TRAFFIC STUDY FOR

SPIRIT OF JOY CHURCH

PRE-APP 07-142

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1.0 INTRODUCTION

This Traffic Study was prepared by ***RCE*** to evaluate the potential traffic and circulation impacts related to the construction of the Spirit of Joy Church in Ramona. The proposed site is vacant land located on the north side of Highland Valley Road north of State Route 67 (SR-67) in the unincorporated area of Ramona in the County of San Diego.

1.1 PROJECT DESCRIPTION

The project proposes the construction of an 18,695 church on 8.86 acres. The project consists of a 5,745 s.f. sanctuary building (seating capacity 410), a 5,550 s.f. fellowship hall, two 3,700 s.f. administration/classroom buildings, a 250 s.f. maintenance building, and 182 parking spaces. The traffic generation expected from the development of this project used the square footages of all of the buildings, with the exception of the maintenance building, for a total project square footage of 18,695 s.f. This represents a conservative approach because, due to parking restrictions, the fellowship hall and sanctuary will not be allowed to be used simultaneous. Appendix C shows the scheduling of regular hours, events and special events that are proposed on the site. The church facilities will not be rented out for non-church uses. The development of this church project is estimated to generate a total of 168 weekday trips with 8 and 13 vehicles per hour being generated during the morning and afternoon peak hour on the adjacent roadways, respectively. These volumes are well below the County of San Diego's "Criteria for the Need to Prepare a Traffic Impact Study" contained in the "County of San Diego Report Format & Content Requirements" (June 30, 2009 version).

County staff has requested that we also include an analysis of weekday traffic conditions for "existing" and "existing plus project" conditions due to the poor level of service which currently exists on adjacent facilities during the weekdays.

Since the major activities are proposed for Sundays, we have calculated the project trip generation on Sundays as follows: 673 ADT with 220 peak hour trips. Since these volumes meet the County's criteria for a Focused Traffic Impact Study, this report will also analyze this project's Sunday impacts to the roadway system.

Access to the site will be through a proposed roadway which will connect to Highland Valley Road. See figure 1 for the project site plan.

1.2 STUDY AREA

The boundaries of the study area were determined as intersections that operate at LOS E/F and received 25 or more peak hour project trips. The following intersections were determined to be included in this study area:

- SR-67 & Highland Valley Road
- SR-67 & Mussey Grade Road
- SR-67 & Archie Moore Road
- Project Roadway & Highland Valley Road
- SR-67 & Ramona Street

2.0 EXISTING TRAFFIC CONDITIONS

The following is an assessment of the existing conditions of the roadway network adjacent to the project relevant to this study.

2.1 EXISTING CIRCULATION NETWORK

Access to the study area is provided by the following facilities:

SR-67 –is a circulation element roadway classified as a four–lane "Collector Road" from Mussey Grade Road to Ramona Street in the County of San Diego's General Plan and is included in the bicycle network system. West of Mussey Grade Road, SR-67 is classified as a "Major Road". SR-67 is classified by Caltrans as a "four-lane conventional highway" and provides access to the Lakeside and Poway areas west of Ramona. The roadway within the study area is developed as a two-lane highway two through lanes and shoulders with signalized intersection spacing over one mile. Major intersections along SR-67 occur at Archie Moore Road (unsignalized), Mussey Grade Road (unsignalized), and Highland Valley Road (signalized). SR-67 west of Archie Moore Road is developed with four through lanes and shoulders.

Highland Valley Road – Highland Valley Road is a two-lane roadway which is classified as a "rural collector" in the County Circulation Element and is also included in the bicycle network system. Highland Valley Road provides access to SR-67 for the properties located to the north. The portion of the roadway within the study area is currently improved to two lanes with shoulders with a pavement width of 36 to 40 feet.

Dye Road – Dye Road is classified as a Major Road in the County Circulation Element and is also included in the bicycle network system. Dye Road currently provides access to the San Diego Country Estates development as well as the Barona Indian Reservation. Dye Road is included in the Ramona Community Plan as a major component to the proposed "south bypass" to provide alternatives to SR-67 and Main Street. The roadway within the study area is currently improved to a two-lane facility with a pavement width of approximately 40 feet.

2.2 EXISTING TRAFFIC VOLUMES

Existing Weekday and Sunday daily traffic volume data and peak hour turning volumes for the study area roadways and intersections were obtained from traffic counts performed during May, 2007 and August, 2009 by Southland Car Counters. The County of San Diego requires traffic counts to be taken within two years to accurately reflect current conditions. New counts were taken in September 2008 and compared with the May 2007 counts. It was determined that the September 2008 counts were slightly less than the May 2007 counts. It was agreed that we would use the May 2007 counts in this study to provide a more conservative analysis. Refer to figures 2, 3 & 4 for existing roadway characteristics and traffic volumes. We have also researched count data for 2010 traffic counts along SR-67 and have determined that the 2007 and 2009 counts showed greater ADT volumes that the 2010 counts. We have therefore stayed with the previous 2007 and 2009 counts to provide a more conservative analysis in this report. Actual count sheets are located in Appendix A.

2.3 LEVEL OF SERVICE METHODOLOGY

The Level of Service (LOS) is a qualitative measure used to describe the operational conditions within a traffic stream, and a motorist and/or passenger's perception of the performance of the roadway. LOS is designated a letter from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS C is typically used as a design standard, while LOS D is considered acceptable for peak period operating conditions by most jurisdictions.

2.3.1 ROADWAY LEVEL OF SERVICE

Circulation element roadways within the study area were evaluated using the County of San Diego's daily level of service volume table. See Appendix E. This methodology compares daily traffic volumes to roadway classifications to determine the approximate daily street segment level of service. This methodology is based on generalized assumptions regarding roadway design and traffic compositions and often does not accurately reflect peak hour operating characteristics. It is intended to be used as a guide to help determine roadway classifications and sizing. According to the San Diego County General Plan Public Facilities Element, projects that significantly increase congestion on roadways operating at LOS E or LOS F must provide mitigation. If adequate mitigation cannot be provided, then a statement of overriding findings would need to be made by the decision-makers. Caltrans uses Measures of Effectiveness (MOE) to determine the target LOS of the facility. If the facility is operating at less than this target LOS, the existing MOE should be maintained. Any degradation of operations below these levels is considered a direct impact and should be mitigated accordingly.

2.3.2 INTERSECTION LEVEL OF SERVICE

Intersection levels of service were evaluated using the 2000 Highway Capacity Manual methods for signalized and unsignalized intersections. The University of Florida Transportation Research Center's Highway Capacity Software program was used in analyzing the intersections within the study area.

The County of San Diego Public Facilities Element has set standards for adequate traffic flow through an existing intersection at LOS D or better. If the delay at an existing intersection declines to LOS E (unstable flow) or worse, it is considered an unacceptable condition by the County.

2.4 ANALYSIS OF EXISTING TRAFFIC CONDITIONS

2.4.1 ROADWAYS

Existing Weekday and Sunday average daily traffic volumes (ADT) shown in figures 3 & 4 were compared to the County's capacity standards to determine the levels of service for the circulation element roadway segments. The County's capacity standards are based on average daily traffic on the facility. This analysis reveals that all roadways within the study area operate at LOS D or better with the exception of SR-67 between Archie Moore Road and Highland Valley Road which currently operates at LOS F, and SR-67 between Highland Valley Road and Ramona Street which currently operates at LOS F during the weekdays and LOS E on Sundays according to the County's capacity standards. See Table 1.

2.4.2 INTERSECTIONS

During Weekday conditions, all study area intersections operate at LOS D or better with the exception of the Highland Valley Road & SR-67 intersection which operates at LOS E during the morning peak hour and the intersection of Ramona Street & SR-67 which operates at LOS E during the afternoon peak hour.

All study area intersections operate at LOS C or better under existing Sunday conditions.

See Appendix B for LOS calculations.

3.0 EXISTING PLUS PROJECT TRAFFIC CONDITIONS

To properly evaluate the traffic impacts of this project on the existing roadways, the amount of traffic generated by the project must be estimated and distributed over the study area street system. Section 3.1 describes the methods and assumptions used to forecast project generated traffic volumes. Section 3.2 describes the analysis and results to determine the project impacts on the existing streets.

3.1 PROJECT-GENERATED TRAFFIC VOLUMES

3.1.1 PROJECT TRAFFIC GENERATION

This project proposes to construct an 18,695 square foot church. Using the Sandag land use designation of "Church", weekday ADT is estimated at 9 trips per 1000 square feet of building area, with 5% AM and 8% PM peak hour trips. This calculation reveals a total weekday project generated ADT of 168 vehicles/day. The net increase of traffic to the street system during the weekday AM peak is 8 trips and during the PM peak is 13 trips. These volumes are well below the County of San Diego's "Criteria for the Need to Prepare a Traffic Impact Study" contained in the "County of San Diego Report Format & Content Requirements". Please refer to figure 6 for weekday project generated trips. This project will not generate a significant amount of traffic during weekdays, however County staff has requested that we include an analysis of weekday traffic conditions for "existing" and "existing plus project" conditions due to the poor level of service which currently exists on adjacent facilities during the weekdays.

Please refer to Appendix C for the church schedule of regular activities and events throughout the year.

To compute Sunday traffic generation, the Sandag rate of 36 trips per 1000 square feet of building area was used. Because church activities cause traffic peaks before, after and in between services, we refered to ITE for peak hour calculations. For peak hour calculations, the ITE Trip Generation Manual (7th edition) was used (11.76 trips per 1000 square feet). This calculation reveals a total Sunday project generated ADT of 673 vehicles/day. The net increase to traffic during the Sunday peak hour is 220 vehicles/hour.
Sunday peak hours were determined based on the Church schedule (Appendix C) to more accurately analyze the project related impacts. Because the Church activities are scheduled, this represents a more accurate assessment of project impacts to the surrounding roadway system. It was determined that the existing Sunday peak hours (11:45 am, and 2:00 pm) on the surrounding roadways occur when no Church activities are scheduled, therefore, no project related traffic will be added to the existing background traffic.

3.1.2 PROJECT TRAFFIC DISTRIBUTION

To properly evaluate impacts of the project to the surrounding street system, it is necessary to distribute project-generated traffic in a manner consistent with the surrounding land uses and anticipated origins and destinations. The distribution of trips generated by this project are shown in figures 5, 6 and 7. Figures 8 & 9 show existing plus project traffic volumes.

3.2 EXISTING PLUS PROJECT IMPACTS

Roadway Segments:

The LOS of the study area roadway system based on existing plus project traffic volumes are shown in table 1. Analysis of these volumes reveal that all roadways in the project study area will operate at LOS D or better with the exception of SR-67 between Archie Moore Road and Highland Valley Road which continues to operate at LOS F during Weekday and Sunday conditions, and SR-67 between Highland Valley Road and Ramona Street which continues to operate at LOS F during Weekday conditions and LOS E during Sunday conditions based on the County's capacity standards.

Intersections:

During Weekday conditions, all study area intersections continue to operate at LOS D or better with the exception of the Highland Valley Road & SR-67 intersection which continues to operate at LOS E during the morning peak hour, and the intersection of Ramona Street & SR-67 which continues to operate at LOS E during the afternoon peak hour.

During Sunday conditions, all study area intersections continue to operate at LOS C or better with the addition of project traffic.

See Appendix B for LOS calculations.

4.0 EXISTING PLUS CUMULATIVE PROJECTS

The County Board of Supervisors adopted the County's Transportation Impact Fee (TIF) program in April 2005 (and currently undergoing an update) to collect fees to fund identified transportation facilities. The TIF program uses the projection method of analyzing cumulative impacts as provided in section 15130(b1B) of CEQA guidelines. San Diego Association of Governments (SANDAG) regional land use forecasts and traffic models were used to determine the amount of expected future development and the types of transportation improvements needed. The County will use impact fees to fund construction of the development portion of needed road improvements. These facilities (TIF facilities) will provide the additional capacity necessary to accommodate the increased traffic generated by future development. The TIF program provides an opportunity for the project to mitigate its cumulative traffic impacts.

Sandag's Trip Generation Rates provide calculations for various land uses of "weekday" trip generation rates. Since the major traffic generation for this project occurs on Sundays, calculation of cumulative projects traffic volumes using Sandag's rates is not possible. The applicant has agreed to participate in the TIF program as a means of mitigating the project's potential cumulative traffic impacts to TIF facilities.

TABLE 1: Street Segment LOS

Segment	LOS E Capacity	Existing Sunday		Existing + Project Sunday		Existing Weekday		Existing + Project Weekday	
	ADT	LOS	ADT	LOS	ADT	LOS	ADT	LOS	ADT
SR-67:									
Archie to Mussey	16,200	F	17,688	F	17,762	F	23,942	F	23,965
Mussey to Highland Valley	16,200	F	18,337	F	18,472	F	24,250	F	24,300
Highland Valley to Pala	16,200	E	15,687	E	15,889	F	24,250	F	24,300
Highland Valley:									
West of SR-67	16,200	A	1,695	A	1,897	B	3,167	B	3,217

TABLE 2: Intersection LOS

Intersection	Existing		Existing + Project		Existing - Weekday				Exist. + Project Weekday			
	Sunday AM		Sunday AM		AM		PM		AM		PM	
signalized	LOS	Delay (ILV)	LOS	Delay (ILV)	LOS	Delay (ILV)	LOS	Delay (ILV)	LOS	Delay (ILV)	LOS	Delay (ILV)
SR-67/Highland	C	20.6 (793)	C	27.9 (841)	E	76.6 (1359)	D	36.4 (1215)	E	76.7 (1360)	D	36.6 (1219)
SR-67/Ramona	C	23.6 (772)	C	23.9 (785)	D	36.6 (1085)	E	56.1 (1270)	D	36.9 (1085)	E	56.2 (1270)
non-signalized												
SR-67/Mussey	B	13.6	B	13.9	C	19.3	C	21.3	C	19.3	C	21.3
SR-67/Archie	B	13.8	B	14.1	D	29.9	D	30.5	D	30.1	D	30.7
Highland Valley & Project Roadway	-		A	9.9					A	9.3	A	9.4

Note: Delays shown are average intersection delays in seconds.

5.0 PROJECT IMPACTS

Based on the guidelines set forth in the County of San Diego's "Guidelines for Determining Significance", direct impacts would occur when the significance criteria outlined are exceeded. Direct impacts are impacts that would result solely from the implementation of the project.

Cumulative impacts occur when: 1) build-out of all near term projects result in a cumulative traffic impact and 2) the amount of traffic generated by the individual proposed project contributes (even in a small part) to that cumulative impact.

ROADWAY SEGMENTS:

According to these guidelines, exceeding the following significance guidelines will be considered substantial evidence that the project will have a significant direct impact on a road segment if:

- The additional or redistributed ADT generated by the proposed project will cause an adjacent or nearby County Circulation Element Road to operate below LOS D and will significantly increase congestion as identified in the table below, and/or
- The additional or redistributed ADT generated by the proposed project will cause a residential street to exceed its design capacity, and/or
- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a Circulation Element Road, State Highway or intersection currently operating at LOS E or LOS F as identified in the table below.

Measures of Significant Project Impacts to Congestion
Allowable Increases on Congested Roads and Intersections

Road Segments			
	2-Lane Road	4-Lane Road	6-Lane Road
LOS E	200 ADT	400 ADT	600 ADT
LOS F	100 ADT	200 ADT	300 ADT
Intersections			
	Signalized	Unsignalized	
LOS E	Delay of 2 seconds	20 peak hour trips on a critical movement	
LOS F	Delay of 1 second, or 5 peak hour trips on a critical movement	5 peak hour trips on a critical movement	

The segments of SR-67 between Archie Moore Road and Ramona Street are currently developed as a two-lane highway with signalized intersection spacing over one mile. The following table summarizes the allowable increases to existing traffic volumes from the project:

Level of Service	LOS Criteria	Impact Significance Level
LOS E	>16,200 ADT	>325 ADT
LOS F	>22,900 ADT	>225 ADT

The following tables summarize the project related direct impacts:

TABLE 3: Street Segment Impact Summary
Sunday

Segment	Existing	Existing + Project		
	LOS	LOS	Project ADT	Direct Impact
SR-67:				
Archie to Mussey Grade	F	F	74	No
Mussey Grade to Highland Valley	F	F	135	**No**
Highland Valley to Pala	E	E	202	**No**
Highland Valley:				
West of SR-67	A	A	471	No

Weekday

Segment	Existing	Existing + Project		
	LOS	LOS	Project ADT	Direct Impact
SR-67:				
Archie to Mussey Grade	F	F	18	No
Mussey Grade to Highland Valley	F	F	34	**No**
Highland Valley to Pala	F	F	50	**No**
Highland Valley:				
West of SR-67	B	B	118	No

In this case, this project will have no direct impacts to the two-lane highway sections of SR-67 from Archie Moore Road to Ramona Street based on County criteria.

Caltrans uses Measures of Effectiveness (MOE) to determine the target LOS of the facility. If the facility is operating at less than this target LOS, the existing MOE should be maintained. Any degradation of operations below these levels is considered a direct impact and should be mitigated accordingly. For two-lane Highways, the MOE categories are as follows:

LOS	Percent Time-Spent-Following	Average Travel Speed (mi/hr)
A	<35	<55
B	>35-50	>50-55
C	>50-65	>45-50
D	>65-80	>40-45
E	>80	<40

The current traffic patterns on SR-67 reflect high peak hour directional movements in the westbound direction during the morning peak hours and eastbound during the evening peaks. Calculations were performed to determine the impacts of the proposed project. See appendix H for travel time and Average Travel Speed calculations. The following table shows the travel times and speeds along these segments during existing and existing plus project scenarios:

Segment	Length (miles)	EXISTING (SUNDAY AM)				EXISTING + PROJECT (SUNDAY AM)				Project Impacts		
		Segment Travel Time (sec)	Delay (sec)	Total Travel Time (sec)	Arterial Speed (MPH)	Segment Travel Time (sec)	Delay (sec)	Total Travel Time (sec)	Arterial Speed (MPH)	Reduction in Average Travel Speed	Reduction in MOE?	Impact?
E/B SR-67 - Ramona Street to Archie Moore Road												
Ramona St. to Archie Moore Rd	4.0	320	33.8	353.8	40.7	320	34.9	354.9	40.6	0.1	No	No
W/B SR-67 - Pala Street to Archie Moore Road												
Ramona to Archie Moore Rd	4.0	320	16.2	336.3	42.8	320	16.4	336.3	42.8	0.0	No	No

Segment	Length (miles)	EXISTING (WEEKDAY AM/PM)				EXISTING + PROJECT (WEEKDAY AM/PM)				Project Impacts		
		Segment Travel Time (sec)	Delay (sec)	Total Travel Time (sec)	Arterial Speed (MPH)	Segment Travel Time (sec)	Delay (sec)	Total Travel Time (sec)	Arterial Speed (MPH)	Reduction in Average Travel Speed	Reduction in MOE?	Impact?
E/B SR-67 - Ramona Street to Archie Moore Road												
Ramona St. to Archie Moore Rd	4.0	320/ 320	42.0/ 80.3	362.0/ 400.3	39.8/ 36.0	320/ 320	42.0/ 82.5	362.0/ 402.4	39.8/ 35.8	0.0/ 0.2	No/ No	No/ No
W/B SR-67 - Pala Street to Archie Moore Road												
Ramona to Archie Moore Rd	4.0	320	35.9/ 20.1	355.9/ 340.1	40.5/ 42.3	320/ 320	35.9/ 20.1	355.9/ 340/1	40.5/ 42.3	0.0/ 0.0	No/ No	No/ No

The above table demonstrates that the addition of project generated traffic to the study area segment of SR-

67 will not have significant direct impacts based on Caltrans criteria.

