	0.68	0.39

Step 4: LT from Minor Street	NB	SB
Conflicting Flows: (vph)	311	
Potential Capacity: (pcph)	670	
Major LT, Minor TH Impedance Factor:	0.38	
Adjusted Impedance Factor:	0.50	
Capacity Adjustment Factor due to Impeding Movements	0.49	
Movement Capacity: (pcph)	330	

****

Intersection Performance Summary

Movement	FlowRate v(pcph)	MoveCap Cm(pcph)	SharedCap Csh(pcph)	Avg.Total Delay	LOS	Delay By App
NB L	29	330		12.0	C	
NB T	284	885		6.0	B	6.5
SB T	588	968		9.4	B	9.1
SB R	26	1385		2.6	A	
WB L	70	1714		2.2	A	1.0

Intersection Delay = 7.2

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-19-1997
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 WB ramps (N-S) Milliken Avenue
Analyst: SV File Name: PMIL60WP.HC9
Area Type: Other 11-18-96 pm peak
Comment: existing plus project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes				1		1	1	2			2	1
Volumes				43		60	57	199			278	273
Lane Width				12.0		12.0	12.0	12.0			12.0	12.0
RTOR Vols						0			0			0
Lost Time				3.00		3.00	3.00	3.00			3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left *			
Thru					Thru *	*		
Right					Right *			
Peds					Peds			
WB Left	*				SB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	15.0A	20.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
WB	L	370	1388	0.122	0.267	10.8	B	10.9	B
	R	331	1242	0.190	0.267	11.0	B		
NB	L	347	1388	0.173	0.250	11.4	B	4.7	A
	T	1851	2922	0.118	0.633	2.8	A		
SB	T	974	2922	0.316	0.333	9.7	B	12.1	B
	R	414	1242	0.693	0.333	14.6	B		

Intersection Delay = 9.8 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.382

SECTION SUMMARY Version 2.4a 03-19-1997
or Microcomputers In Transportation

EB ramps (N-S) Milliken Avenue
File Name: PMIL60EP.HC9
11-18-96 pm peak

is project conditions

und R	Westbound L	T	R	Northbound L	T	R	Southbound L	T	R
< 1				2	1		1	2	
55				138	99		97	232	
0 12.0				12.0	12.0		12.0	12.0	
0					0				0
3.00				3.00	3.00		3.00	3.00	

Signal Operations

	2	3	4	5	6	7	8
NB	Left						
	Thru			*			
	Right			*			
	Peds						
SB	Left				*		
	Thru			*	*		
	Right						
	Peds						
EB	Right						
WB	Right						
Green				20.0A	15.0A		
Yellow/AR				3.0	3.0		

0A
0
s :s Phase combination order: #1 #5 #6

ntersection Performance Summary

Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
1388	0.332	0.267	11.6	B	11.4	B
1461	0.000	0.267	0.0	A		
1242	0.175	0.267	11.0	B		
2922	0.156	0.333	9.1	B	9.2	B
1242	0.251	0.333	9.5	B		
1388	0.294	0.250	11.9	B	5.4	B
2922	0.138	0.633	2.9	A		

e section Delay = 8.0 sec/veh Intersection LOS = B
9.0 sec Critical v/c(x) = 0.289

03-21-1997
ation

en Avenue
MILRIVP.HC9
eak

und R	Southbound L	T	R
1	1	2	<
16	35	168	67
12.0	12.0	12.0	
0			0
3.00	3.00	3.00	3.00

5	6	7	8
*			
	*		
	*		
*			
	*		
	*		

0A 18.0A
0 3.0
#5 #6

LOS	Approach: Delay	LOS
B	12.4	B
B		
B	11.0	B
B		
B	10.1	B
B		
B		
B	10.3	B
B		

ntersection LOS = B
= 0.281

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-20-1996
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Haven Avenue
Analyst: SV File Name: EHAVMISP.HC9
Area Type: Other 11-18-96 pm peak
Comment: existing plus project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	1	1	3	1	1	3	<
Volumes	430	549	127	55	282	21	39	616	19	99	943	139
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
NB Right	*				EB Right	*		
SB Right					WB Right	*		
Green	18.0A	15.0A			Green	10.0A	25.0A	
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0	

Cycle Length: 80 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	674	2996	0.693	0.225	20.5	C	37.7	D
	T	591	3154	1.026	0.188	56.6	E		
	R	469	1340	0.286	0.350	12.2	B		
WB	L	674	2996	0.089	0.225	15.8	C	18.6	C
	T	591	3154	0.528	0.188	19.6	C		
	R	469	1340	0.047	0.350	11.1	B		
NB	L	187	1498	0.219	0.125	20.4	C	14.6	B
	T	1478	4731	0.482	0.313	14.6	B		
	R	770	1340	0.026	0.575	4.7	A		
SB	L	187	1498	0.555	0.125	24.0	C	21.1	C
	TR	1449	4636	0.865	0.313	20.8	C		

Intersection Delay = 24.9 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.809

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-20-1997
Center For Microcomputers In Transportation

Streets: (E-W) Jurupa Street (N-S) Milliken Avenue
Analyst: SV File Name: FMILJURA.HC9
Area Type: Other 3-11-97 am peak
Comment: 2015 without project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	<	2	3	1	2	3	1
Volumes	271	562	40	413	1358	930	201	554	238	194	662	69
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vols			40			186			207			69
Lost Time	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left	*			
	Thru			*			Thru		*		
	Right			*			Right		*		
	Peds						Peds				
WB	Left	*	*			SB	Left	*			
	Thru		*	*			Thru		*		
	Right		*	*			Right		*		
	Peds						Peds				
NB	Right	*	*			EB	Right	*			
SB	Right	*				WB	Right				
Green		17.0A	9.0A	40.0A		Green		13.0A	26.0A		
Yellow/AR		3.0	3.0	3.0		Yellow/AR		3.0	3.0		

Cycle Length: 120 secs Phase combination order: #1 #2 #3 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	428	2852	0.666	0.150	33.8	D	24.1	C
	T	1539	4503	0.385	0.342	19.4	C		
	R	713	1501	0.000	0.475	0.0	A		
WB	L	713	2852	0.610	0.250	26.8	D	*	*
	TR	1889	4278	1.171	0.442	*	*		
NB	L	333	2852	0.637	0.117	35.5	D	28.8	D
	T	1013	4503	0.575	0.225	27.3	D		
	R	606	1276	0.054	0.475	11.0	B		
SB	L	333	2852	0.613	0.117	34.9	D	30.3	D
	T	1013	4503	0.688	0.225	28.9	D		
	R	588	1501	0.000	0.392	0.0	A		

Intersection Delay = * (sec/veh) Intersection LOS = *

(g/C)*(V/c) is greater than one. Calculation of D1 is infeasable.

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-20-1997
Center For Microcomputers In Transportation

Streets: (E-W) Jurupa Street (N-S) Milliken Avenue
Analyst: SV File Name: FMLJURAM.HC9
Area Type: Other 3-11-97 am peak
Comment: 2015 without project w/ mitigation

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	2	1	2	3	1	2	3	1
Volumes	271	762	40	413	1158	930	201	554	238	194	662	69
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vols			40			300			207			69
Lost Time	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left	*			
	Thru			*			Thru		*		
	Right			*			Right		*		
	Peds						Peds				
WB	Left	*	*			SB	Left	*			
	Thru		*	*			Thru		*		
	Right		*	*			Right		*		
	Peds										
NB	Right	*	*			EB	Right	*			
SB	Right	*				WB	Right				
Green		16.0A	17.0A	40.0A		Green		13.0A	19.0A		
Yellow/AR		3.0	3.0	3.0		Yellow/AR		3.0	3.0		

Cycle Length: 120 secs Phase combination order: #1 #2 #3 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	404	2852	0.705	0.142	35.5	D	24.6	C
	T	1539	4503	0.521	0.342	20.7	C		
	R	713	1501	0.000	0.475	0.0	A		
WB	L	879	2852	0.495	0.308	22.3	C	28.5	D
	T	1526	3002	0.799	0.508	18.0	C		
	R	649	1276	1.022	0.508	52.0	E		
NB	L	333	2852	0.637	0.117	35.5	D	33.8	D
	T	750	4503	0.777	0.167	34.5	D		
	R	606	1276	0.054	0.475	11.0	B		
SB	L	333	2852	0.613	0.117	34.9	D	42.5	E
	T	750	4503	0.929	0.167	44.7	E		
	R	488	1501	0.000	0.325	0.0	A		

Intersection Delay = 31.0 sec/veh Intersection LOS = D

Lost Time/Cycle, L = 8.0 sec Critical v/c(x) = 0.909

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-20-1997
Center For Microcomputers In Transportation

Streets: (E-W) Philadelphia Street (N-S) Milliken Avenue
Analyst: SV File Name: FMILPHIA.HC9
Area Type: Other 11-18-96 am peak
Comment: 2015 without project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes		> 1	<	1	> 1	1	1	3	<	2	3	<
Volumes	1	1	1	149	1	50	2	1041	320	205	481	3
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	10.0A	25.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	LTR	315	1182	0.010	0.267	10.4	B	10.4	B
WB	L	357	1339	0.218	0.267	11.1	B	11.1	B
	LT	357	1339	0.224	0.267	11.1	B		
	R	323	1211	0.164	0.267	10.9	B		
NB	L	226	1354	0.009	0.167	13.5	B	12.9	B
	TR	1710	4104	0.838	0.417	12.9	B		
SB	L	451	2707	0.479	0.167	15.3	C	9.8	B
	TR	1781	4275	0.286	0.417	7.5	B		

Intersection Delay = 11.8 sec/veh Intersection LOS = B
Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.575

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-20-1997
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Milliken Avenue
Analyst: SV File Name: EMLMISAM.HC9
Area Type: Other 11-18-96 am peak
Comment: 2015 without project with mitigation

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	<	2	3	<	1	2	<	2	2	
Volumes	190	175	29	52	624	329	150	842	12	51	430	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			6			66			2			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds					Peds				
WB Left	*				SB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	17.0A	22.0A			Green	13.0A	26.0A		
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0		

Cycle Length: 90 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	266	1408	0.752	0.189	30.0	D	23.6	C
	TR	1065	4357	0.196	0.244	17.4	C		
WB	L	532	2816	0.103	0.189	19.5	C	28.8	D
	TR	1033	4224	0.905	0.244	29.3	D		
NB	L	203	1408	0.777	0.144	35.4	D	54.4	E
	TR	856	2964	1.048	0.289	57.8	E		
SB	L	407	2816	0.133	0.144	21.7	C	18.3	C
	T	856	2964	0.529	0.289	17.9	C		

Intersection Delay = 35.4 sec/veh Intersection LOS = D

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.898

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-20-1997
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 WB ramps (N-S) Milliken Avenue
Analyst: SV File Name: FMIL60WA.HC9
Area Type: Other 11-18-96 am peak
Comment: 2015 without project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes				1		1	1	2			2	1
Volumes				98		371	254	710			161	266
Lane Width				12.0		12.0	12.0	12.0			12.0	12.0
RTOR Vols						74			0			53
Lost Time				3.00		3.00	3.00	3.00			3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left *			
Thru					Thru *	*		
Right					Right *			
Peds					Peds			
WB Left	*				SB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	21.0A				Green	15.0A	15.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
WB	L	480	1372	0.214	0.350	8.9	B	13.7	B
	R	429	1227	0.729	0.350	15.2	C		
NB	L	343	1372	0.778	0.250	20.9	C	9.5	B
	T	1588	2888	0.470	0.550	5.5	B		
SB	T	722	2888	0.234	0.250	11.6	B	15.9	C
	R	307	1227	0.730	0.250	19.2	C		

Intersection Delay = 11.9 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.744

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-20-1997
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 EB ramps (N-S) Milliken Avenue
Analyst: SV File Name: FMIL60EA.HC9
Area Type: Other 11-18-96 am peak
Comment: 2015 without project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	>	< 1					2	1	1	2	
Volumes	451		51					413	55	51	208	
Lane Width	12.0	12.0	12.0					12.0	12.0	12.0	12.0	
RTOR Vols			10						11			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*							
Thru								
Right	*							
Peds								
WB Left								
Thru								
Right								
Peds								
NB Right								
SB Right								
Green	26.0A							
Yellow/AR	3.0							

NB Left								
Thru					*			
Right					*			
Peds								
SB Left						*		
Thru					*	*		
Right								
Peds								
EB Right								
WB Right								
Green					15.0A	10.0A		
Yellow/AR					3.0	3.0		

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	610	1408	0.779	0.433	13.8	B	13.2	B
	LR	642	1482	0.000	0.433	0.0	A		
	R	546	1260	0.079	0.433	6.4	B		
NB	T	741	2964	0.587	0.250	13.7	B	13.5	B
	R	315	1260	0.146	0.250	11.3	B		
SB	L	235	1408	0.230	0.167	14.1	B	7.6	B
	T	1383	2964	0.158	0.467	6.0	B		

Intersection Delay = 12.1 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.615

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Riverside (N-S) Milliken Avenue
Analyst: SV File Name: FMILRIVA.HC9
Area Type: Other 3-12-97 am peak
Comment: 2015 without project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 <		1	1 <		1	1	1	1	2 <	
Volumes	104	101	78	100	215	197	64	187	45	38	170	51
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			16			39			9			51
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	26.0A				Green	12.0A	13.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	176	406	0.620	0.433	13.0	B	9.3	B
	TR	720	1661	0.238	0.433	7.0	B		
WB	L	444	1025	0.236	0.433	7.0	B	8.4	B
	TR	720	1661	0.545	0.433	8.8	B		
NB	L	336	1679	0.200	0.200	13.0	B	13.8	B
	T	383	1767	0.515	0.217	14.4	B		
	R	325	1502	0.117	0.217	12.2	B		
SB	L	336	1679	0.119	0.200	12.7	B	12.6	B
	TR	766	3534	0.246	0.217	12.6	B		

Intersection Delay = 10.6 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.494