INTERSECTIONS:

According to County guidelines, exceeding the following significance guidelines will be considered substantial evidence that the project will have a significant direct impact on an intersection if:

1. Signalized:

- The additional or redistributed ADT generated by the proposed project will cause a signalized intersection to operate below LOS D and will significantly increased congestion as identified in the table above, and/or
- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a signalized intersection currently operating at LOS E or LOS F as identified in the table above.

2. Unsignalized:

- The proposed project will generate 20 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operated below LOS D, or
- The proposed project will generate 20 or more peak hour trips to a critical movement of an unsignalized intersection and the unsignalized intersection currently operates at LOS E, or
- The proposed project will generate 5 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate below LOS E, or
- The proposed project will generate 5 or more peak hour trips to a critical movement of an unsignalized intersection and the unsignalized intersection currently operates at LOS F, or
- Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance and/or other factors, it is found that the generation rate less than those specified above would significantly impact the operations of the intersection.

Caltrans criteria for MOE for a signalized intersection also uses Control Delay per Vehicle (sec/veh) to determine if the proposed project degrades the intersection from the target LOS at the transition between LOS C to LOS D. If an existing intersection is operating at less than the appropriate target LOS, the existing MOE should be maintained.

Please refer to the tables below for a summary of the Intersection impacts.

TABLE 4: Intersection Impact Summary

Intersection	Existing	Existing + Project			Existing Weekday		Existing + Project Weekday					
	Sunday AM	Sunday AM			AM	PM	AM			PM		
signalized	LOS	LOS	Delay Increase	Direct Impact	LOS	LOS	LOS	Delay Increase	Direct Impact	LOS	Delay Increase	Direct Impact
SR-67/Highland	C	C	7.3	No	E	D	E	0.1	No	D	0.2	No
SR-67 & Ramona	C	C	0.3	No	D	E	D	0.3	No	E	0.1	No
non-signalized			Trip increase									
SR-67/Mussey	B	B	15	No	C	C	C	0.0	No	C	0.0	No
SR-67/Archie	B	B	7	No	D	D	D	0.2	No	D	0.2	No
Highland/ Project Roadway	_	B	9.9	No			A	9.3	No	A	9.4	No

Notes: "Delay increase" shown is the increase in average intersection delay in seconds.
"Trip increase" shown is the increase in peak hour trips on a critical movement.

In this case, this project will have no direct impacts to the study area intersections during Weekday or Sunday conditions.

5.1 PROPOSED MITIGATION MEASURES

DIRECT IMPACTS:

As outlined in the above tables, the addition of project generated trips to the surrounding roadways will not have direct impacts to the existing two-lane highway section of SR-67 from Archie Moore Road to Pala Street or to the study area intersections. Therefore, no mitigation measures for direct impacts are necessary with this project.

CUMULATIVE IMPACTS:

Sandag's Trip Generation Rates provide calculations for various land uses of "weekday" trip generation rates. Since the major traffic generation for this project occurs on Sundays, calculation of cumulative projects traffic volumes using Sandag's rates is not possible. For weekday conditions, the addition of projected cumulative projects traffic volumes to the street segments which already operate at LOS E and F will trigger a cumulative

impact for any project which adds traffic to these roadways. The applicant has agreed to participate in the TIF program as a means of mitigating the project's potential cumulative traffic impacts to TIF facilities.

6.0 ADDITIONAL ITEMS ANALYZED

6.1 ALTERNATIVE FORMS OF TRANSPORTATION

- BIKE LANES: All circulation element roadways in the study area are included in the County of San Diego bicycle network system. The project proposes to improve Highland Valley Road adjacent to the project site to provide "rural collector" standards with bike lanes.

- PUBLIC TRANSPORTATION: Bus service is provided for the Ramona area to Escondido, via SR-78 and to El Cajon, via SR-67. No bus stops are currently located in the project area. Improvements proposed to improve the capacity of the SR-67 & Highland Valley Road intersection will reduce delays to public transportation vehicles during the peak hours. Development of this project as proposed will not adversely affect the current bus service.

6.2 PROJECT ACCESS

Access to the project will be via a roadway which will access Highland Valley Road. No direct access to SR-67 is proposed with this project.

The County of San Diego design guidelines establish a minimum distance between non-circulation element roadways entering onto a circulation element roadway as 300 feet. This project is designed with a minimum of 1,000 feet of spacing along Highland Valley Road between the project roadway and SR-67 and between the project roadway and future roadways proposed by the Cumming Ranch project.

6.3 PARKING REQUIREMENTS

Section 6766 of the San Diego County Zoning Ordinance (see Appendix F) requires that one parking space be provided for every 4 persons based on the largest assembly room permitted by the Uniform Building Code. Calculations received from the project applicant reveals that a maximum of 726 occupants can be accommodated on this site at one time. This includes the maximum allowed during regular services and any special events. This results in 182 parking spaces required.

The following is an explanation of the method for calculating the parking requirements for the church:

PARKING SUMMARY
Floor Area of Main Gathering Space (Sanctuary) 5,082 s.f.
Occupant Load Factor (without fixed seats)
7 s.f. per occupant
Number of Occupants (5,082 / 7 =) 726 occupants
Parking ratio required (per DPLU) 1 space per 4 occupants
Number of Parking Spaces (726 / 4 =) 182 parking Spaces

EXPLANATION
The occupancy is calculated without fixed seating. The actual seating layout, taking into account the chancel area, choir area, and required aisle spaces, will result in a total of 406 in the congregation, 12 in the choir, one at the piano, and two pastors, for an approximate total of 421. This would equate to 105 parking spaces, however, for purposes of this calculation, the ratio of 1:4 is used on the 726 occupants.

6.4 CONSTRUCTION TRAFFIC

During construction operations relating to this project, construction traffic will use the existing street system for access. Approximately 15,300 cubic yards of material is estimated to be imported to the site. This is estimated to generate approximately 100 ADT related to truck traffic hauling the imported fill material. This activity will be conditioned to off-peak hours to avoid impacts to the morning and afternoon commutes. The source of the import material has not been identified at this time, however, it is anticipated that the trucks will use existing State Highway 67 and the existing County roadways to access the site. The surrounding roadways are adequate to handle this type or activity.

6.5 RIGHT OF WAY DEDICATIONS

The project proposed to provide right of way dedications along the frontage of SR-67 to provide for a 4-lane highway to the satisfaction of Caltrans and the County of San Diego. Preliminary analysis sets this right of way width at 66 feet from centerline. The project also will provide right of way dedications along the frontage of Highland Valley Road as a "rural collector – with bike lanes" classification. This is 47 feet from centerline. As Highland Valley Road approaches SR-67, County standards requires an additional 7 feet of right of way on each side of the centerline to accommodate a left turn lane onto SR-67. County standards require this additional 7 feet be dedicated to provide for a 250 foot left turn lane with tapers.

6.6 YEAR 2030 ANALYSIS

This proposed project is processing a Major Use Permit (MUP). To determine if development of this project will affect long range transportation planning and require a Year 2030 analysis, we have analyzed the traffic generation created by currently allowed uses and compares that to traffic generated by the project. The following table compares these:

General Plan		Proposed Project	
Land Use	**ADT**	**Land Use**	**ADT**
Estate – 1-2 DU/AC	204 *	Church	168 *

* Weekday traffic volumes

Since the traffic generated by the proposed project is substantially less than currently allowed, the County is not requiring an analysis of year 2030 conditions in this report.

7.0 CONDITIONS OF APPROVAL

It is recommended that the following traffic related improvements be made conditions of approval for development of this project:

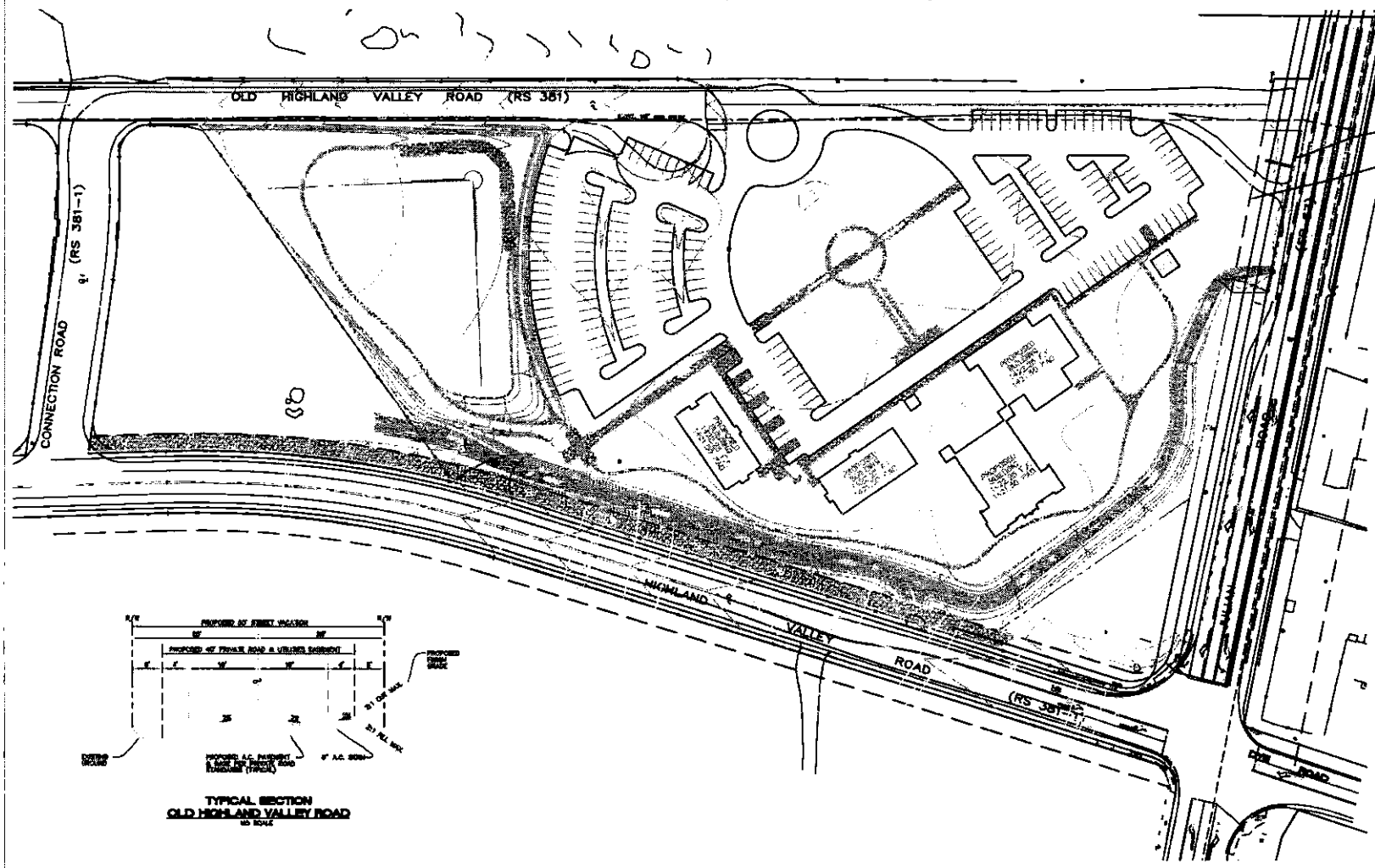
- Improve Highland Valley Road adjacent to the site to "rural collector" standards with bike lanes and left turn lanes at all project access streets.
- Dedicate right of way along the project's frontage with SR-67 and Highland Valley Road to the satisfaction of Caltrans and the County of San Diego.
- All curb, sidewalk and curb ramps must meet current ADA requirements.
- All work within the County right-of-way will require County construction and encroachment permits.
- All work within Caltrans right-of-way will require an encroachment permit from Caltrans.
- Pay appropriate TIF fees to mitigate potential cumulative impacts.
- All truck traffic associated with the import of fill material during construction activities will not be allowed on public streets during peak traffic hours.

Please feel free to call me at (619)589-9151 if you have questions regarding any of the above.

Sincerely,

Richard Crafts T.E., C.E.

SPIRIT OF JOY LUTHERAN CHURCH
CONCEPTUAL GRADING PLAN



OWNER / APPLICANT

SPIRIT OF JOY LUTHERAN CHURCH
1725 SAN JOSE STREET, SUITE 3
PANORAMA, CALIFORNIA 92083
FOR/

SOURCE OF TOPOGRAPHY

SAN-LO AERIAL SURVEYS DATED JUNE 3, 2003

ESTIMATED GRADING QUANTITIES

TOTAL FILL	35,300	CUBIC YARDS
TOTAL CUT	20,000	CUBIC YARDS
IMPORT	15,300	CUBIC YARDS

ASSESSOR'S PARCEL NUMBERS

[illegible]

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- PROPERTY BOUNDARY
- DIRECTION OF DRAINAGE (SLOPE MIN.)
- PROPOSED STRUCTURE
- PROPOSED CONCRETE PAVEMENT
- PROPOSED A.C. PAVEMENT
- PROPOSED LANDSCAPE AREA
- PROPOSED CONCRETE CURB
- PROPOSED STORM DRAIN
- PROPOSED CATCH BASIN

NOTES

1. THIS PLAN IS PROVIDED TO ALLOW FOR FULL AND ADEQUATE DISCRETIONARY REVIEW OF A PROPOSED DEVELOPMENT PROJECT.

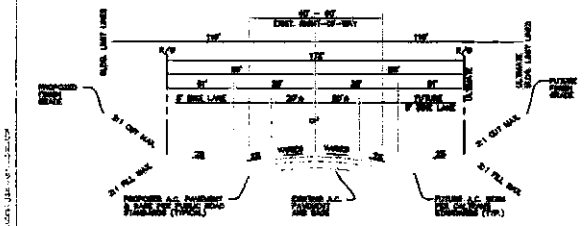
   THE PROPERTY OWNER ACKNOWLEDGES THAT ACCEPTANCE OR APPROVAL OF THIS PLAN DOES NOT CONSTITUTE AN APPROVAL TO COMMENCE ANY GRADING WORK HOWEVER, YOU ARE ADVISED TO OBTAIN A VALID GRADING PERMIT BEFORE COMMENCING SUCH ACTIVITY.
2. CUT SLOPES STEEPER THAN 3:1 WILL BE REQUIRED TO HAVE THE SLOPE STABILITY CERTIFIED BY A SOILS ENGINEER PER GRADING ORDINANCE SECTION 87.401 A.
3. PARKING LOTS SHALL BE SHEET FLOW WITH A VARIABLE NONERODIBLE SURFACE OR A REGULAR SWALE.
4. LANDSCAPE AREAS AND PLANTERS SHALL ACT AS BIO-FILTERS BEFORE THE RUN-OFF FROM IMPERVIOUS SURFACES.
5. HIGHLAND VALLEY ROAD IS CLASSIFIED AS A COLLECTOR ROAD WITH BIKE LANES ON THE CIRCULATION ELEMENT OF THE COUNTY GENERAL PLAN. THE ULTIMATE RIGHT-OF-WAY SHALL BE COORDINATED WITH ROAD LOCATIONS.
6. STREET LIGHTS SHALL BE INSTALLED AS REQUIRED BY THE SAN DIEGO COUNTY STREET LIGHTING DISTRICT ZONE 3.
7. HIGHLAND VALLEY ROAD IMPROVEMENTS SHALL BE INSTALLED AS PART OF W 5344.

LEGAL DESCRIPTION

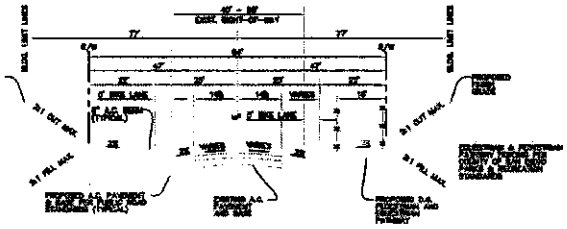
THAT PORTION OF SECTION 36, TOWNSHIP 13 SOUTH, RANGE 1 EAST, SAN BERNARDINO MERIDIAN, IN THE RANCHO SANTA YSABEL, IN THE EXTENSION OF THE UNITED STATES SURVEY OF GOVERNMENT SURVEYS, AND AS SHOWN ON A MAP THAT HAS BEEN MADE BY CAL RANCHOS, CAL ENGINEER, IN MAY 1883, AND ALSO ADDRESSED TO MAY THERSOP NO. 883, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, MAY 30, 1883.