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-20-1997
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Haven Avenue
Analyst: SV File Name: FHAVMISA.HC9
Area Type: Other 11-18-96 am peak
Comment: 2015 without project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	1	1	3	1	1	3	<
Volumes	320	172	24	53	528	173	148	1823	11	71	899	311
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left	*			
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds						Peds				
WB	Left	*				SB	Left	*			
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds						Peds				
NB	Right	*				EB	Right	*			
SB	Right					WB	Right	*			
Green		13.0A	15.0A			Green		10.0A	35.0A		
Yellow/AR		3.0	3.0			Yellow/AR		3.0	3.0		

Cycle Length: 85 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	458	2996	0.735	0.153	26.4	D	23.6	C
	T	557	3154	0.325	0.176	19.9	C		
	R	441	1340	0.057	0.329	12.6	B		
WB	L	458	2996	0.122	0.153	20.1	C	41.0	E
	T	557	3154	0.999	0.176	51.7	E		
	R	441	1340	0.412	0.329	14.7	B		
NB	L	176	1498	0.885	0.118	49.8	E	30.2	D
	T	1948	4731	0.985	0.412	28.8	D		
	R	804	1340	0.015	0.600	4.4	A		
SB	L	176	1498	0.426	0.118	23.5	C	14.5	B
	TR	1870	4542	0.681	0.412	13.9	B		

Intersection Delay = 26.8 sec/veh Intersection LOS = D

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.930

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Jurupa Street (N-S) Milliken Avenue
Analyst: SV File Name: FMLJURPM.HC9
Area Type: Other 3-11-97 pm peak
Comment: 2015 without project with mitigation

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	2	1	2	3	1	2	3	1
Volumes	233	1132	209	279	752	247	70	843	226	234	880	51
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vols			35			117			138			51
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*				NB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds					Peds				
WB Left	*				SB Left	*			
Thru		*			Thru		*		
Right		*			Right		*		
Peds					Peds				
NB Right	*				EB Right	*			
SB Right	*				WB Right				
Green	8.0A	17.0A			Green	8.0A	15.0A		
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0		

Cycle Length: 60 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	380	2852	0.644	0.133	18.5	C	20.3	C
	T	1276	4503	0.934	0.283	22.7	C		
	R	595	1276	0.307	0.467	6.5	B		
WB	L	380	2852	0.773	0.133	22.7	C	23.3	C
	T	851	3002	0.931	0.283	25.6	D		
	R	362	1276	0.379	0.283	11.5	B		
NB	L	380	2852	0.195	0.133	15.0	B	15.3	C
	T	1126	4503	0.788	0.250	16.3	C		
	R	553	1276	0.168	0.433	6.7	B		
SB	L	380	2852	0.647	0.133	18.6	C	17.6	C
	T	1126	4503	0.823	0.250	17.3	C		
	R	650	1501	0.000	0.433	0.0	A		

Intersection Delay = 19.3 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.825

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-19-1997
Center For Microcomputers In Transportation

Streets: (E-W) Philadelphia Street (N-S) Milliken Avenue
Analyst: SV File Name: FMILPHIP.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 without project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes		> 1	<	1	> 1	1	1	3	<	2	3	<
Volumes	1	1	1	338	1	156	1	983	287	90	1278	1
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left *			
Thru	*				Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left	*				SB Left *			
Thru	*				Thru	*		
Right	*				Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	10.0A	25.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	LTR	310	1164	0.010	0.267	10.4	B	10.4	B
WB	L	361	1354	0.493	0.267	12.9	B	13.0	B
	LT	361	1354	0.496	0.267	12.9	B		
	R	326	1224	0.502	0.267	13.1	B		
NB	L	228	1368	0.004	0.167	13.5	B	11.2	B
	TR	1746	4191	0.766	0.417	11.2	B		
SB	L	456	2736	0.208	0.167	14.0	B	11.0	B
	TR	1800	4321	0.748	0.417	10.8	B		

Intersection Delay = 11.4 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.574

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-20-1997
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Milliken Avenue
Analyst: SV File Name: FMILMISP.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 without project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2 <		2	2 <		1	2 <		2	2	
Volumes	252	956	117	54	533	188	106	830	153	247	1182	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			106			0			0			0
Lost Time	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*	*			NB Left	*		
Thru		*	*		Thru		*	
Right		*	*		Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru			*		Thru		*	
Right			*		Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	4.0A	19.0A	21.0A		Green	12.0A	49.0A	
Yellow/AR	3.0	3.0	3.0		Yellow/AR	3.0	3.0	

Cycle Length: 120 secs Phase combination order: #1 #2 #3 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	369	1641	0.718	0.225	32.3	D	26.3	D
	TR	1265	3449	0.804	0.367	24.8	C		
WB	L	137	3282	0.417	0.042	37.4	D	*	*
	TR	609	3320	1.247	0.183	*	*		
NB	L	166	1530	0.676	0.108	40.2	E	23.8	C
	TR	1310	3143	0.790	0.417	22.0	C		
SB	L	331	3059	0.785	0.108	41.7	E	31.8	D
	T	1342	3220	0.927	0.417	29.7	D		

Intersection Delay = * (sec/veh) Intersection LOS = *

(g/C)*(V/c) is greater than one. Calculation of D1 is infeasable.

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-20-1997
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Milliken Avenue
Analyst: SV File Name: FMILMISP.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 without project with mitigation

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3 <		2	3 <		1	2 <		2	2	
Volumes	252	956	117	54	533	188	106	830	153	247	1182	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			106			0			0			0
Lost Time	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*	*			NB Left	*			
Thru		*	*		Thru		*		
Right		*	*		Right		*		
Peds					Peds				
WB Left	*				SB Left	*			
Thru			*		Thru		*		
Right			*		Right		*		
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	4.0A	19.0A	23.0A		Green	12.0A	47.0A		
Yellow/AR	3.0	3.0	3.0		Yellow/AR	3.0	3.0		

Cycle Length: 120 secs Phase combination order: #1 #2 #3 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	317	1408	0.836	0.225	40.7	E	23.9	C
	TR	1704	4446	0.597	0.383	19.5	C		
WB	L	117	2816	0.486	0.042	38.8	D	38.3	D
	TR	854	4268	0.889	0.200	38.3	D		
NB	L	153	1408	0.734	0.108	44.5	E	29.6	D
	TR	1162	2905	0.891	0.400	28.0	D		
SB	L	305	2816	0.852	0.108	47.8	E	55.5	E
	T	1186	2964	1.049	0.400	57.2	E		

Intersection Delay = 37.8 sec/veh Intersection LOS = D

Lost Time/Cycle, L = 8.0 sec Critical v/c(x) = 0.941

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-20-1997
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 WB ramps (N-S) Milliken Avenue
Analyst: SV File Name: FML60WPM.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 without project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes				1		1	1	2			2	1
Volumes				211		265	156	808			667	701
Lane Width				12.0		12.0	12.0	12.0			12.0	12.0
RTOR Vols						0			0			140
Lost Time				3.00		3.00	3.00	3.00			3.00	3.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left					NB Left	*			
Thru					Thru	*	*		
Right					Right				
Peds					Peds				
WB Left	*				SB Left				
Thru					Thru		*		
Right	*				Right		*		
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	26.0A				Green	12.0A	43.0A		
Yellow/AR	3.0				Yellow/AR	3.0	3.0		