FIGURE 1
SITE PLAN

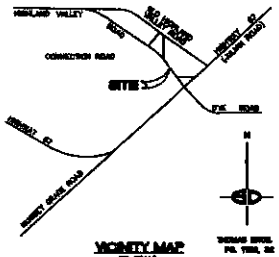
TYPICAL SECTION
OLD HIGHLAND VALLEY ROAD
NO SCALE



TYPICAL SECTION
80' R/W / HIGHWAY 67
NO SCALE



TYPICAL SECTION
84' R/W / HIGHLAND VALLEY ROAD
NO SCALE

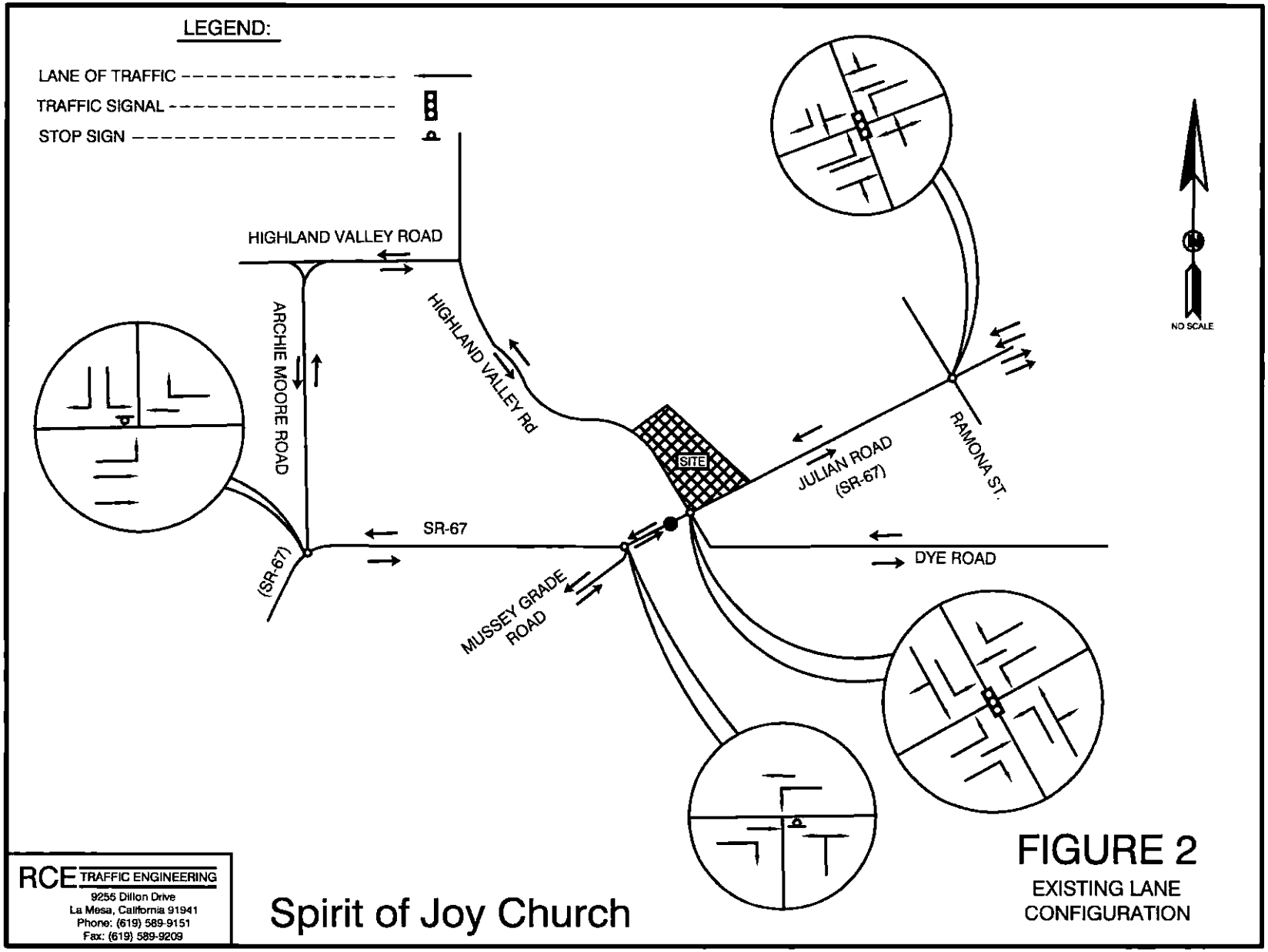


VICINITY MAP
NO SCALE

ENGINEER OF WORK

Snipes-Dye Association

CONCEPTUAL GRADING PLAN
SPIRIT OF JOY LUTHERAN CHURCH
PANORAMA, CALIFORNIA



RCE TRAFFIC ENGINEERING
9255 Dillon Drive
La Mesa, California 91941
Phone: (619) 589-9151
Fax: (619) 589-9209

Spirit of Joy Church

FIGURE 2
EXISTING LANE CONFIGURATION

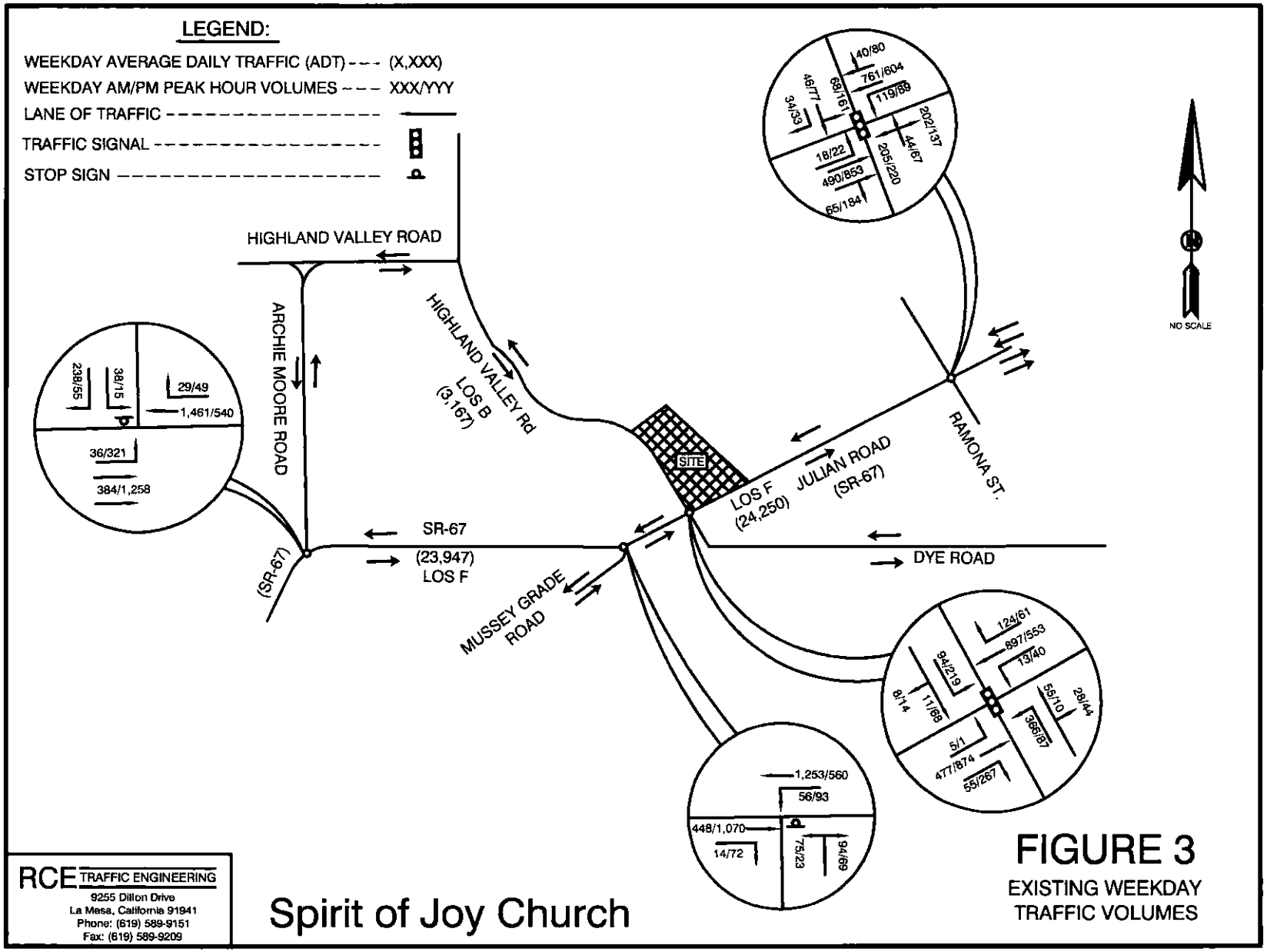


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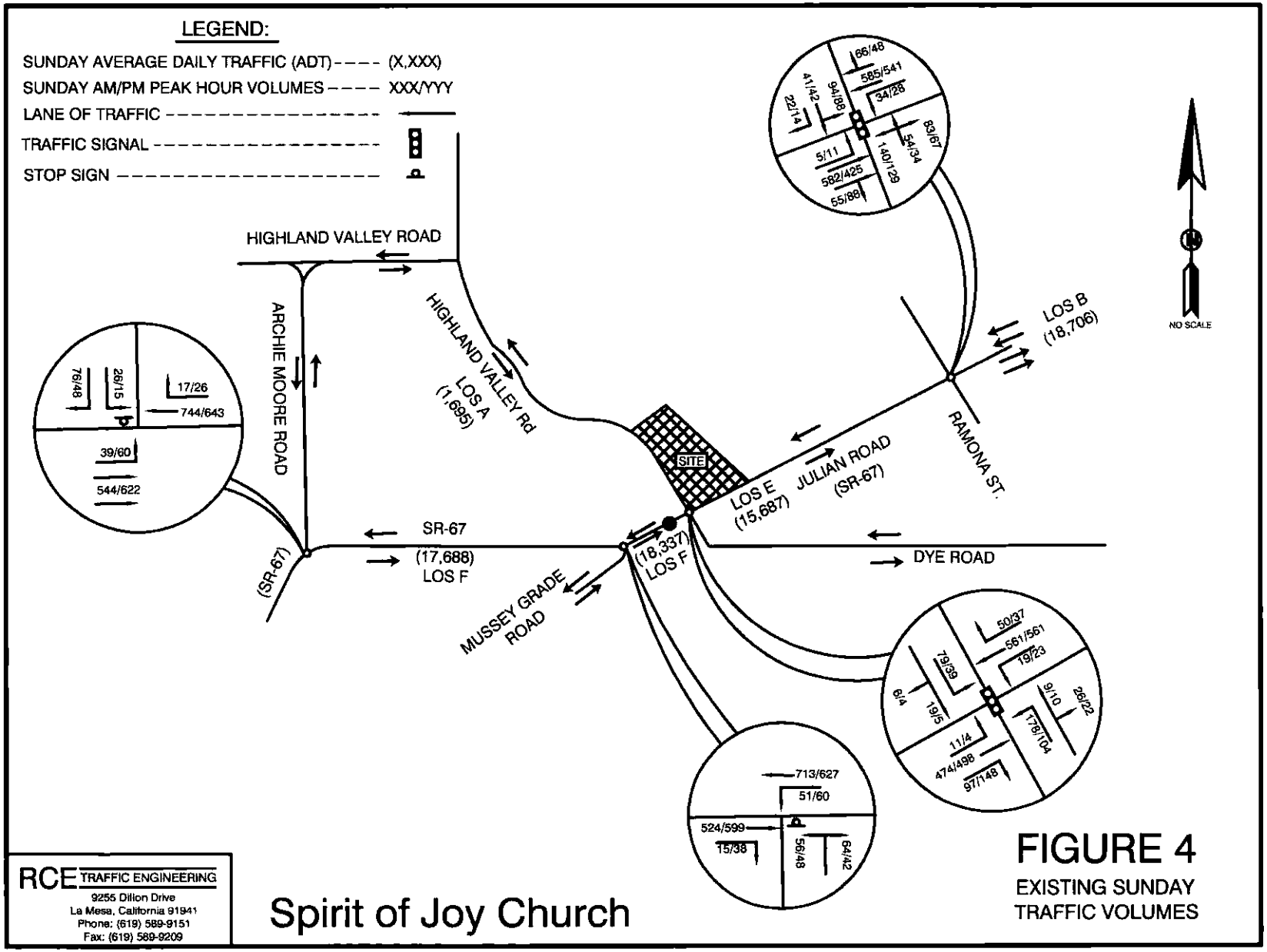
FIGURE 3

EXISTING WEEKDAY TRAFFIC VOLUMES


LEGEND:
SUNDAY AVERAGE DAILY TRAFFIC (ADT) - - - - (X,XXX)
SUNDAY AM/PM PEAK HOUR VOLUMES - - - - XXX/YYY
LANE OF TRAFFIC
TRAFFIC SIGNAL
STOP SIGN
HIGHLAND VALLEY ROAD
ARCHIE MOORE ROAD
HIGHLAND VALLEY Rd
LOS A
(1,695)
SITE
LOS E
(15,687)
JULIAN ROAD
(SR-67)
RAMONA ST.
LOS B
(18,706)
NO SCALE
SR-67
(17,688)
LOS F
(SR-67)
(18,337)
LOS F
MUSSEY GRADE ROAD
DYE ROAD
76/48
26/15
17/26
744/643
39/60
544/622
66/48
585/541
41/42
94/88
34/28
22/14
83/67
5/11
54/34
140/129
582/425
55/88
50/37
561/561
79/39
19/23
6/4
19/5
9/10
26/22
178/104
11/4
474/498
97/148
713/627
51/60
524/599
15/38
56/48
64/42
RCE TRAFFIC ENGINEERING
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La Mesa, California 91941
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Spirit of Joy Church
FIGURE 4
EXISTING SUNDAY
TRAFFIC VOLUMES

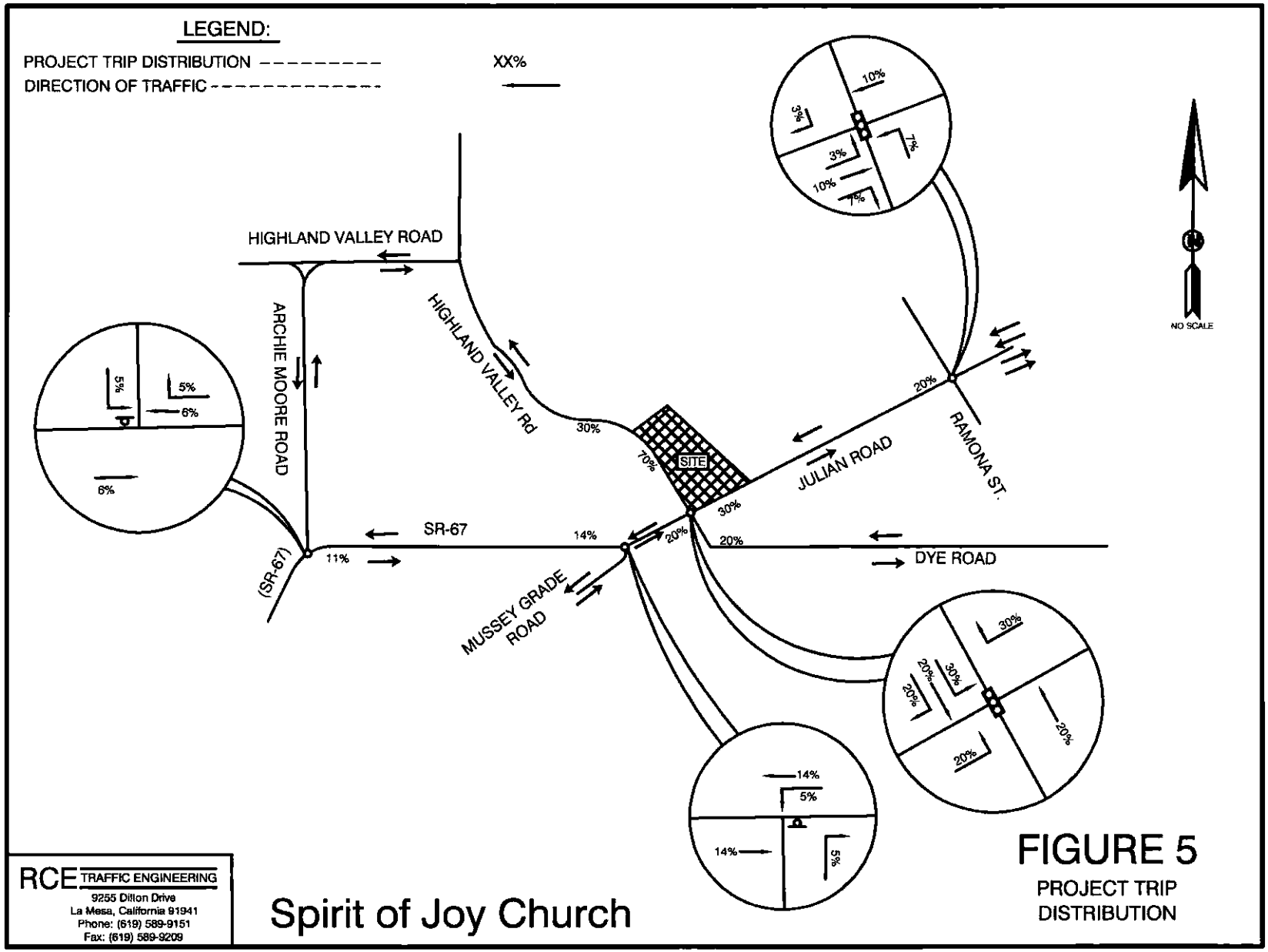

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FIGURE 5
PROJECT TRIP DISTRIBUTION

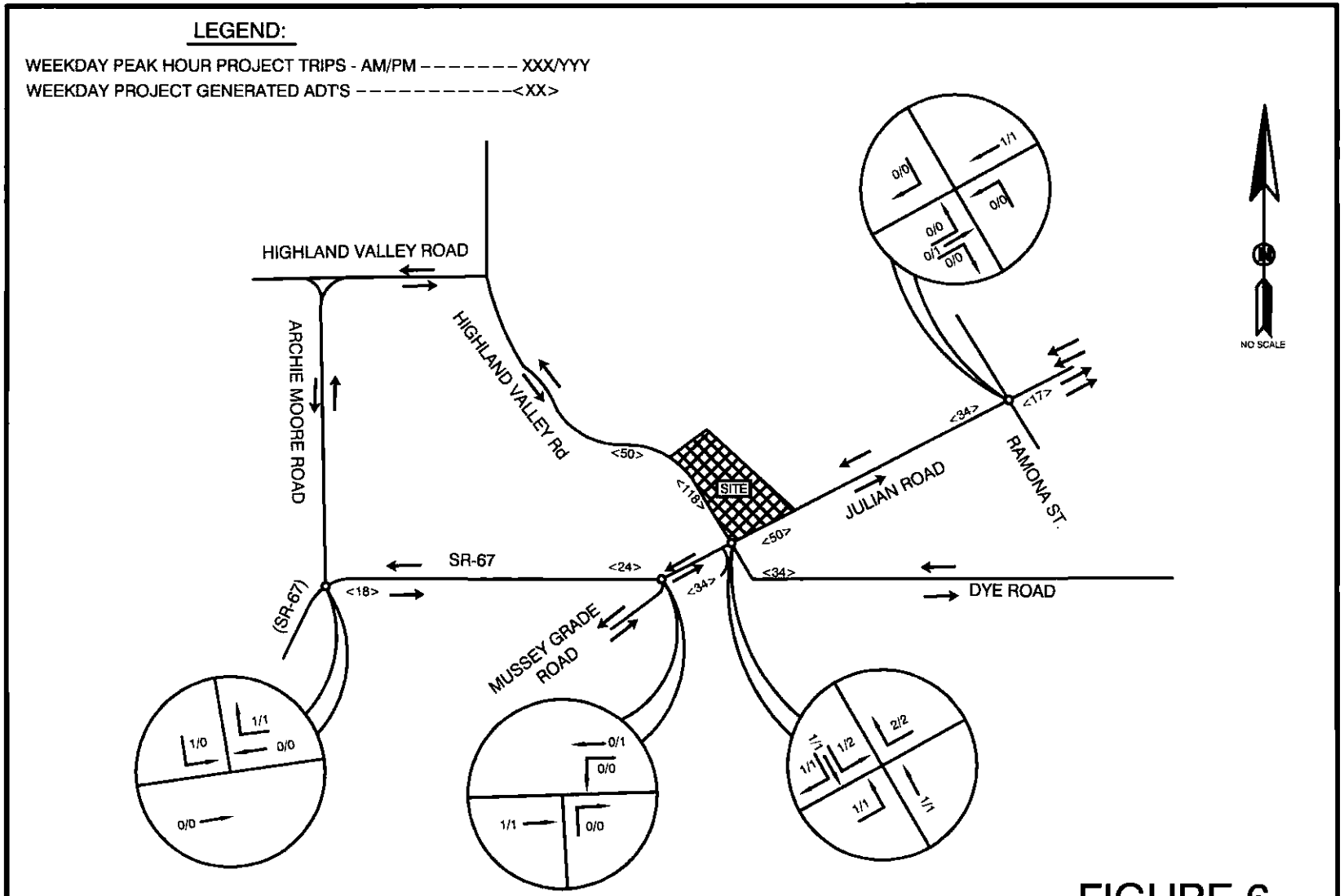

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FIGURE 6

PROJECT GENERATED TRIPS
WEEKDAY

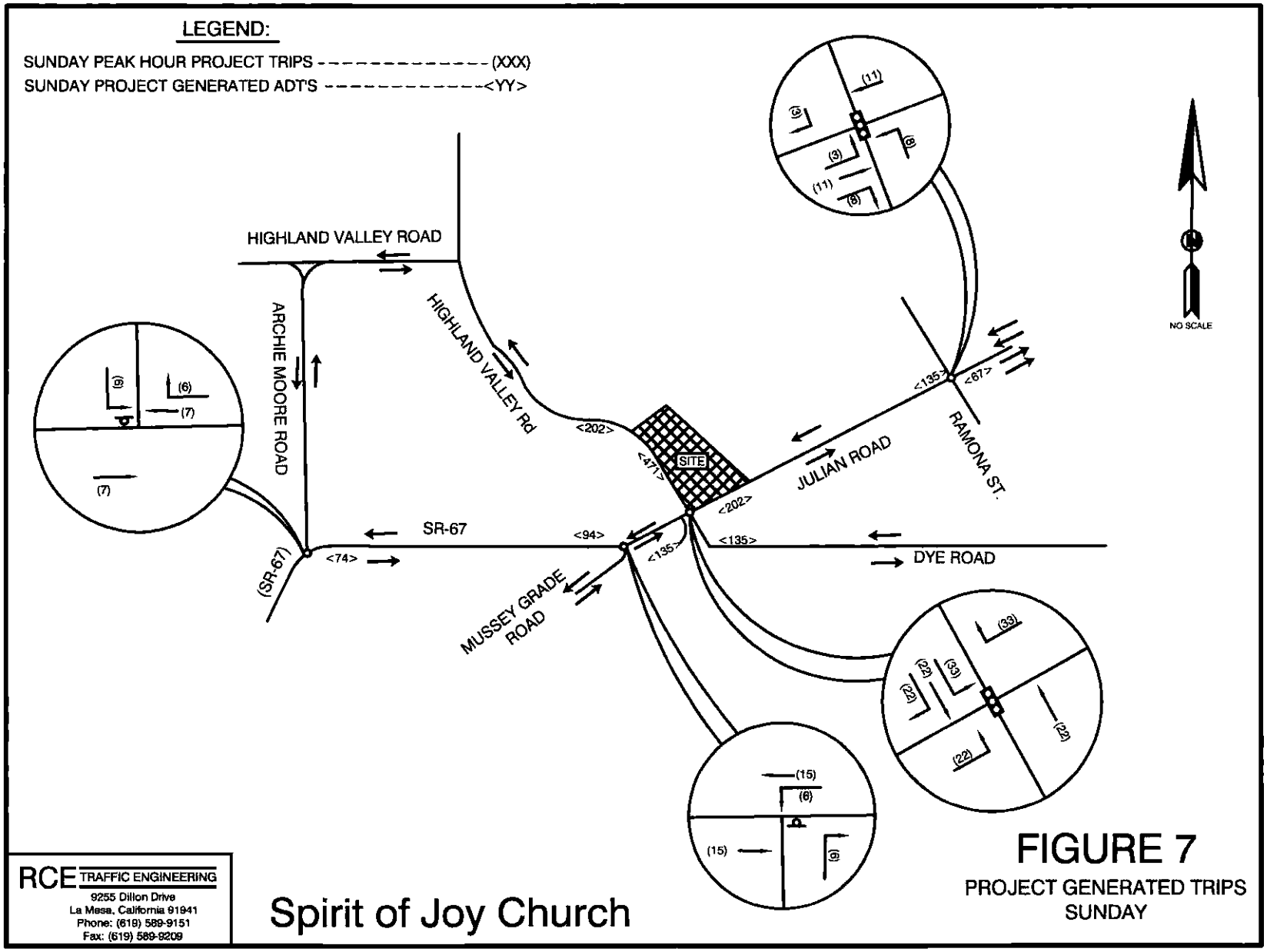

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FIGURE 7

PROJECT GENERATED TRIPS
SUNDAY

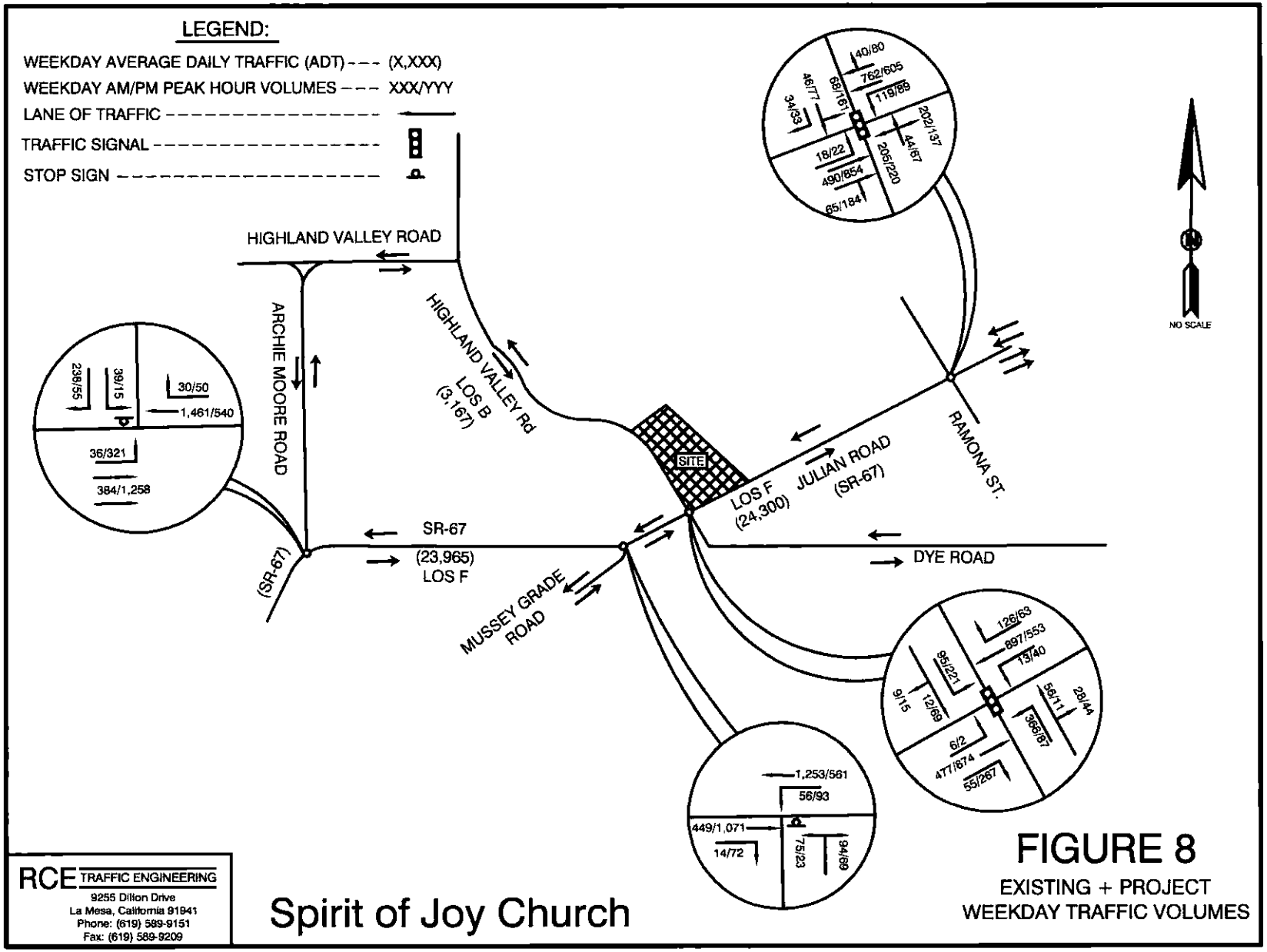

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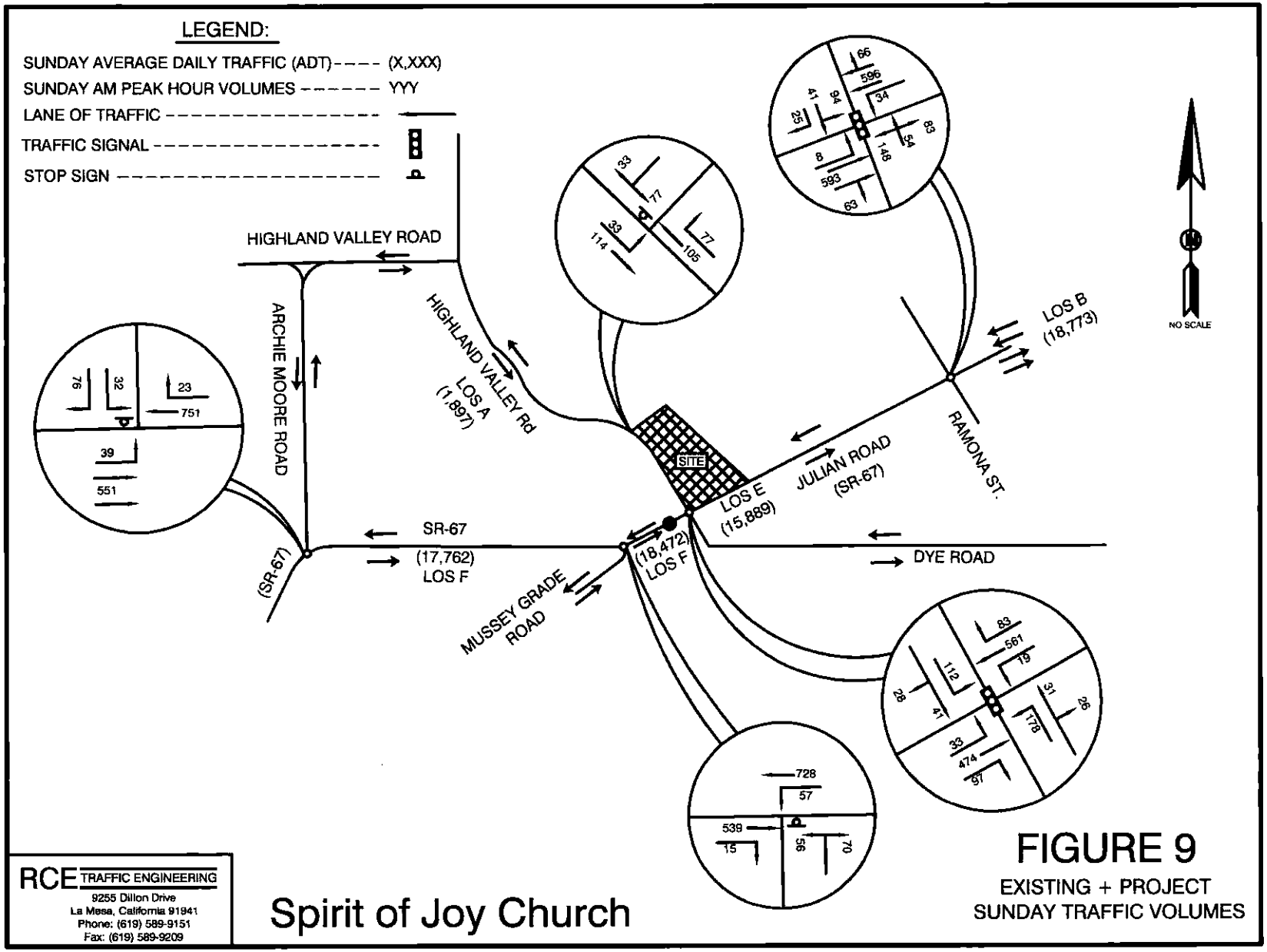
FIGURE 8

EXISTING + PROJECT
WEEKDAY TRAFFIC VOLUMES



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Spirit of Joy Church

FIGURE 9

EXISTING + PROJECT
SUNDAY TRAFFIC VOLUMES

TRAFFIC STUDY

APPENDIX

FOR:

SPIRIT OF JOY CHURCH

APPENDIX A	-	Traffic Counts
APPENDIX B	-	Intersection LOS Calculations
APPENDIX C	-	Schedule
APPENDIX D	-	Striping Plan – Highland Valley Road
APPENDIX E	-	County of San Diego LOS Table
APPENDIX F	-	Parking Schedules
APPENDIX G	-	ILV Calculations
APPENDIX H	-	Arterial Speed Calculations

APPENDIX A

Traffic Counts

State Highways - Caltrans

Primary Highway	1st Cross Street	2nd Cross Street	Average Weekday Traffic Volumes 2006	2007	2008	2009	2010
ROUTE 54/JAMACHA RD	GRANITE HILLS DR	CHASE AVE	25800	24300	23800	23600	24100
ROUTE 54/JAMACHA RD	CHASE AVE	WILLOW GLEN DR	25800	24300	24200	24100	24100
ROUTE 54/JAMACHA RD	WILLOW GLEN DR	WEST CUYAMACA COLLEGE DR	61300 E	38500	38000	37900	37700
ROUTE 54/JAMACHA RD	WEST CUYAMACA COLLEGE DR	ROUTE 94/CAMPO RD	79200 E	38500	37000	36800	36700
ROUTE 67/MAIN ST	10TH ST/ROUTE 78	11TH ST	28400	32500	23900	23800	26700
ROUTE 67/MAIN ST	11TH ST	12TH ST	30900	32500	31900	31900	31900
ROUTE 67/MAIN ST	12TH ST	MONTECITO RD	30400	31900	31300	31100	30800
ROUTE 67/MAIN ST	MONTECITO RD	HIGHLAND VALLEY RD	29900	31400	30800	21700	21500
ROUTE 67	HIGHLAND VALLEY RD	ARCHIE MOORE RD	26400	26600	26600	25800	20800
ROUTE 67	ARCHIE MOORE RD	CITY LIMITS	26400	27100	26600	20400	23200
ROUTE 67	CITY LIMITS	POWAY RD	27000	27100	26600	25800	25600
ROUTE 67	POWAY RD	SCRIPPS POWAY PKWY	26600	27300	25300	20400	19800
ROUTE 67	SCRIPPS POWAY PKWY	VIGILANTE RD	24600	25300	23400	23100	25600
ROUTE 67	VIGILANTE RD	WILLOW RD	25300	26000	24100	23700	22400
ROUTE 67	WILLOW RD	LAKESIDE AVE	34300	32400	30100	27900	26800
ROUTE 67	LAKESIDE AVE	MAPLEVIEW ST	34300	32400	30100	27900	26800
CORONADO BRIDGE/ROUTE 75	INTERSTATE 5	CITY LIMITS	80700	80300	79300	79100	81700
CORONADO BRIDGE/ROUTE 75	CITY LIMITS	GLORIETTA BLVD	80700	80300	79300	79100	81700
3RD ST/RT 75 (W/B)	GLORIETTA BLVD	C ST	63400	69300	68400	68300	70800
4TH ST/RT 75 (E/B)	C ST	3RD ST/ROUTE 282	63400	69300	68400	68300	70800
ORANGE AVE/ROUTE 75	3RD ST/ROUTE 282	4TH ST/ROUTE 75	22800	25200	33400	23300	30600
ORANGE AVE/ROUTE 75	4TH ST/ROUTE 75	6TH ST	28200	28800	28300	25400	27000
ORANGE AVE/ROUTE 75	6TH ST	8TH ST	27700	27800	25800	25400	25000
ORANGE AVE/ROUTE 75	8TH ST	10TH ST	27700	27800	25800	22700	25000
ORANGE AVE/ROUTE 75	10TH ST	OCEAN BLVD/DANA PL	27700	27800	23100	22700	22200
ORANGE AVE/ROUTE 75	OCEAN BLVD/DANA PL	POMONA AVE	24600	24800	32100	32100	22200
SILVER STRAND BLVD/RT 75	POMONA AVE	GUADALCANAL RD	28400	28000	25900	24400	24200
SILVER STRAND BLVD/RT 75	GUADALCANAL RD	CORONADO CAYS BLVD	26200	25800	23800	23200	23000
SILVER STRAND BLVD/RT 75	CORONADO CAYS BLVD	RAINBOW DR	22000	21000	19700	19100	18800
SILVER STRAND BLVD/RT 75	RAINBOW DR	7TH ST	18800	18200	17700	17400	17500

N = Link not counted in that year. Previous year's count carried forward.
E = No actual count. ADT was estimated by the reporting jurisdiction.