Cycle Length: 90 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
WB	L	401	1388	0.554	0.289	18.8	C	22.8	C
	R	359	1242	0.778	0.289	26.0	D		
NB	L	185	1388	0.886	0.133	50.0	E	12.5	B
	T	1883	2922	0.452	0.644	5.3	B		
SB	T	1396	2922	0.503	0.478	10.7	B	25.3	D
	R	593	1242	0.996	0.478	42.6	E		

Intersection Delay = 20.2 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.910

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-19-1997
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 EB ramps (N-S) Milliken Avenue
Analyst: SV File Name: FMIL60EP.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 without project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	>	< 1					2	1	1	2	
Volumes	279		110					685	199	256	616	
Lane Width	12.0	12.0	12.0					12.0	12.0	12.0	12.0	
RTOR Vols			0						0			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left					SB Left		*	
Thru					Thru	*	*	
Right					Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	20.0A	15.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	364	1366	0.807	0.267	21.9	C	19.1	C
	LR	383	1438	0.000	0.267	0.0	A		
	R	326	1223	0.356	0.267	11.8	B		
NB	T	959	2877	0.752	0.333	13.9	B	13.3	B
	R	408	1223	0.513	0.333	11.3	B		
SB	L	342	1366	0.788	0.250	21.5	C	8.7	B
	T	1822	2877	0.356	0.633	3.4	A		

Intersection Delay = 12.5 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.780

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Riverside (N-S) Milliken Avenue
Analyst: SV File Name: FMILRIVP.HC9
Area Type: Other 3-12-97 pm peak
Comment: 2015 without project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 <		1	1 <		1	1	1	1	2 <	
Volumes	314	399	212	46	202	315	122	255	399	170	422	134
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			100			0
Lost Time	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	25.0A	44.0A			Green	14.0A	25.0A	
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0	

Cycle Length: 120 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	364	1679	0.910	0.217	48.1	E	54.2	E
	TR	630	1679	1.021	0.375	57.4	E		
WB	L	364	1679	0.132	0.217	24.5	C	34.2	D
	TR	603	1608	0.904	0.375	35.1	D		
NB	L	210	1679	0.610	0.125	35.7	D	45.3	E
	T	383	1767	0.700	0.217	31.9	D		
	R	325	1502	0.968	0.217	60.6	F		
SB	L	210	1679	0.853	0.125	51.8	E	37.4	D
	TR	735	3393	0.796	0.217	33.0	D		

Intersection Delay = 44.0 sec/veh Intersection LOS = E

Lost Time/Cycle, L = 8.0 sec Critical v/c(x) = 0.960

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-20-1997
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Haven Avenue
Analyst: SV File Name: FHAVMISP.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 without project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	1	1	3	1	1	3	<
Volumes	633	956	269	94	509	80	166	1532	47	271	1789	195
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			166			80			47			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*	*			NB Left *			
Thru		*	*		Thru		*	
Right		*	*		Right		*	
Peds					Peds			
WB Left	*				SB Left	*	*	
Thru			*		Thru		*	*
Right			*		Right		*	*
Peds					Peds			
NB Right	*				EB Right	*		
SB Right					WB Right	*		
Green		4.0A	21.0A	15.0A	Green	16.0A	14.0A	42.0A
Yellow/AR		3.0	3.0	3.0	Yellow/AR	3.0	3.0	3.0

Cycle Length: 130 secs Phase combination order: #1 #2 #3 #5 #6 #7

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	645	2996	1.032	0.215	68.9	F	*	*
	T	946	3154	1.063	0.300	*	*		
	R	598	1340	0.181	0.446	14.0	B		
WB	L	92	2996	1.074	0.031	*	*	*	*
	T	364	3154	1.473	0.115	*	*		
	R	412	1577	0.000	0.262	0.0	A		
NB	L	184	1498	0.949	0.123	74.1	F	*	*
	T	1528	4731	1.055	0.323	*	*		
	R	594	1577	0.000	0.377	0.0	A		
SB	L	380	1498	0.749	0.254	34.4	D	34.3	D
	TR	2126	4684	0.982	0.454	34.3	D		

Intersection Delay = * (sec/veh) Intersection LOS = *
(g/C)*(V/c) is greater than one. Calculation of D1 is infeasable.

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-20-1997
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Haven Avenue
Analyst: SV File Name: FHVMISPM.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 without project w/ mitigation

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	1	3	1	1	3	<
Volumes	633	956	269	94	509	80	166	1532	47	271	1789	195
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			166			80			47			0
Lost Time	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*	*			NB Left	*			
Thru		*	*		Thru			*	
Right		*	*		Right			*	
Peds					Peds				
WB Left	*				SB Left	*	*		
Thru			*		Thru		*	*	
Right			*		Right		*	*	
Peds					Peds				
NB Right	*				EB Right	*			
SB Right					WB Right	*			
Green	4.0A	21.0A	15.0A		Green	16.0A	14.0A	42.0A	
Yellow/AR	3.0	3.0	3.0		Yellow/AR	3.0	3.0	3.0	

Cycle Length: 130 secs Phase combination order: #1 #2 #3 #5 #6 #7

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	668	2996	0.997	0.223	58.5	E	37.7	D
	T	1456	4731	0.691	0.308	26.6	D		
	R	608	1340	0.178	0.454	13.6	B		
WB	L	115	2996	0.859	0.038	69.8	F	53.8	E
	T	582	4731	0.921	0.123	50.8	E		
	R	425	1577	0.000	0.269	0.0	A		
NB	L	196	1498	0.893	0.131	61.3	F	54.2	E
	T	1565	4731	1.031	0.331	53.5	E		
	R	607	1577	0.000	0.385	0.0	A		
SB	L	392	1498	0.727	0.262	32.8	D	31.4	D
	TR	2162	4684	0.966	0.462	31.2	D		

Intersection Delay = 41.5 sec/veh Intersection LOS = E

Lost Time/Cycle, L = 8.0 sec Critical v/c(x) = 0.957

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 04-13-1997
Center For Microcomputers In Transportation

Streets: (E-W) Jurupa Street (N-S) Milliken Avenue
Analyst: SV File Name: WMLJURAM.HC9
Area Type: Other 3-11-97 am peak
Comment: 2015 with project with mitigation

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	2	1	2	3	1	2	3	1
Volumes	271	762	46	453	1158	930	203	565	263	194	702	69
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vols			40			300			207			69
Lost Time	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru			*		Thru		*	
Right			*		Right		*	
Peds					Peds			
WB Left	*	*			SB Left	*		
Thru		*	*		Thru		*	
Right		*	*		Right		*	
Peds					Peds			
NB Right	*	*			EB Right	*		
SB Right	*				WB Right			
Green	15.0A	9.0A	47.0A		Green	13.0A	22.0A	
Yellow/AR	3.0	3.0	3.0		Yellow/AR	3.0	3.0	