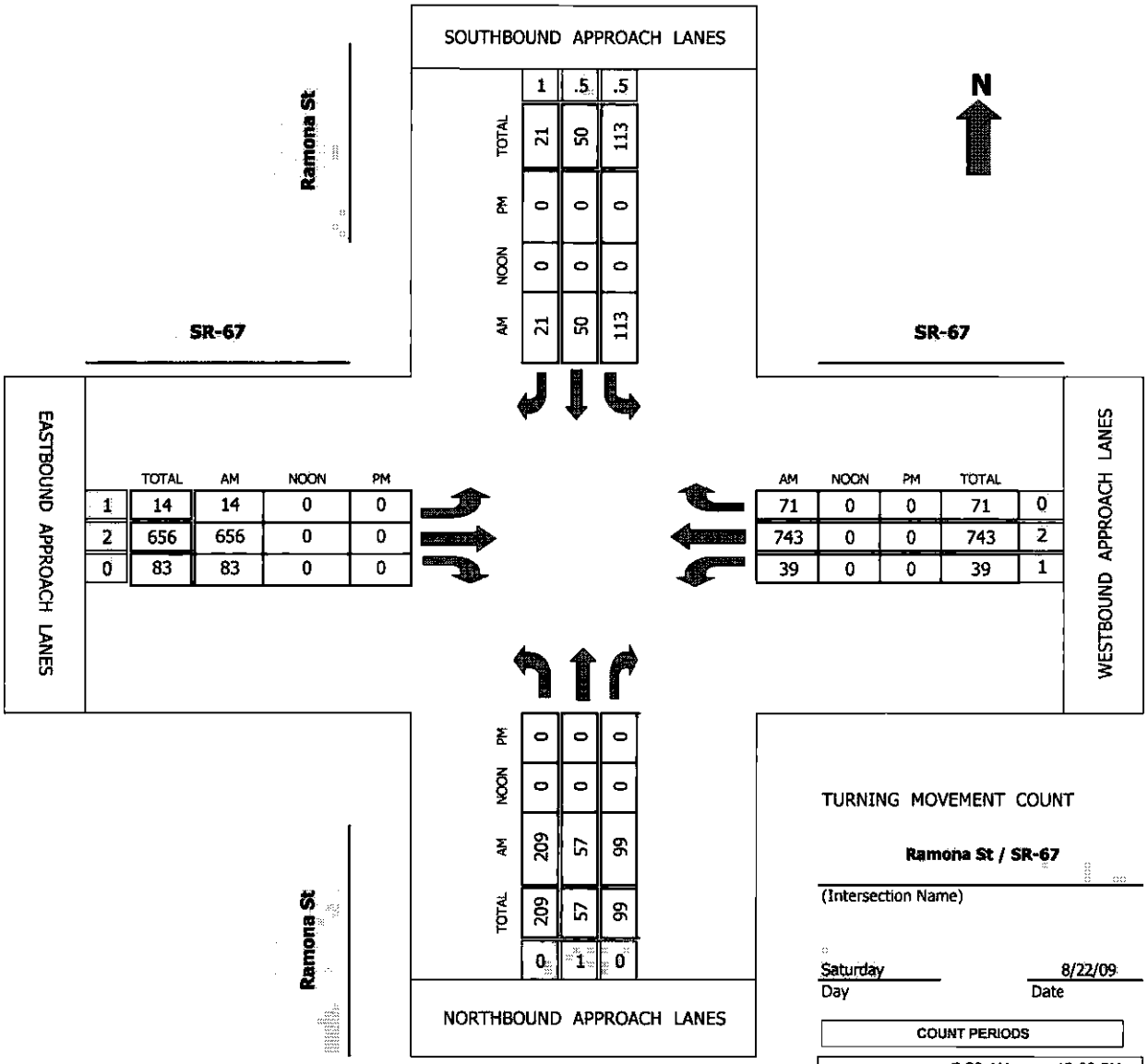
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Ramona St/SR-67

Project #: 09-4319-004



	TOTAL	AM	NOON	PM
1	21	21	0	0
.5	50	50	0	0
.5	113	113	0	0

	TOTAL	AM	NOON	PM
1	14	14	0	0
2	656	656	0	0
0	83	83	0	0

	AM	NOON	PM	TOTAL
0	71	0	0	71
2	743	0	0	743
1	39	0	0	39

	TOTAL	AM	NOON	PM
0	209	209	0	0
1	57	57	0	0
0	99	99	0	0

TURNING MOVEMENT COUNT

Ramona St / SR-67

(Intersection Name)

Saturday — Day

8/22/09 — Date

COUNT PERIODS		
am	7:30 AM -	12:00 PM
noon	-	
pm	-	

AM PEAK HOUR	1100 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	0 AM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Ramona St DATE: 08/22/2009 LOCATION: City of Ramona

E-W STREET: SR-67 DAY: SATURDAY PROJECT# 09-4319-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	.5	.5	1	1	2	0	1	2	0	
8:00 AM													
8:15 AM													
8:30 AM													
8:45 AM													
9:00 AM													
9:15 AM													
9:30 AM	29	14	27	21	4	3	2	132	24	10	148	13	427
9:45 AM	45	10	39	16	12	7	2	177	18	13	128	9	476
10:00 AM	41	7	21	20	7	8	0	127	16	12	180	11	450
10:15 AM	40	11	29	13	11	8	2	144	16	7	178	11	470
10:30 AM	51	9	32	27	5	5	3	130	18	11	160	15	466
10:45 AM	49	12	39	28	10	14	4	176	17	8	171	17	545
11:00 AM	54	16	28	24	13	5	7	146	21	8	184	17	523
11:15 AM	57	16	21	28	12	6	1	158	23	9	158	18	507
11:30 AM	44	10	30	33	14	4	3	163	18	11	219	17	566
11:45 AM	54	15	20	28	11	6	3	189	21	11	182	19	559
TOTAL VOLUMES =	NL 464	NT 120	NR 286	SL 238	ST 99	SR 66	EL 27	ET 1542	ER 192	WL 100	WT 1708	WR 147	TOTAL 4989

AM Peak Hr Begins at: 1100 AM

PEAK VOLUMES =	209	57	99	113	50	21	14	656	83	39	743	71	2155
PEAK HR. FACTOR:		0.931			0.902			0.884			0.863		0.952

CONTROL: Signalized

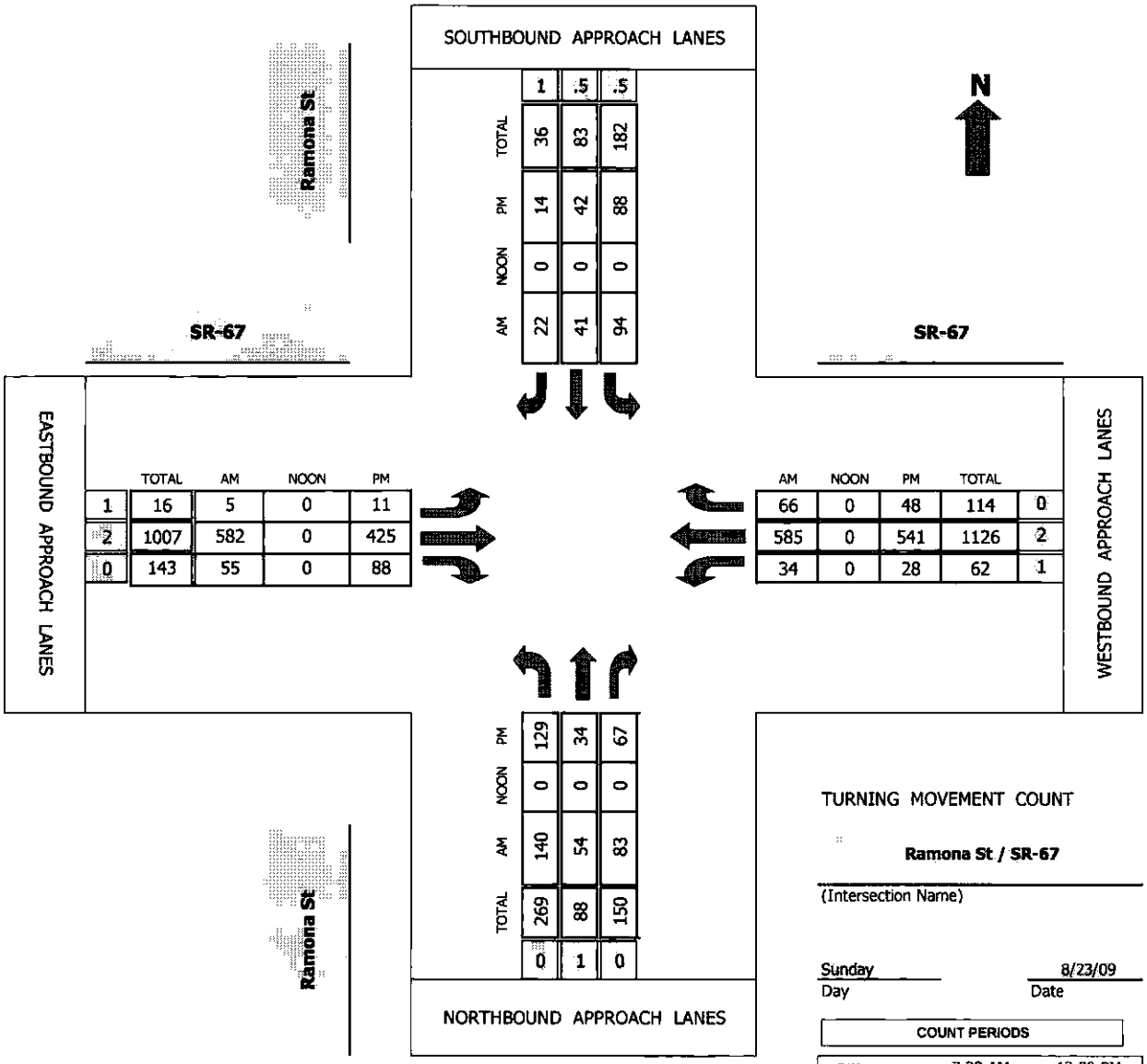
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Ramona St/SR-67

Project #: 09-4319-004



	TOTAL	AM	NOON	PM
1	36	22	0	14
5	83	41	0	42
5	182	94	0	88

	TOTAL	AM	NOON	PM
1	16	5	0	11
2	1007	582	0	425
0	143	55	0	88

	AM	NOON	PM	TOTAL
0	66	0	48	114
2	585	0	541	1126
1	34	0	28	62

	TOTAL	AM	NOON	PM
0	269	140	0	129
1	88	54	0	34
0	150	83	0	67

TURNING MOVEMENT COUNT

Ramona St / SR-67

(Intersection Name)

Sunday — Day

8/23/09 — Date

COUNT PERIODS			
am	7:30 AM	-	12:00 PM
noon		-	
pm	4:30 PM	-	7:30 PM

AM PEAK HOUR	1000 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Ramona St DATE: 08/23/2009 LOCATION: City of Ramona

E-W STREET: SR-67 DAY: SUNDAY PROJECT# 09-4319-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	.5	.5	1	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM													
7:15 AM													
7:30 AM	11	7	8	9	2	0	1	48	5	3	52	1	147
7:45 AM	9	4	10	6	2	4	5	90	5	9	68	5	217
8:00 AM	23	15	17	6	3	5	3	66	3	5	70	2	218
8:15 AM	18	6	12	5	3	1	1	82	16	6	71	7	228
8:30 AM	19	6	16	13	4	2	3	84	11	4	84	6	252
8:45 AM	17	4	19	16	6	0	4	128	8	4	86	9	301
9:00 AM	34	4	12	7	4	4	0	92	12	5	92	11	277
9:15 AM	25	6	14	14	5	4	4	100	13	4	126	10	325
9:30 AM	33	17	18	26	10	6	0	89	11	2	109	12	333
9:45 AM	33	13	15	26	15	7	2	150	12	8	103	7	391
10:00 AM	31	9	22	22	10	5	0	113	15	11	146	19	403
10:15 AM	29	13	19	26	11	3	2	148	13	4	160	18	446
10:30 AM	34	20	26	24	13	5	2	171	9	11	144	15	474
10:45 AM	46	12	16	22	7	9	1	150	18	8	135	14	438
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 362	NT 136	NR 224	SL 222	ST 95	SR 55	EL 28	ET 1511	ER 151	WL 84	WT 1446	WR 136	TOTAL 4450

AM Peak Hr Begins at: 1000 AM

PEAK VOLUMES =	140	54	83	94	41	22	5	582	55	34	585	66	1761
PEAK HR. FACTOR:		0.866			0.935			0.882			0.941		0.929

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Ramona St DATE: 08/23/2009 LOCATION: City of Ramona

E-W STREET: SR-67 DAY: SUNDAY PROJECT# 09-4319-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	.5	.5	1	1	2	0	1	2	0	
4:00 PM													
4:15 PM													
4:30 PM	31	9	11	27	15	1	1	107	18	7	137	16	380
4:45 PM	34	7	27	29	5	3	1	91	15	10	149	12	383
5:00 PM	34	9	18	13	10	2	4	108	24	6	105	10	343
5:15 PM	30	9	11	19	12	8	5	119	31	5	150	10	409
5:30 PM	25	10	20	22	10	2	1	100	14	4	123	11	342
5:45 PM	21	13	19	15	9	1	1	110	24	10	104	9	336
6:00 PM	28	7	12	22	10	4	1	75	23	15	101	17	315
6:15 PM	21	9	18	12	12	2	1	102	22	9	101	13	322
6:30 PM	17	5	13	20	7	2	5	80	15	13	119	15	311
6:45 PM	13	6	16	8	11	1	1	97	15	9	104	4	285
7:00 PM	25	14	14	16	6	1	0	91	21	11	85	12	296
7:15 PM	22	6	22	19	7	4	1	111	13	5	59	10	279
7:30 PM													
7:45 PM													
TOTAL VOLUMES =	NL 301	NT 104	NR 201	SL 222	ST 114	SR 31	EL 22	ET 1191	ER 235	WL 104	WT 1337	WR 139	TOTAL 4001

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	129	34	67	88	42	14	11	425	88	28	541	48	1515
PEAK HR. FACTOR:		0.846			0.837			0.845			0.902		0.926

CONTROL: Signalized

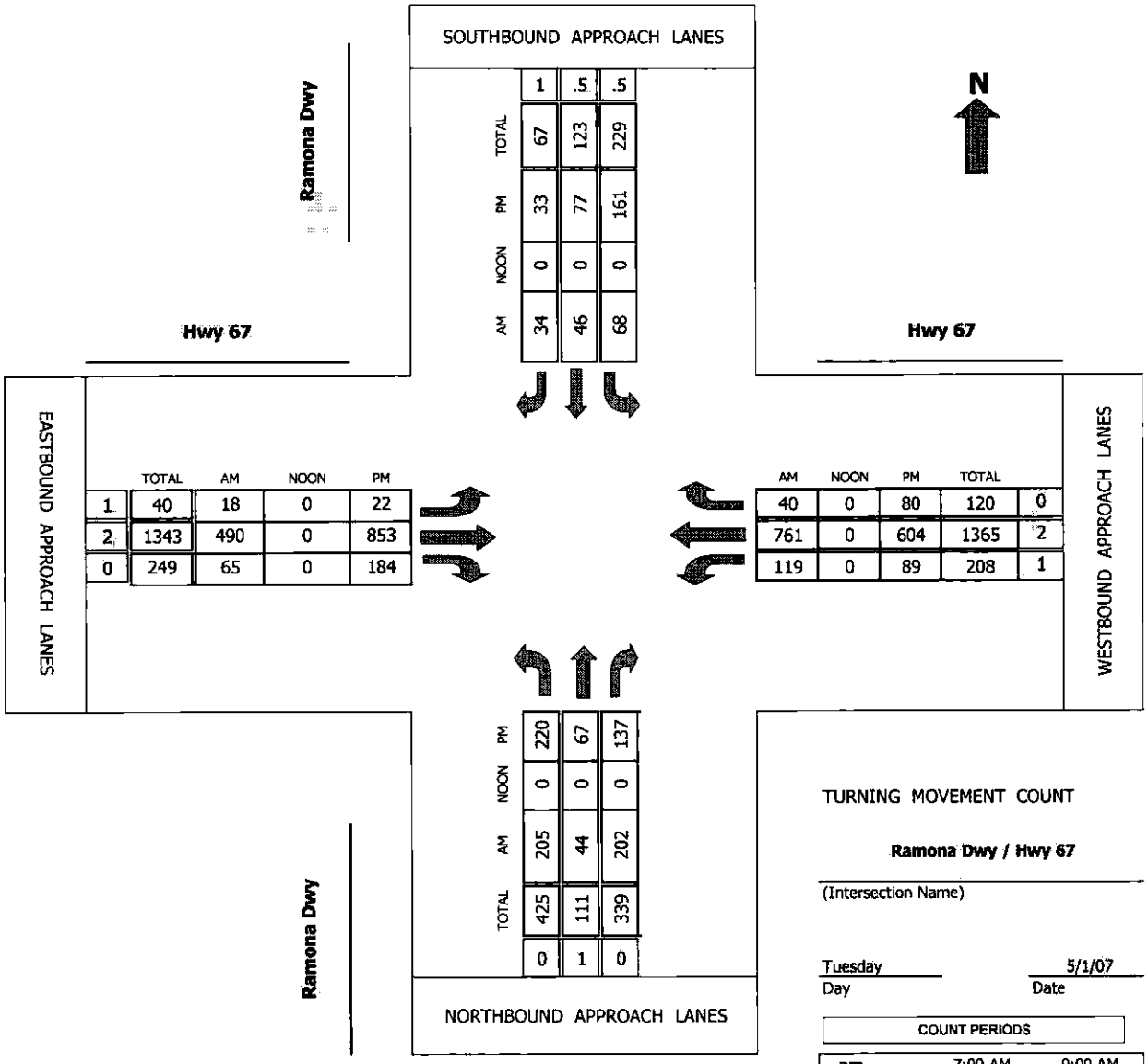
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Ramona Dwy/Hwy 67

Project #: 07-4089-003



	TOTAL	AM	NOON	PM
1	1	.5	.5	
	67	123	229	
	33	77	161	
	0	0	0	
	34	46	68	

	TOTAL	AM	NOON	PM
1	40	18	0	22
2	1343	490	0	853
0	249	65	0	184

AM	NOON	PM	TOTAL	
40	0	80	120	0
761	0	604	1365	2
119	0	89	208	1

	TOTAL	AM	NOON	PM
	220	67	137	
	0	0	0	
	205	44	202	
	425	111	339	
	0	1	0	

TURNING MOVEMENT COUNT

Ramona Dwy / Hwy 67

(Intersection Name)

Tuesday — Day

5/1/07 — Date

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	11:00 AM -	1:00 PM
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	745 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	400 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Ramona Dwy DATE: 05/01/2007 LOCATION: City of Ramona