Cycle Length: 121 secs Phase combination order: #1 #2 #3 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	377	2852	0.756	0.132	38.5	D	22.9	C
	T	1786	4503	0.449	0.397	17.4	C		
	R	675	1276	0.009	0.529	8.7	B		
WB	L	660	2852	0.723	0.231	30.4	D	33.3	D
	T	1489	3002	0.819	0.496	19.4	C		
	R	633	1276	1.048	0.496	61.0	F		
NB	L	330	2852	0.649	0.116	36.1	D	31.3	D
	T	856	4503	0.695	0.190	31.3	D		
	R	538	1276	0.110	0.421	13.7	B		
SB	L	330	2852	0.618	0.116	35.4	D	36.7	D
	T	856	4503	0.863	0.190	37.1	D		
	R	509	1501	0.000	0.339	0.0	A		

Intersection Delay = 31.4 sec/veh Intersection LOS = D

Lost Time/Cycle, L = 8.0 sec Critical v/c(x) = 0.919

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Philadelphia Street (N-S) Milliken Avenue
Analyst: SV File Name: WMILPHIA.HC9
Area Type: Other 11-18-96 am peak
Comment: 2015 with project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes		> 1	<	1	> 1	1	1	3	<	2	3	<
Volumes	1	1	1	161	1	50	2	1079	323	205	592	3
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left *			
Thru	*				Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left	*				SB Left *			
Thru	*				Thru	*		
Right	*				Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	10.0A	25.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	LTR	318	1192	0.009	0.267	10.4	B	10.4	B
WB	L	362	1357	0.232	0.267	11.2	B	11.1	B
	LT	362	1357	0.238	0.267	11.2	B		
	R	327	1227	0.162	0.267	10.9	B		
NB	L	229	1372	0.009	0.167	13.5	B	13.0	B
	TR	1751	4202	0.843	0.417	13.0	B		
SB	L	457	2744	0.472	0.167	15.2	C	9.7	B
	TR	1805	4332	0.347	0.417	7.8	B		

Intersection Delay = 11.7 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.580

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 11-21-1996
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Milliken Avenue
Analyst: SV File Name: WMILMISP.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 with project with mitigation

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3	<	2	3	<	1	2	<	2	2	
Volumes	279	962	117	59	533	188	175	955	159	247	1228	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			106			0			0			0
Lost Time	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*	*			NB Left	*		
Thru		*	*		Thru		*	
Right		*	*		Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru			*		Thru		*	
Right			*		Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	4.0A	19.0A	23.0A		Green	16.0A	54.0A	
Yellow/AR	3.0	3.0	3.0		Yellow/AR	3.0	3.0	

Cycle Length: 131 secs Phase combination order: #1 #2 #3 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	295	1431	0.997	0.206	73.0	F	34.7	D
	TR	1587	4520	0.645	0.351	23.7	C		
WB	L	109	2863	0.567	0.038	44.9	E	49.7	E
	TR	795	4339	0.955	0.183	50.1	E		
NB	L	186	1431	0.991	0.130	84.9	F	41.1	E
	TR	1240	2953	0.945	0.420	34.2	D		
SB	L	372	2863	0.700	0.130	39.2	D	47.8	E
	T	1265	3013	1.022	0.420	49.5	E		

Intersection Delay = 42.9 sec/veh Intersection LOS = E

Lost Time/Cycle, L = 8.0 sec Critical v/c(x) = 0.999

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 WB ramps (N-S) Milliken Avenue
Analyst: SV File Name: WMIL60WA.HC9
Area Type: Other 11-18-96 am peak
Comment: 2015 with project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes				1		1	1	2			2	1
Volumes				98		450	254	830			192	289
Lane Width				12.0		12.0	12.0	12.0			12.0	12.0
RTOR Vols						74			0			53
Lost Time				3.00		3.00	3.00	3.00			3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left *			
Thru					Thru *	*		
Right					Right *			
Peds					Peds			
WB Left	*				SB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	21.0A				Green	15.0A	15.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
WB	L	493	1408	0.209	0.350	8.9	B	23.0	C
	R	441	1260	0.898	0.350	26.6	D		
NB	L	352	1408	0.759	0.250	19.7	C	9.1	B
	T	1630	2964	0.536	0.550	5.8	B		
SB	T	741	2964	0.273	0.250	11.8	B	17.4	C
	R	315	1260	0.787	0.250	22.1	C		

Intersection Delay = 14.2 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.824

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 EB ramps (N-S) Milliken Avenue
Analyst: SV File Name: WMIL60EA.HC9
Area Type: Other 11-18-96 am peak
Comment: 2015 with project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	>	< 1					2	1	1	2	
Volumes	529		51					455	55	67	250	
Lane Width	12.0	12.0	12.0					12.0	12.0	12.0	12.0	
RTOR Vols			10						11			0
Lost Time	3.00		3.00					3.00	3.00	3.00	3.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left					SB Left		*	
Thru					Thru	*	*	
Right					Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	26.0A				Green	15.0A	10.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	618	1426	0.901	0.433	21.9	C	20.8	C
	LR	650	1501	0.000	0.433	0.0	A		
	R	553	1276	0.078	0.433	6.4	B		
NB	T	750	3002	0.638	0.250	14.3	B	14.0	B
	R	319	1276	0.144	0.250	11.3	B		
SB	L	238	1426	0.299	0.167	14.4	B	7.8	B
	T	1401	3002	0.188	0.467	6.0	B		

Intersection Delay = 15.4 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.706

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Haven Avenue
Analyst: SV File Name: WHAVMISA.HC9
Area Type: Other 11-18-96 am peak
Comment: 2015 with project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	2	1	2	2	1	1	3	1	1	3	<
Volumes	320	193	24	56	534	178	148	1823	23	89	899	311
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left *			
Thru		*			Thru	*		
Right		*			Right	*		
Peds					Peds			
WB Left	*				SB Left *			
Thru		*			Thru	*		
Right		*			Right	*		
Peds					Peds			
NB Right	*				EB Right *			
SB Right					WB Right *			
Green	13.0A	15.0A			Green 10.0A	35.0A		
Yellow/AR	3.0	3.0			Yellow/AR 3.0	3.0		

Cycle Length: 85 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	458	2996	0.735	0.153	26.4	D	23.5	C
	T	557	3154	0.365	0.176	20.1	C		
	R	441	1340	0.057	0.329	12.6	B		
WB	L	458	2996	0.129	0.153	20.1	C	42.7	E
	T	557	3154	1.010	0.176	54.4	E		
	R	441	1340	0.424	0.329	14.8	B		
NB	L	176	1498	0.885	0.118	49.8	E	30.1	D
	T	1948	4731	0.985	0.412	28.8	D		
	R	804	1340	0.030	0.600	4.5	A		
SB	L	176	1498	0.533	0.118	25.2	D	14.7	B
	TR	1870	4542	0.681	0.412	13.9	B		

Intersection Delay = 27.1 sec/veh Intersection LOS = D

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.932

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Haven Avenue
Analyst: SV File Name: WHVMISPM.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 with project with mitigation

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	3	1	1	3	1	1	3	<
Volumes	633	965	269	110	537	105	166	1532	52	279	1789	195
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
RTOR Vols			166			105			52			0
Lost Time	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	*	*			NB Left	*			
Thru		*	*		Thru			*	
Right		*	*		Right			*	
Peds					Peds				
WB Left	*				SB Left	*	*		
Thru			*		Thru		*	*	
Right			*		Right		*	*	
Peds					Peds				
NB Right	*				EB Right	*			
SB Right					WB Right	*			
Green	4.0A	21.0A	15.0A		Green	16.0A	14.0A	42.0A	
Yellow/AR	3.0	3.0	3.0		Yellow/AR	3.0	3.0	3.0	

Cycle Length: 130 secs Phase combination order: #1 #2 #3 #5 #6 #7

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	668	2996	0.997	0.223	58.5	E	37.7	D
	T	1456	4731	0.698	0.308	26.7	D		
	R	608	1340	0.178	0.454	13.6	B		
WB	L	115	2996	1.007	0.038	107.1	F	67.1	F
	T	582	4731	0.970	0.123	58.9	E		
	R	425	1577	0.000	0.269	0.0	A		
NB	L	196	1498	0.893	0.131	61.3	F	54.2	E
	T	1565	4731	1.031	0.331	53.5	E		
	R	607	1577	0.000	0.385	0.0	A		
SB	L	392	1498	0.750	0.262	33.9	D	31.5	D
	TR	2162	4684	0.966	0.462	31.2	D		

Intersection Delay = 43.0 sec/veh Intersection LOS = E

Lost Time/Cycle, L = 8.0 sec Critical v/c(x) = 0.964

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 04-13-1997
Center For Microcomputers In Transportation

Streets: (E-W) Greystone (N-S) Milliken
Analyst: SV File Name: WMILGREA.HC9
Area Type: Other 11-18-96 am peak
Comment: 2015 with project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1		1				1	2			2	<
Volumes	52		25				131	1100			444	84
Lane Width	12.0		12.0				12.0	12.0			12.0	
RTOR Vols			0						0			0
Lost Time	3.00		3.00				3.00	3.00			3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru					Thru	*	*	
Right	*				Right			
Peds					Peds			
WB Left					SB Left			
Thru					Thru		*	
Right					Right		*	
Peds					Peds			
NB Right	*				EB Right			
SB Right					WB Right			
Green	13.0A				Green	12.0A	26.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	301	1390	0.183	0.217	12.4	B	12.3	B
	R	270	1244	0.096	0.217	12.2	B		
NB	L	278	1390	0.496	0.200	14.9	B	4.7	A
	T	1999	2926	0.579	0.683	3.5	A		
SB	TR	1242	2867	0.447	0.433	7.9	B	7.9	B

Intersection Delay = 6.0 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.484

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Riverside (N-S) Milliken Avenue
Analyst: SV File Name: WMILRIVP.HC9
Area Type: Other 3-12-97 pm peak
Comment: 2015 with project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 <		1	1 <		1	1	1	1	2 <	
Volumes	330	399	212	46	202	317	122	256	39	175	462	292
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			0			0			39			0
Lost Time	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru		*			Thru		*	
Right		*			Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	25.0A	49.0A			Green	14.0A	30.0A	
Yellow/AR	3.0	3.0			Yellow/AR	3.0	3.0	

Cycle Length: 130 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	336	1679	1.033	0.200	81.2	F	62.2	F
	TR	646	1679	0.996	0.385	52.0	E		
WB	L	336	1679	0.143	0.200	27.7	D	33.7	D
	TR	618	1608	0.884	0.385	34.2	D		
NB	L	194	1679	0.661	0.115	41.1	E	34.2	D
	T	421	1767	0.638	0.238	31.0	D		
	R	421	1767	0.000	0.238	0.0	A		
SB	L	194	1679	0.950	0.115	73.5	F	59.9	E
	TR	792	3322	1.001	0.238	56.8	E		

Intersection Delay = 52.0 sec/veh Intersection LOS = E

Lost Time/Cycle, L = 8.0 sec Critical v/c(x) = 0.999

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Jurupa Street (N-S) Milliken Avenue
Analyst: SV File Name: WMLJURPM.HC9
Area Type: Other 3-11-97 pm peak
Comment: 2015 with project with mitigation

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	2	3	1	2	2	1	2	3	1	2	3	1
Volumes	233	1132	212	300	752	247	78	897	300	234	897	51
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vols			39			117			150			51
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	*				NB	Left	*			
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds						Peds				
WB	Left	*				SB	Left	*			
	Thru		*				Thru		*		
	Right		*				Right		*		
	Peds						Peds				
NB	Right	*				EB	Right	*			
SB	Right	*				WB	Right				
Green		8.0A	17.0A			Green		8.0A	15.0A		
Yellow/AR		3.0	3.0			Yellow/AR		3.0	3.0		

Cycle Length: 60 secs Phase combination order: #1 #2 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	380	2852	0.644	0.133	18.5	C	20.3	C
	T	1276	4503	0.934	0.283	22.7	C		
	R	595	1276	0.306	0.467	6.5	B		
WB	L	380	2852	0.831	0.133	26.3	D	24.2	C
	T	851	3002	0.931	0.283	25.6	D		
	R	362	1276	0.379	0.283	11.5	B		
NB	L	380	2852	0.216	0.133	15.0	B	16.2	C
	T	1126	4503	0.839	0.250	17.9	C		
	R	553	1276	0.286	0.433	7.2	B		
SB	L	380	2852	0.647	0.133	18.6	C	18.0	C
	T	1126	4503	0.839	0.250	17.9	C		
	R	650	1501	0.000	0.433	0.0	A		

Intersection Delay = 19.8 sec/veh Intersection LOS = C

Lost Time/Cycle, L = 12.0 sec Critical v/c(x) = 0.839

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Philadelphia Street (N-S) Milliken Avenue
Analyst: SV File Name: WMILPHIP.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 with project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes		> 1	<	1	> 1	1	1	3	<	2	3	<
Volumes	1	1	1	343	1	156	1	1118	304	90	1319	1
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vols			0			0			0			0
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	10.0A	25.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	LTR	311	1167	0.010	0.267	10.4	B	10.4	B
WB	L	362	1357	0.497	0.267	12.9	B	13.0	B
	LT	362	1357	0.503	0.267	13.0	B		
	R	327	1227	0.501	0.267	13.1	B		
NB	L	229	1372	0.004	0.167	13.5	B	13.4	B
	TR	1751	4202	0.855	0.417	13.4	B		
SB	L	457	2744	0.208	0.167	14.0	B	11.4	B
	TR	1805	4332	0.770	0.417	11.2	B		

Intersection Delay = 12.5 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.618

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Mission Boulevard (N-S) Milliken Avenue
Analyst: SV File Name: WMILMISP.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 with project with mitigation

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	3 <		2	3 <		1	2 <		2	2	
Volumes	279	962	117	59	533	188	175	955	159	247	1228	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vols			106			0			0			0
Lost Time	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*	*			NB Left	*		
Thru		*	*		Thru		*	
Right		*	*		Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru			*		Thru		*	
Right			*		Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	4.0A	19.0A	23.0A		Green	16.0A	53.0A	
Yellow/AR	3.0	3.0	3.0		Yellow/AR	3.0	3.0	