E-W STREET: Hwy 67 DAY: TUESDAY PROJECT# 07-4089-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	.5	.5	1	1	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	65	15	48	8	33	4	1	96	43	28	166	5	512
7:15 AM	93	11	52	11	15	14	4	113	29	28	155	10	535
7:30 AM	60	13	34	9	3	1	5	94	28	24	162	5	438
7:45 AM	48	13	56	24	19	12	5	137	25	33	169	10	551
8:00 AM	51	7	53	16	11	6	5	113	11	39	207	11	530
8:15 AM	60	16	47	18	6	7	6	106	12	36	193	5	512
8:30 AM	46	8	46	10	10	9	2	134	17	11	192	14	499
8:45 AM	55	12	27	18	8	6	6	171	14	15	161	9	502
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 478	NT 95	NR 363	SL 114	ST 105	SR 59	EL 34	ET 964	ER 179	WL 214	WT 1405	WR 69	TOTAL 4079

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	205	44	202	68	46	34	18	490	65	119	761	40	2092
PEAK HR. FACTOR:		0.917			0.673			0.858			0.895		0.949

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Ramona Dwy DATE: 05/01/2007 LOCATION: City of Ramona

E-W STREET: Hwy 67 DAY: TUESDAY PROJECT# 07-4089-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	.5	.5	1	1	2	0	1	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	46	18	45	37	18	13	4	199	49	25	165	22	641
4:15 PM	57	13	40	32	19	2	7	227	47	16	147	20	627
4:30 PM	55	17	26	49	19	4	2	194	43	27	152	19	607
4:45 PM	62	19	26	43	21	14	9	233	45	21	140	19	652
5:00 PM	41	17	26	47	15	9	7	210	46	22	175	19	634
5:15 PM	38	20	27	40	13	10	4	240	43	22	120	12	589
5:30 PM	38	13	28	34	19	15	13	217	42	32	146	20	617
5:45 PM	35	19	33	33	11	3	0	217	47	7	104	10	519
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 372	NT 136	NR 251	SL 315	ST 135	SR 70	EL 46	ET 1737	ER 362	WL 172	WT 1149	WR 141	TOTAL 4886

PM Peak Hr Begins at: 400 PM

PEAK VOLUMES =	220	67	137	161	77	33	22	853	184	89	604	80	2527
PEAK HR. FACTOR:		0.964			0.869			0.922			0.912		0.969

CONTROL: Signalized

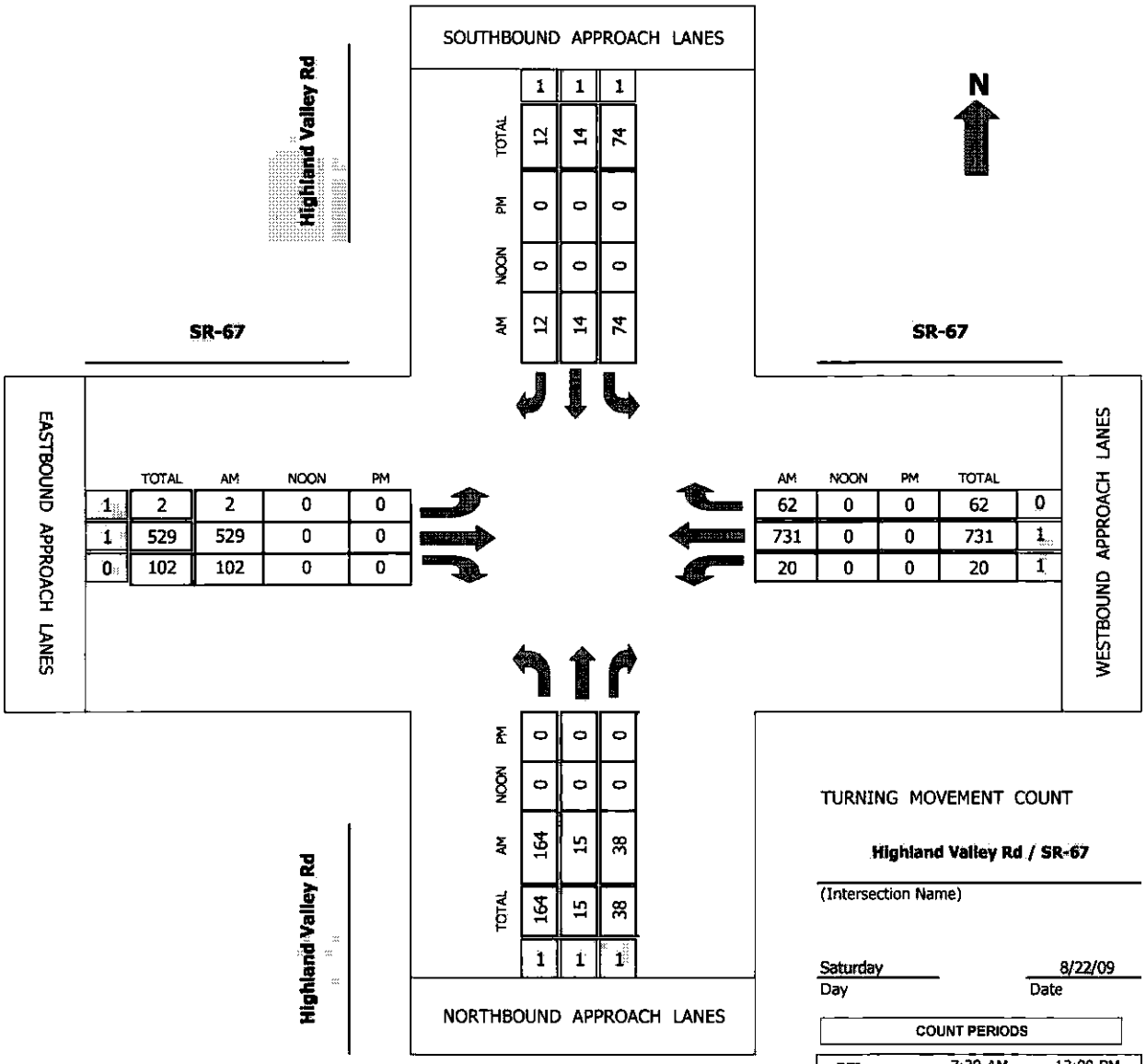
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Highland Valley Rd/SR-67

Project #: 09-4319-003



	AM	NOON	PM	TOTAL
1	12	0	0	12
1	14	0	0	14
1	74	0	0	74

	TOTAL	AM	NOON	PM
1	2	2	0	0
1	529	529	0	0
0	102	102	0	0

AM	NOON	PM	TOTAL	
62	0	0	62	0
731	0	0	731	1
20	0	0	20	1

	AM	NOON	PM
1	164	0	0
1	15	0	0
1	38	0	0

	TOTAL	AM	NOON	PM
1	164	164	0	0
1	15	15	0	0
1	38	38	0	0

TURNING MOVEMENT COUNT

Highland Valley Rd / SR-67

(Intersection Name)

Saturday — Day

8/22/09 — Date

COUNT PERIODS		
am	7:30 AM -	12:00 PM
noon	-	
pm	-	

AM PEAK HOUR	1100 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	0 AM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Highland Valley Rd DATE: 08/22/2009 LOCATION: City of Ramona

E-W STREET: SR-67 DAY: SATURDAY PROJECT# 09-4319-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	1	1	1	0	1	1	0	
8:00 AM													
8:15 AM													
8:30 AM													
8:45 AM													
9:00 AM													
9:15 AM													
9:30 AM	29	2	8	21	2	3	1	115	21	6	132	16	356
9:45 AM	35	4	8	20	4	0	3	106	29	3	126	9	347
10:00 AM	38	1	9	16	3	3	0	118	30	3	161	22	404
10:15 AM	39	4	7	24	4	2	3	120	19	6	154	16	398
10:30 AM	41	4	5	13	2	0	3	128	29	9	170	16	420
10:45 AM	31	1	4	19	3	3	5	120	27	7	163	9	392
11:00 AM	42	6	13	12	3	2	1	138	24	5	164	16	426
11:15 AM	30	4	7	17	4	3	0	138	18	6	182	17	426
11:30 AM	49	3	7	28	4	4	1	123	28	3	201	12	463
11:45 AM	43	2	11	17	3	3	0	130	32	6	184	17	448
TOTAL VOLUMES =	NL 377	NT 31	NR 79	SL 187	ST 32	SR 23	EL 17	ET 1236	ER 257	WL 54	WT 1637	WR 150	TOTAL 4080

AM Peak Hr Begins at: 1100 AM

PEAK VOLUMES =	164	15	38	74	14	12	2	529	102	20	731	62	1763
PEAK HR. FACTOR:		0.889			0.694			0.971			0.941		0.952

CONTROL: Signalized

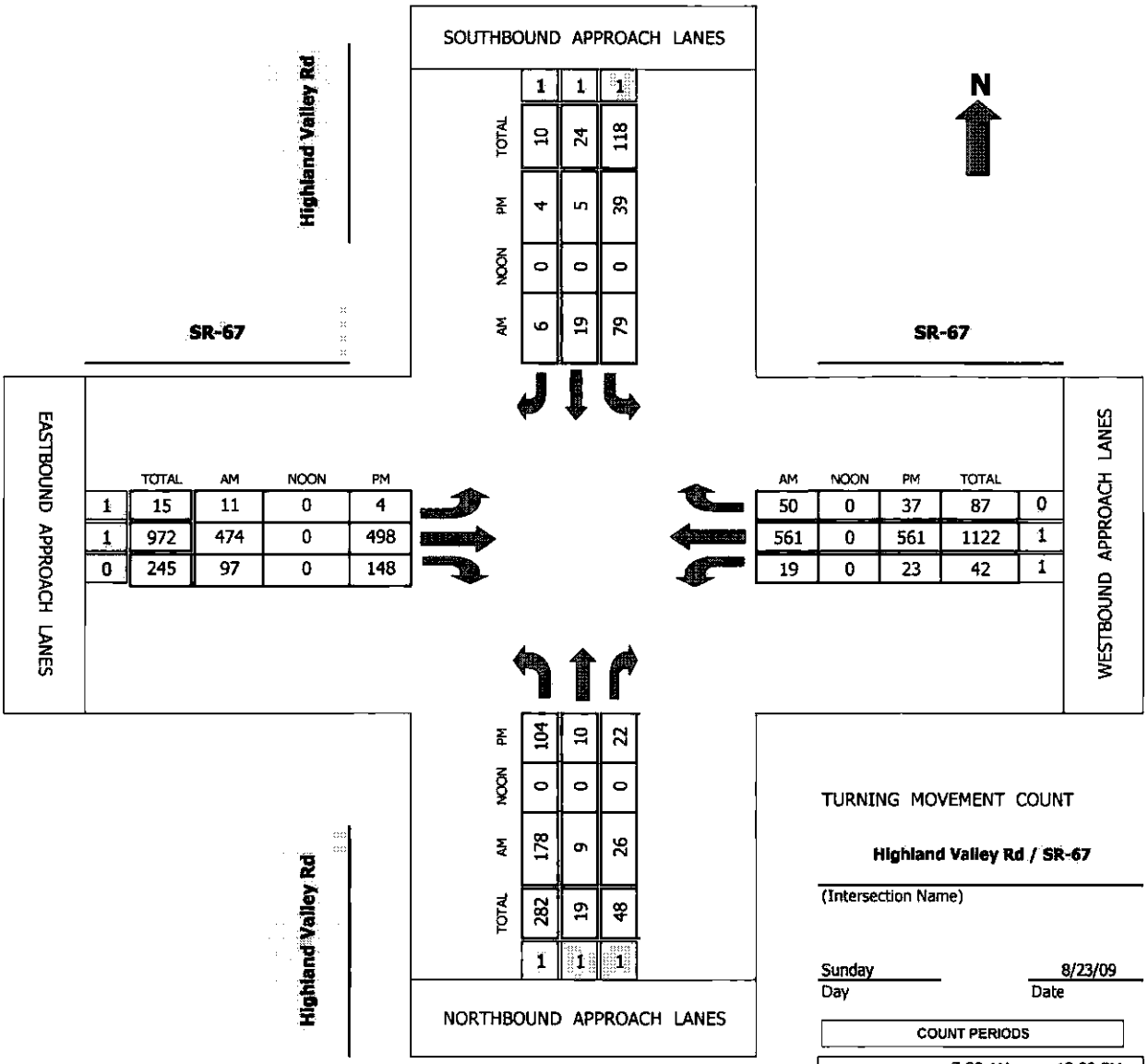
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Highland Valley Rd/SR-67

Project #: 09-4319-003



	TOTAL	AM	NOON	PM
	1	1	1	
TOTAL	10	24	118	
PM	4	5	39	
NOON	0	0	0	
AM	6	19	79	

	TOTAL	AM	NOON	PM
1	15	11	0	4
1	972	474	0	498
0	245	97	0	148

AM	NOON	PM	TOTAL	
50	0	37	87	0
561	0	561	1122	1
19	0	23	42	1

	TOTAL	AM	NOON	PM
PM	104	10	22	
NOON	0	0	0	
AM	178	9	26	
TOTAL	282	19	48	
	1	1	1	

TURNING MOVEMENT COUNT

Highland Valley Rd / SR-67

(Intersection Name)

Sunday — Day

8/23/09 — Date

COUNT PERIODS		
am	7:30 AM -	12:00 PM
noon	-	
pm	4:30 PM -	7:30 PM

AM PEAK HOUR	1000 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Highland Valley Rd DATE: 08/23/2009 LOCATION: City of Ramona

E-W STREET: SR-67 DAY: SUNDAY PROJECT# 09-4319-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	1	1	1	0	1	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM													
7:15 AM													
7:30 AM	14	1	3	5	3	1	2	55	14	2	51	4	155
7:45 AM	15	4	6	7	1	1	1	73	17	6	56	8	195
8:00 AM	25	0	4	11	2	1	1	59	11	3	91	3	211
8:15 AM	30	2	8	14	1	0	3	70	13	4	70	3	218
8:30 AM	22	0	5	19	4	1	1	78	9	6	82	10	237
8:45 AM	19	2	6	15	0	2	1	91	19	6	82	5	248
9:00 AM	28	1	3	17	0	1	0	82	29	6	83	2	252
9:15 AM	35	2	6	6	2	3	1	107	21	13	115	13	324
9:30 AM	32	1	9	18	1	0	0	96	23	11	114	8	313
9:45 AM	33	0	8	14	1	3	3	107	8	10	109	13	309
10:00 AM	42	4	7	14	12	3	0	88	27	3	128	13	341
10:15 AM	48	1	9	18	2	1	3	133	27	5	149	14	410
10:30 AM	45	3	8	25	2	2	4	139	18	7	144	12	409
10:45 AM	43	1	2	22	3	0	4	114	25	4	140	11	369
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 431	NT 22	NR 84	SL 205	ST 34	SR 19	EL 24	ET 1292	ER 261	WL 86	WT 1414	WR 119	TOTAL 3991

AM Peak Hr Begins at: 1000 AM

PEAK VOLUMES =	178	9	26	79	19	6	11	474	97	19	561	50	1529
PEAK HR. FACTOR:		0.918			0.897			0.893			0.938		0.932

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Highland Valley Rd DATE: 08/23/2009 LOCATION: City of Ramona

E-W STREET: SR-67 DAY: SUNDAY PROJECT# 09-4319-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	1	1	1	1	1	1	0	1	1	0	
4:00 PM													
4:15 PM													
4:30 PM	22	3	6	6	0	2	1	129	46	6	155	13	389
4:45 PM	36	1	5	9	2	0	2	97	24	4	138	7	325
5:00 PM	28	2	4	13	1	2	1	136	29	7	122	13	358
5:15 PM	18	4	7	11	2	0	0	136	49	6	146	4	383
5:30 PM	20	2	5	7	2	0	0	102	45	4	132	4	323
5:45 PM	22	2	5	8	1	1	2	120	27	3	117	10	318
6:00 PM	11	0	7	5	1	3	1	98	29	4	120	8	287
6:15 PM	9	1	5	4	1	0	0	106	28	6	103	10	273
6:30 PM	14	1	3	3	1	1	1	94	32	4	114	7	275
6:45 PM	16	0	2	6	1	5	0	101	30	5	97	8	271
7:00 PM	23	3	11	6	1	2	2	99	27	4	73	5	256
7:15 PM	17	2	4	9	4	0	1	119	30	4	67	10	267
7:30 PM													
7:45 PM													
TOTAL VOLUMES =	NL 236	NT 21	NR 64	SL 87	ST 17	SR 16	EL 11	ET 1337	ER 396	WL 57	WT 1384	WR 99	TOTAL 3725

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	104	10	22	39	5	4	4	498	148	23	561	37	1455
PEAK HR. FACTOR:		0.810			0.750			0.878			0.892		0.935

CONTROL: Signalized

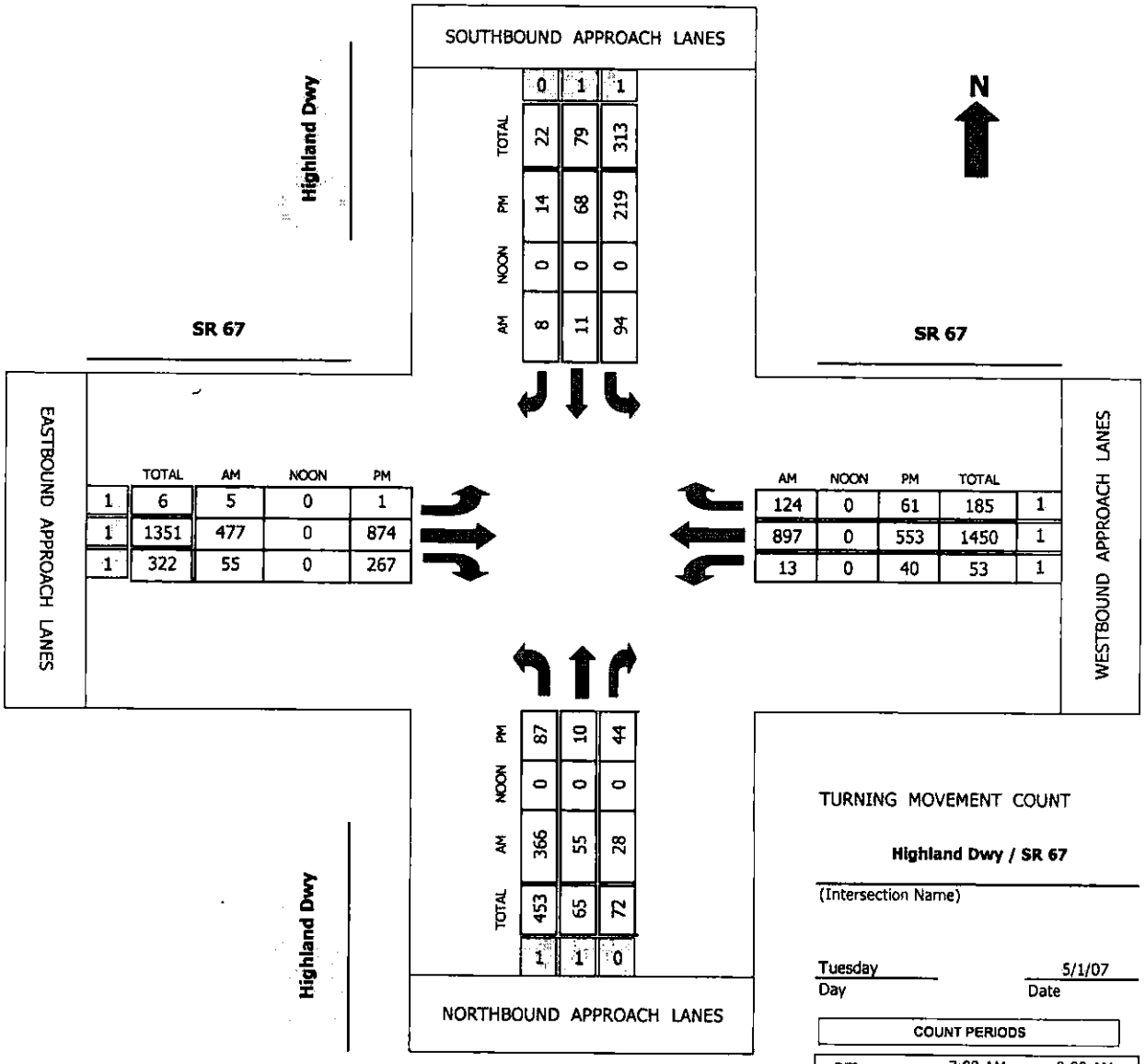
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Highland Dwy/SR 67

Project #: 07-4089-004



	TOTAL	AM	NOON	PM
1	22	8	0	14
1	79	11	0	68
1	313	94	0	219

	TOTAL	AM	NOON	PM
1	6	5	0	1
1	1351	477	0	874
1	322	55	0	267

AM	NOON	PM	TOTAL	
124	0	61	185	1
897	0	553	1450	1
13	0	40	53	1

	TOTAL	AM	NOON	PM
1	453	366	0	87
1	65	55	0	10
0	72	28	0	44

TURNING MOVEMENT COUNT

Highland Dwy / SR 67

(Intersection Name)

Tuesday — Day

5/1/07 — Date

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	11:00 AM -	1:00 PM
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	730 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	415 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Highland Dwy DATE: 05/01/2007 LOCATION: City of Ramona

E-W STREET: SR 67 DAY: TUESDAY PROJECT# 07-4089-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	1	1	1	1	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	101	18	3	9	2	0	1	105	10	2	239	10	500
7:15 AM	72	19	4	16	1	2	2	102	11	2	259	9	499
7:30 AM	107	20	4	15	0	1	2	131	10	3	231	20	544
7:45 AM	79	3	8	27	0	2	0	153	15	1	242	25	555
8:00 AM	96	15	8	15	4	2	1	98	16	5	215	32	507
8:15 AM	84	17	8	37	7	3	2	95	14	4	209	47	527
8:30 AM	68	9	10	41	11	7	0	109	9	6	202	30	502
8:45 AM	59	2	19	32	10	2	3	94	18	6	162	14	421
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 666	NT 103	NR 64	SL 192	ST 35	SR 19	EL 11	ET 887	ER 103	WL 29	WT 1759	WR 187	TOTAL 4055

AM Peak Hr Begins at: 730 AM

PEAK VOLUMES =	366	55	28	94	11	8	5	477	55	13	897	124	2133
PEAK HR. FACTOR:		0.857			0.601			0.799			0.965		0.961

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Highland Dwy DATE: 05/01/2007 LOCATION: City of Ramona

E-W STREET: SR 67 DAY: TUESDAY PROJECT# 07-4089-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	1	1	0	1	1	1	1	1	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	20	1	8	41	14	2	2	227	58	7	133	16	529
4:15 PM	29	4	10	48	16	3	1	241	64	10	146	17	589
4:30 PM	17	3	12	44	8	1	0	229	61	12	149	14	550
4:45 PM	28	2	14	77	25	3	0	196	65	8	124	16	558
5:00 PM	13	1	8	50	19	7	0	208	77	10	134	14	541
5:15 PM	20	2	4	65	23	2	0	204	83	12	137	23	575
5:30 PM	14	0	13	66	27	4	0	209	84	11	111	18	557
5:45 PM	8	2	11	52	11	4	0	211	87	6	123	22	537
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	149	15	80	443	143	26	3	1725	579	76	1057	140	4436

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES =	87	10	44	219	68	14	1	874	267	40	553	61	2238
PEAK HR. FACTOR:		0.801			0.717			0.933			0.934		0.950

CONTROL: Signalized

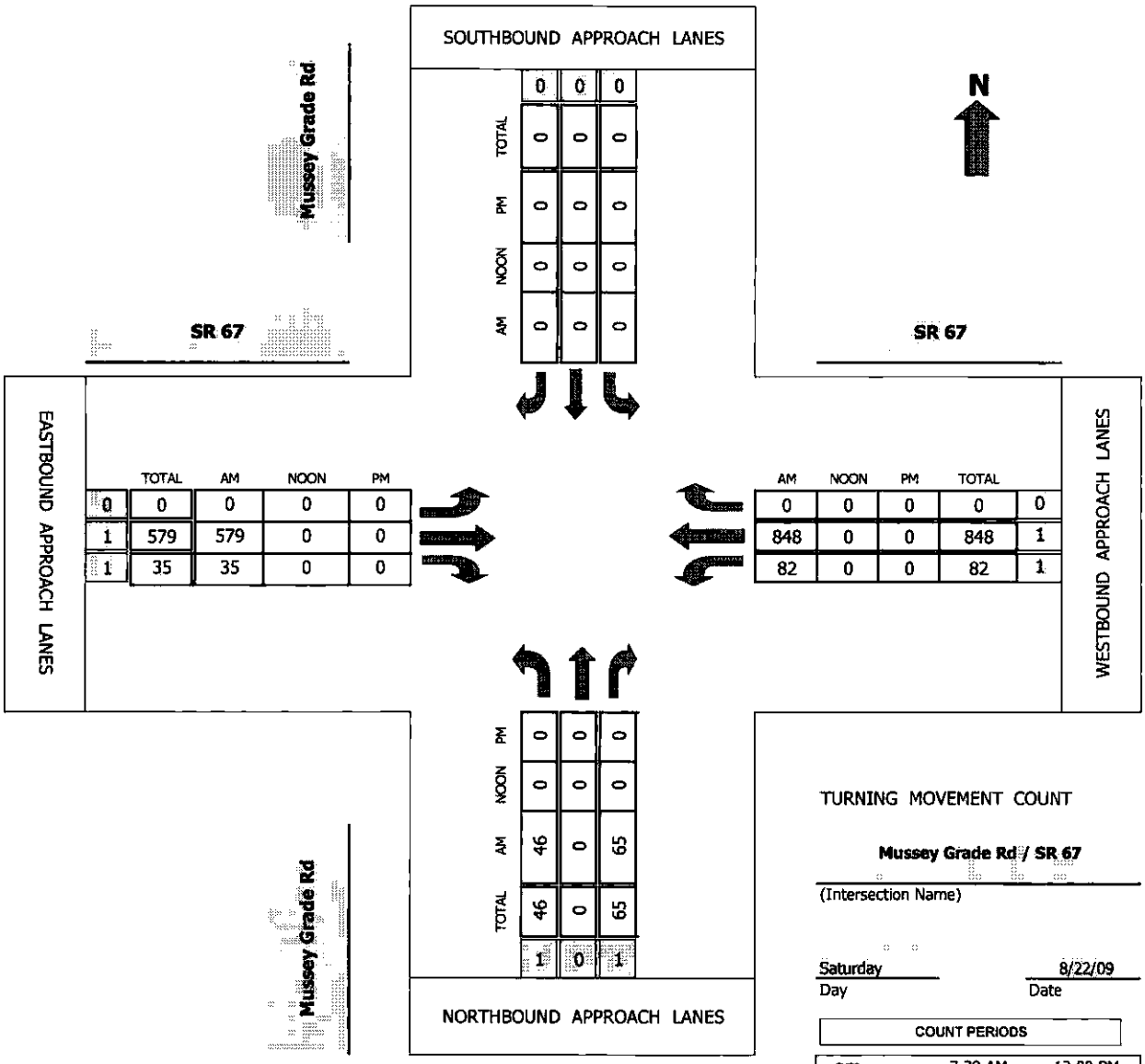
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Mussey Grade Rd/SR 67

Project #: 09-4319-002



	TOTAL	AM	NOON	PM
TOTAL	0	0	0	0
PM	0	0	0	0
NOON	0	0	0	0
AM	0	0	0	0

	TOTAL	AM	NOON	PM
0	0	0	0	0
1	579	579	0	0
1	35	35	0	0

AM	NOON	PM	TOTAL	
0	0	0	0	0
848	0	0	848	1
82	0	0	82	1

	TOTAL	AM	NOON	PM
PM	0	0	0	0
NOON	0	0	0	0
AM	46	0	65	
TOTAL	46	0	65	
	1	0	1	

TURNING MOVEMENT COUNT

Mussey Grade Rd / SR 67

(Intersection Name)

Saturday — Day

8/22/09 — Date

COUNT PERIODS		
am	7:30 AM -	12:00 PM
noon	-	
pm	-	

AM PEAK HOUR	1100 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	0 AM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Mussey Grade Rd DATE: 08/22/2009 LOCATION: City of Ramona

E-W STREET: SR 67 DAY: SATURDAY PROJECT# 09-4319-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	0	0	0	1	1	1	1	0	
8:00 AM													
8:15 AM													
8:30 AM													
8:45 AM													
9:00 AM													
9:15 AM													
9:30 AM	20		20					123	7	13	149		332
9:45 AM	9		20					118	3	9	159		318
10:00 AM	3		19					121	15	15	175		348
10:15 AM	13		27					118	4	17	177		356
10:30 AM	13		16					140	7	21	204		401
10:45 AM	14		15					136	10	12	168		355
11:00 AM	7		18					153	13	15	197		403
11:15 AM	20		16					127	3	19	199		384
11:30 AM	8		14					149	12	23	246		452
11:45 AM	11		17					150	7	25	206		416
TOTAL VOLUMES =	NL 118	NT 0	NR 182	SL 0	ST 0	SR 0	EL 0	ET 1335	ER 81	WL 169	WT 1880	WR 0	TOTAL 3765

AM Peak Hr Begins at: 1100 AM

PEAK VOLUMES =	46	0	65	0	0	0	0	579	35	82	848	0	1655
PEAK HR. FACTOR:		0.771			0.000			0.925			0.864		0.915

CONTROL: 1-way stop(NB)

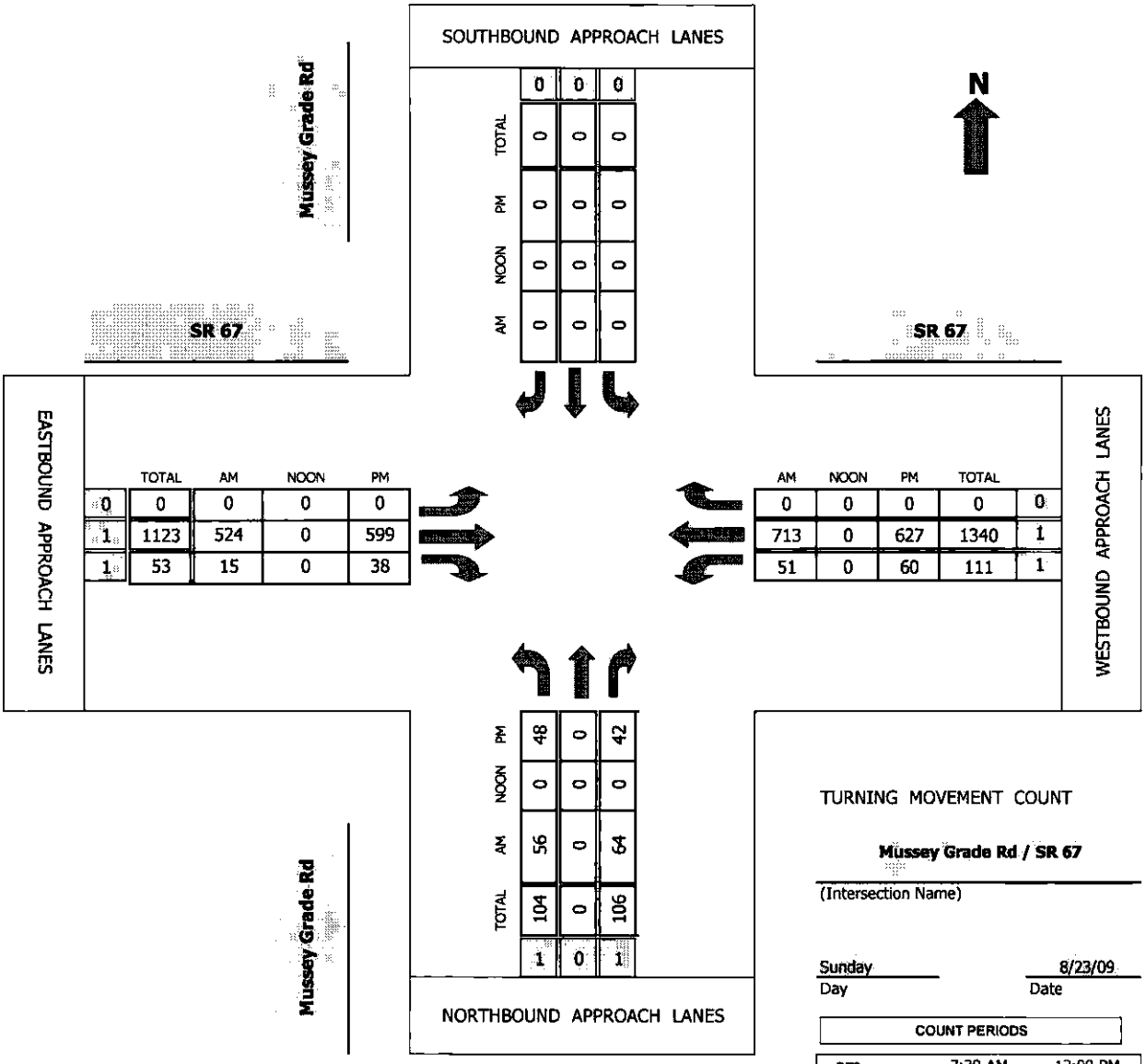
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Mussey Grade Rd/SR 67

Project #: 09-4319-002



	TOTAL	AM	NOON	PM
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	0

0	0	0	0	0	0
1	1123	524	0	599	1
1	53	15	0	38	1

	AM	NOON	PM	TOTAL	
	0	0	0	0	0
	713	0	627	1340	1
	51	0	60	111	1

	TOTAL	AM	NOON	PM
	104	56	0	48
	0	0	0	0
	106	64	0	42
	1	0	1	

TURNING MOVEMENT COUNT

Mussey Grade Rd / SR 67

(Intersection Name)

Sunday — Day

8/23/09 — Date

COUNT PERIODS		
am	7:30 AM -	12:00 PM
noon	-	
pm	4:30 PM -	7:30 PM

AM PEAK HOUR	1000 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Mussey Grade Rd DATE: 08/23/2009 LOCATION: City of Ramona

E-W STREET: SR 67 DAY: SUNDAY PROJECT# 09-4319-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	0	0	0	1	1	1	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM													
7:15 AM													
7:30 AM	4		5					66	1	2	61		139
7:45 AM	8		8					82	0	4	71		173
8:00 AM	6		11					59	3	6	105		190
8:15 AM	7		13					73	2	8	96		199
8:30 AM	5		15					73	3	4	91		191
8:45 AM	12		15					94	3	7	96		227
9:00 AM	5		13					91	7	4	109		229
9:15 AM	8		18					111	5	7	141		290
9:30 AM	12		17					97	5	11	128		270
9:45 AM	17		18					106	3	15	138		297
10:00 AM	16		11					103	6	6	154		296
10:15 AM	11		26					134	0	14	190		375
10:30 AM	15		10					161	4	18	187		395
10:45 AM	14		17					126	5	13	182		357
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 140	NT 0	NR 197	SL 0	ST 0	SR 0	EL 0	ET 1376	ER 47	WL 119	WT 1749	WR 0	TOTAL 3628

AM Peak Hr Begins at: 1000 AM

PEAK VOLUMES =	56	0	64	0	0	0	0	524	15	51	713	0	1423
PEAK HR. FACTOR:		0.811			0.000			0.817			0.932		0.901

CONTROL: 1-way stop(NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Mussey Grade Rd DATE: 08/23/2009 LOCATION: City of Ramona

E-W STREET: SR 67 DAY: SUNDAY PROJECT# 09-4319-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	0	0	0	1	1	1	1	0	
4:00 PM													
4:15 PM													
4:30 PM	9		13					150	11	5	171		359
4:45 PM	22		10					121	6	17	172		348
5:00 PM	10		8					153	10	16	146		343
5:15 PM	7		11					175	11	22	138		364
5:30 PM	6		11					138	9	14	144		322
5:45 PM	5		12					131	9	9	123		289
6:00 PM	10		12					110	5	15	125		277
6:15 PM	6		14					124	7	9	111		271
6:30 PM	5		13					120	10	14	121		283
6:45 PM	3		10					116	8	7	99		243
7:00 PM	4		11					121	5	8	82		231
7:15 PM	8		8					132	9	13	86		256
7:30 PM													
7:45 PM													
TOTAL VOLUMES =	NL 95	NT 0	NR 133	SL 0	ST 0	SR 0	EL 0	ET 1591	ER 100	WL 149	WT 1518	WR 0	TOTAL 3586

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	48	0	42	0	0	0	0	599	38	60	627	0	1414
PEAK HR. FACTOR:		0.703			0.000			0.856			0.909		0.971

CONTROL: 1-way stop(NB)