Cycle Length: 130 secs Phase combination order: #1 #2 #3 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	292	1408	1.005	0.208	75.2	F	35.0	D
	TR	1573	4446	0.651	0.354	23.5	C		
WB	L	108	2816	0.572	0.038	44.8	E	50.8	E
	TR	788	4268	0.963	0.185	51.3	E		
NB	L	184	1408	0.999	0.131	87.3	F	45.1	E
	TR	1207	2905	0.971	0.415	38.5	D		
SB	L	368	2816	0.706	0.131	39.1	D	55.2	E
	T	1231	2964	1.050	0.415	58.4	E		

Intersection Delay = 46.5 sec/veh Intersection LOS = E

Lost Time/Cycle, L = 8.0 sec Critical v/c(x) = 1.016

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 04-13-1997
Center For Microcomputers In Transportation

Streets: (E-W) Greystone (N-S) Milliken
Analyst: SV File Name: WMILGREP.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 with project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1		1				1	2			2	<
Volumes	191		87				34	1097			1427	22
Lane Width	12.0		12.0				12.0	12.0			12.0	
RTOR Vols			0						0			0
Lost Time	3.00		3.00				3.00	3.00			3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru					Thru	*	*	
Right	*				Right			
Peds					Peds			
WB Left					SB Left			
Thru					Thru		*	
Right					Right		*	
Peds					Peds			
NB Right	*				EB Right			
SB Right					WB Right			
Green	13.0A				Green	6.0A	32.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	301	1390	0.667	0.217	17.7	C	16.3	C
	R	270	1244	0.341	0.217	13.1	B		
NB	L	139	1390	0.259	0.100	16.3	C	3.9	A
	T	1999	2926	0.578	0.683	3.5	A		
SB	TR	1561	2926	0.977	0.533	22.0	C	22.0	C

Intersection Delay = 14.3 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.814

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 WB ramps (N-S) Milliken Avenue
Analyst: SV File Name: WMIL60WP.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 without project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes				1		1	1	2			2	1
Volumes				211		291	156	853			787	789
Lane Width				12.0		12.0	12.0	12.0			12.0	12.0
RTOR Vols						40			0			710
Lost Time				2.00		2.00	2.00	2.00			2.00	2.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left					NB Left	*		
Thru					Thru	*	*	
Right					Right			
Peds					Peds			
WB Left	*				SB Left			
Thru					Thru		*	
Right	*				Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	21.0A				Green	12.0A	18.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Group: Mvmts	Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
WB	L	510	1390	0.436	0.367	9.6	B	10.5	B
	R	456	1244	0.579	0.367	11.2	B		
NB	L	301	1390	0.545	0.217	15.1	C	7.0	B
	T	1658	2926	0.542	0.567	5.5	B		
SB	T	927	2926	0.894	0.317	20.5	C	19.5	C
	R	394	1244	0.213	0.317	9.7	B		

Intersection Delay = 12.3 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.681

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Sr 60 EB ramps (N-S) Milliken Avenue
Analyst: SV File Name: WMIL60EP.HC9
Area Type: Other 11-18-96 pm peak
Comment: 2015 with project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	>	< 1					2	1	1	2	
Volumes	305		210					704	199	310	682	
Lane Width	12.0	12.0	12.0					12.0	12.0	12.0	12.0	
RTOR Vols			0						0			0
Lost Time	2.00		2.00					2.00	2.00	2.00	2.00	

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left			
Thru					Thru	*		
Right	*				Right	*		
Peds					Peds			
WB Left					SB Left		*	
Thru					Thru	*	*	
Right					Right			
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	16.0A				Green	20.0A	15.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	394	1390	0.815	0.283	21.5	C	18.7	C
	LR	415	1463	0.000	0.283	0.0	A		
	R	352	1244	0.627	0.283	14.6	B		
NB	T	1024	2926	0.724	0.350	12.8	B	12.3	B
	R	435	1244	0.480	0.350	10.5	B		
SB	L	371	1390	0.879	0.267	28.1	D	11.0	B
	T	1902	2926	0.378	0.650	3.2	A		

Intersection Delay = 13.1 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 6.0 sec Critical v/c(x) = 0.799

HCM: SIGNALIZED INTERSECTION SUMMARY Version 2.4a 03-21-1997
Center For Microcomputers In Transportation

Streets: (E-W) Riverside (N-S) Milliken Avenue
Analyst: SV File Name: WMILRIVA.HC9
Area Type: Other 3-12-97 am peak
Comment: 2015 with project

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1 <		1	1 <		1	1	1	1	2 <	
Volumes	140	101	78	100	215	200	64	189	45	39	171	65
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vols			16			39			9			51
Lost Time	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Signal Operations

Phase Combination	1	2	3	4	5	6	7	8
EB Left	*				NB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds			
WB Left	*				SB Left	*		
Thru	*				Thru		*	
Right	*				Right		*	
Peds					Peds			
NB Right					EB Right			
SB Right					WB Right			
Green	26.0A				Green	12.0A	13.0A	
Yellow/AR	3.0				Yellow/AR	3.0	3.0	

Cycle Length: 60 secs Phase combination order: #1 #5 #6

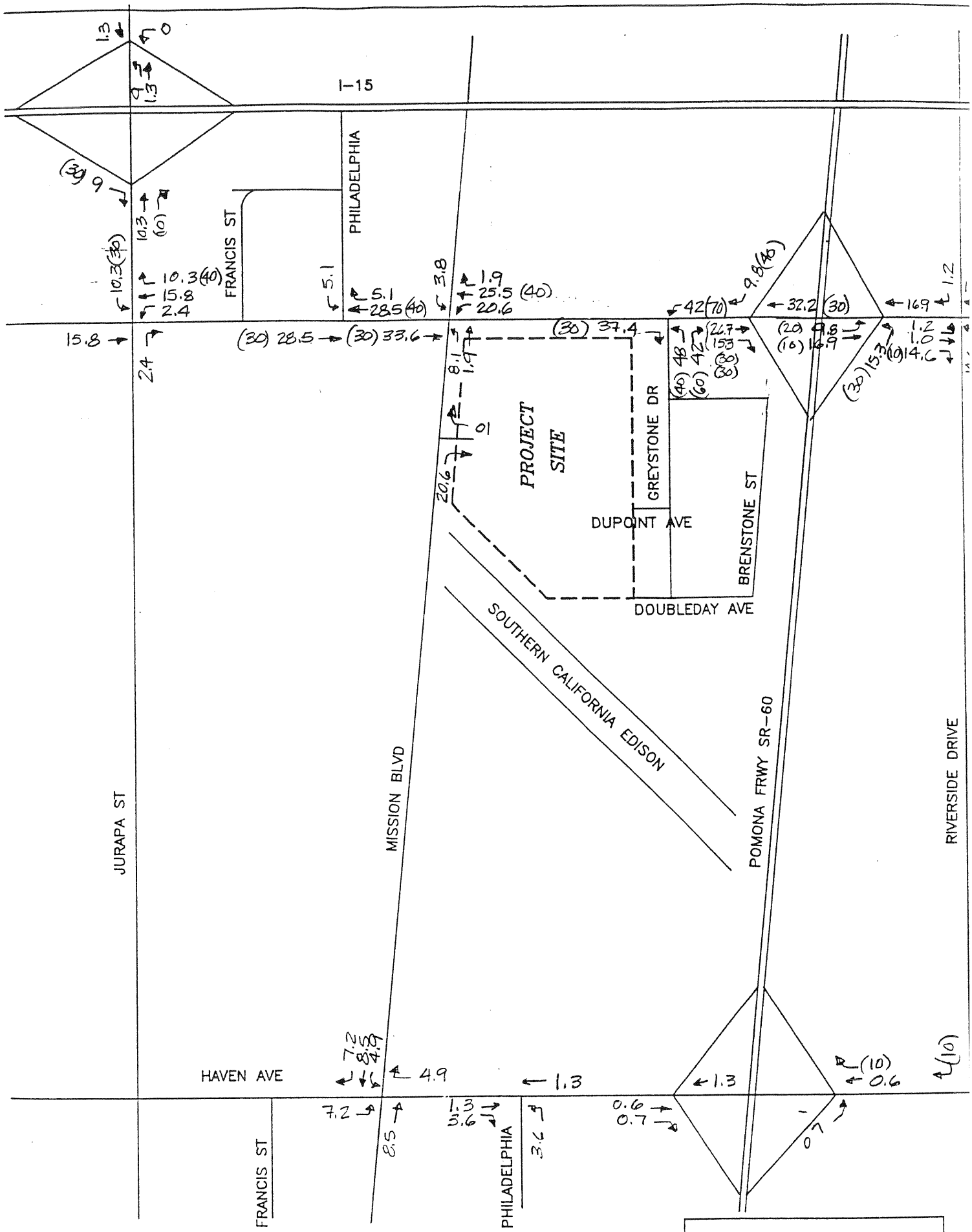
Intersection Performance Summary

	Lane Mvmts	Group: Cap	Adj Sat Flow	v/c Ratio	g/C Ratio	Delay	LOS	Approach: Delay	LOS
EB	L	176	406	0.836	0.433	28.7	D	17.0	C
	TR	720	1661	0.238	0.433	7.0	B		
WB	L	444	1025	0.236	0.433	7.0	B	8.5	B
	TR	720	1661	0.550	0.433	8.9	B		
NB	L	336	1679	0.200	0.200	13.0	B	13.8	B
	T	383	1767	0.520	0.217	14.4	B		
	R	325	1502	0.117	0.217	12.2	B		
SB	L	336	1679	0.122	0.200	12.7	B	12.7	B
	TR	758	3499	0.269	0.217	12.7	B		

Intersection Delay = 12.4 sec/veh Intersection LOS = B

Lost Time/Cycle, L = 9.0 sec Critical v/c(x) = 0.605

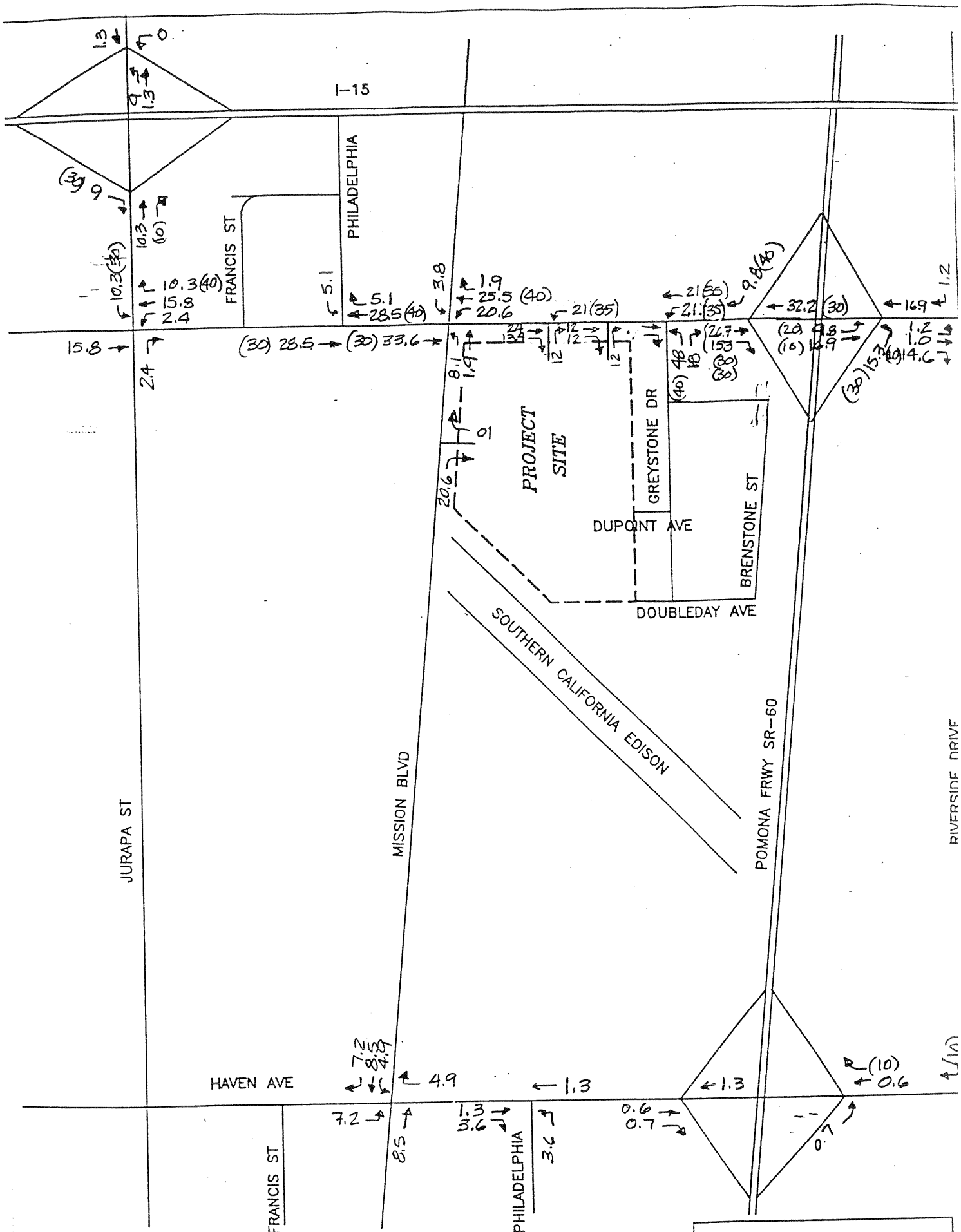
APPENDIX E
Project Percent Assignment



PERCENT TRIP ASSIGNMENT
BRIDGESTONE PROJECT

O'ROURKE ENGINEERING

N NTS


I-15
PHILADELPHIA
FRANCIS ST
PROJECT SITE
GREYSTONE DR
DUPONT AVE
BRENSTONE ST
DOUBLEDAY AVE
SOUTHERN CALIFORNIA EDISON
JURAPA ST
MISSION BLVD
POMONA FRWY SR-60
HAVEN AVE
RIVERSIDE DRIVE
PERCENT TRIP ASSIGNMENT
TOTAL PROJECTS
O'ROURKE ENGINEERING
NTS