Intersection Turning Movement

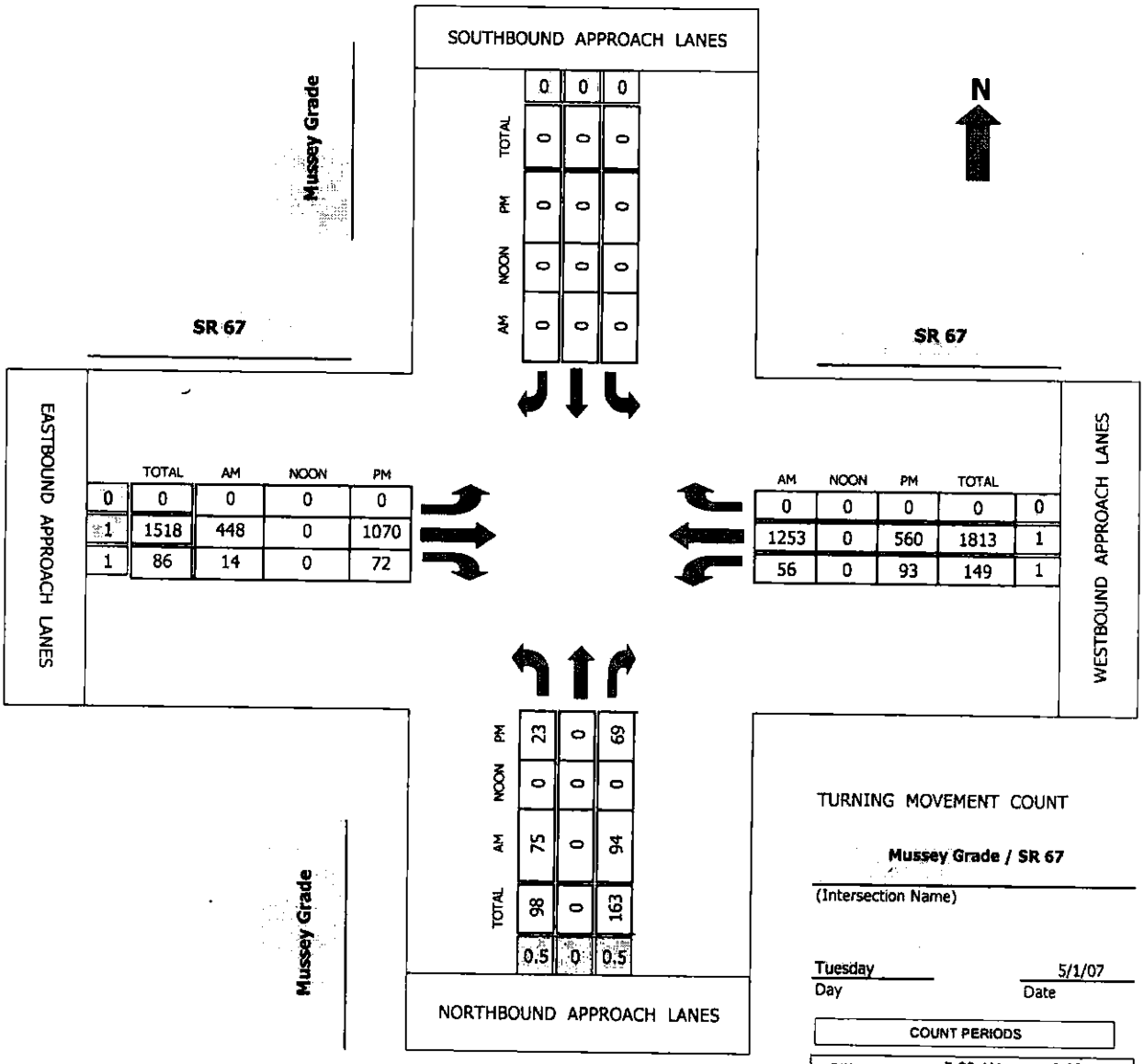
Prepared by:

NDS

National Data & Surveying Services

TMC Summary of Mussey Grade/SR 67

Project #: 07-4089-005



TURNING MOVEMENT COUNT

Mussey Grade / SR 67

(Intersection Name)

Tuesday — Day

5/1/07 — Date

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	11:00 AM -	1:00 PM
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	715 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	415 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Mussey Grade DATE: 05/01/2007 LOCATION: City of Ramona

E-W STREET: SR 67 DAY: TUESDAY PROJECT# 07-4089-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	0	0.5	0	0	0	0	1	1	1	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	22		21					97	5	8	324		477
7:15 AM	20		18					100	4	9	321		472
7:30 AM	15		31					115	1	19	322		503
7:45 AM	20		28					97	5	16	321		487
8:00 AM	20		17					136	4	12	289		478
8:15 AM	21		17					102	3	18	279		440
8:30 AM	22		19					89	8	23	252		413
8:45 AM	7		22					99	6	8	229		371
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 147	NT 0	NR 173	SL 0	ST 0	SR 0	EL 0	ET 835	ER 36	WL 113	WT 2337	WR 0	TOTAL 3641

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	75	0	94	0	0	0	0	448	14	56	1253	0	1940
PEAK HR. FACTOR:		0.880			0.000			0.825			0.960		0.964

CONTROL: 1-WAY STOP SIGN (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Mussey Grade DATE: 05/01/2007 LOCATION: City of Ramona

E-W STREET: SR 67 DAY: TUESDAY PROJECT# 07-4089-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	0	0.5	0	0	0	0	1	1	1	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	3		19					272	15	20	137		466
4:15 PM	8		14					277	15	28	147		489
4:30 PM	8		21					259	11	25	149		473
4:45 PM	4		18					265	22	15	134		458
5:00 PM	3		16					269	24	25	130		467
5:15 PM	5		14					271	17	17	137		461
5:30 PM	9		11					295	18	16	121		470
5:45 PM	5		14					276	10	26	110		441
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 45	NT 0	NR 127	SL 0	ST 0	SR 0	EL 0	ET 2184	ER 132	WL 172	WT 1065	WR 0	TOTAL 3725

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES =	23	0	69	0	0	0	0	1070	72	93	560	0	1887
PEAK HR. FACTOR:		0.793			0.000			0.974			0.933		0.965

CONTROL: 1-WAY STOP SIGN (NB)

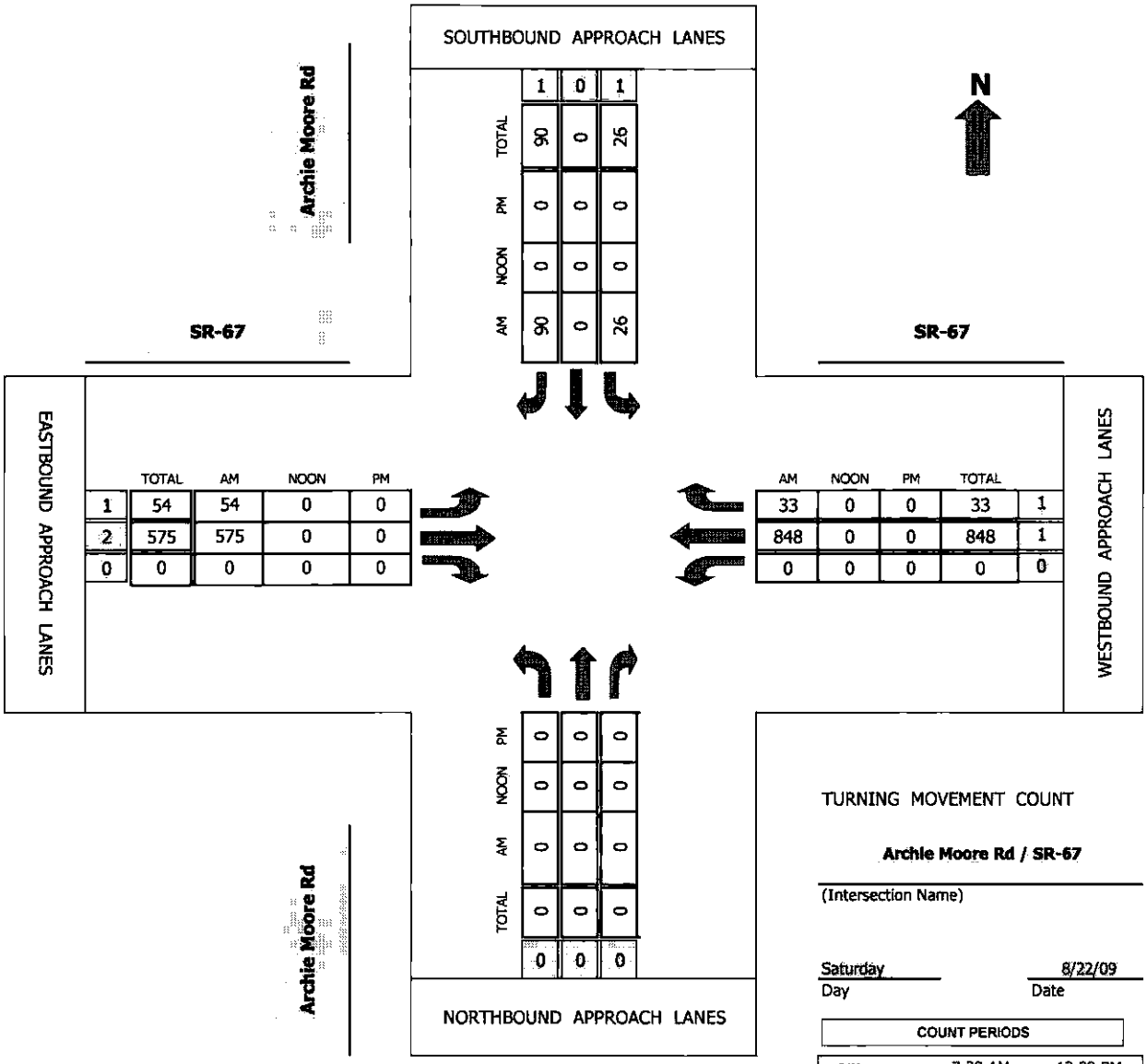
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Archie Moore Rd/SR-67

Project #: 09-4319-001



	TOTAL	AM	NOON	PM
1	1	0	1	
	90	0	26	
	0	0	0	
	0	0	0	
	90	0	26	

	TOTAL	AM	NOON	PM
1	54	54	0	0
2	575	575	0	0
0	0	0	0	0

	AM	NOON	PM	TOTAL
33	0	0	33	1
848	0	0	848	1
0	0	0	0	0

	TOTAL	AM	NOON	PM
	0	0	0	
	0	0	0	
	0	0	0	
	0	0	0	
	0	0	0	

TURNING MOVEMENT COUNT

Archie Moore Rd / SR-67

(Intersection Name)

Saturday — Day

8/22/09 — Date

COUNT PERIODS		
am	7:30 AM -	12:00 PM
noon	-	
pm	-	

AM PEAK HOUR	1100 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	0 AM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Archie Moore Rd DATE: 08/22/2009 LOCATION: City of Ramona

E-W STREET: SR-67 DAY: SATURDAY PROJECT# 09-4319-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1	0	1	1	2	0	0	1	1	
8:00 AM													
8:15 AM													
8:30 AM													
8:45 AM													
9:00 AM													
9:15 AM													
9:30 AM				6		19	11	110			165	3	314
9:45 AM				4		28	14	128			164	6	344
10:00 AM				4		24	10	131			159	5	333
10:15 AM				4		19	17	112			190	6	348
10:30 AM				11		19	8	143			202	8	391
10:45 AM				4		20	9	145			173	3	354
11:00 AM				8		24	6	140			208	11	397
11:15 AM				6		22	23	125			192	8	376
11:30 AM				5		26	11	153			234	8	437
11:45 AM				7		18	14	157			214	6	416
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 59	ST 0	SR 219	EL 123	ET 1344	ER 0	WL 0	WT 1901	WR 64	TOTAL 3710

AM Peak Hr Begins at: 1100 AM

PEAK VOLUMES =	0	0	0	26	0	90	54	575	0	0	848	33	1626
PEAK HR. FACTOR:		0.000			0.906			0.920			0.910		0.930

CONTROL: 1-Way Stop Sign (SB)

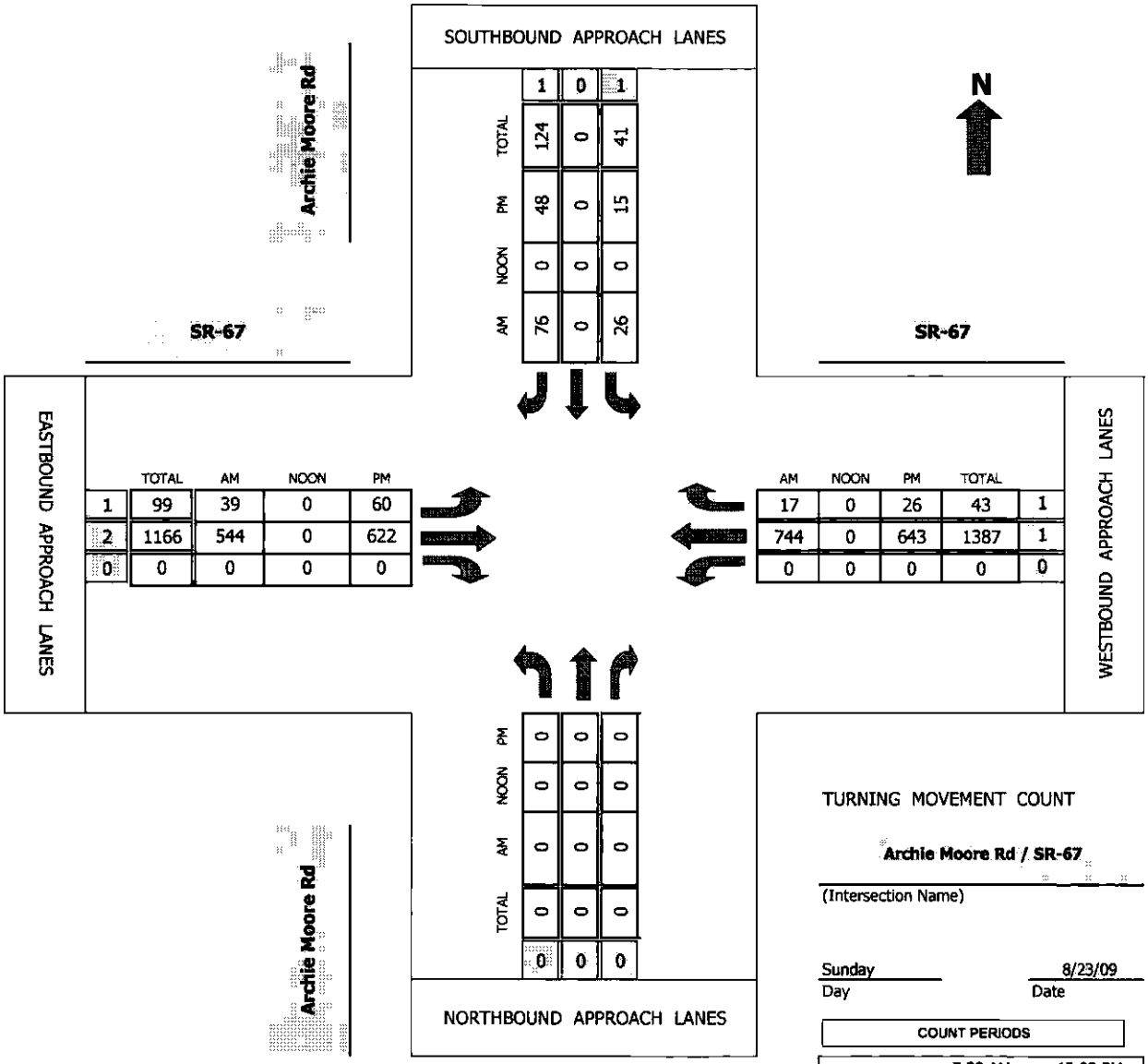
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Archie Moore Rd/SR-67

Project #: 09-4319-001



	TOTAL	AM	NOON	PM
1	124	76	0	48
0	0	0	0	0
1	41	26	0	15

	TOTAL	AM	NOON	PM
1	99	39	0	60
2	1166	544	0	622
0	0	0	0	0

	AM	NOON	PM	TOTAL
17	0	26	43	1
744	0	643	1387	1
0	0	0	0	0

	TOTAL	AM	NOON	PM
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

TURNING MOVEMENT COUNT

Archie Moore Rd / SR-67

(Intersection Name)

Sunday — Day

8/23/09 — Date

COUNT PERIODS			
am	7:30 AM	-	12:00 PM
noon		-	
pm	4:30 PM	-	7:30 PM

AM PEAK HOUR	1000 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	430 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Archie Moore Rd DATE: 08/23/2009 LOCATION: City of Ramona

E-W STREET: SR-67 DAY: SUNDAY PROJECT# 09-4319-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1	0	1	1	2	0	0	1	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM													
7:15 AM													
7:30 AM				5		6	6	68			74	0	159
7:45 AM				0		7	5	74			77	0	163
8:00 AM				6		9	6	52			100	4	177
8:15 AM				4		13	6	79			102	3	207
8:30 AM				2		18	3	84			113	4	224
8:45 AM				5		18	6	77			96	0	202
9:00 AM				1		22	6	96			132	2	259
9:15 AM				8		16	9	108			137	6	284
9:30 AM				4		19	6	103			147	4	283
9:45 AM				6		15	13	79			148	3	264
10:00 AM				7		12	6	115			171	4	315
10:15 AM				5		21	14	163			182	5	390
10:30 AM				4		19	10	127			195	6	361
10:45 AM				10		24	9	139			196	2	380
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 67	ST 0	SR 219	EL 105	ET 1364	ER 0	WL 0	WT 1870	WR 43	TOTAL 3668

AM Peak Hr Begins at: 1000 AM

PEAK VOLUMES =	0	0	0	26	0	76	39	544	0	0	744	17	1446
PEAK HR. FACTOR:		0.000			0.750			0.823			0.947		0.927

CONTROL: 1-Way Stop Sign (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Archie Moore Rd DATE: 08/23/2009 LOCATION: City of Ramona

E-W STREET: SR-67 DAY: SUNDAY PROJECT# 09-4319-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1	0	1	1	2	0	0	1	1	
4:00 PM													
4:15 PM													
4:30 PM				5		10	14	139			165	11	344
4:45 PM				6		8	14	136			198	5	367
5:00 PM				3		16	18	172			145	4	358
5:15 PM				1		14	14	175			135	6	345
5:30 PM				3		10	17	152			134	3	319
5:45 PM				5		6	20	125			123	3	282
6:00 PM				5		22	8	130			135	4	304
6:15 PM				3		17	17	145			103	2	287
6:30 PM				5		13	13	118			128	3	280
6:45 PM				1		10	10	132			99	1	253
7:00 PM				4		11	17	127			102	3	264
7:15 PM				3		8	12	137			81	6	247
7:30 PM													
7:45 PM													
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 44	ST 0	SR 145	EL 174	ET 1688	ER 0	WL 0	WT 1548	WR 51	TOTAL 3650

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	0	0	0	15	0	48	60	622	0	0	643	26	1414
PEAK HR. FACTOR:		0.000			0.829			0.897			0.824		0.963

CONTROL: 1-Way Stop Sign (SB)

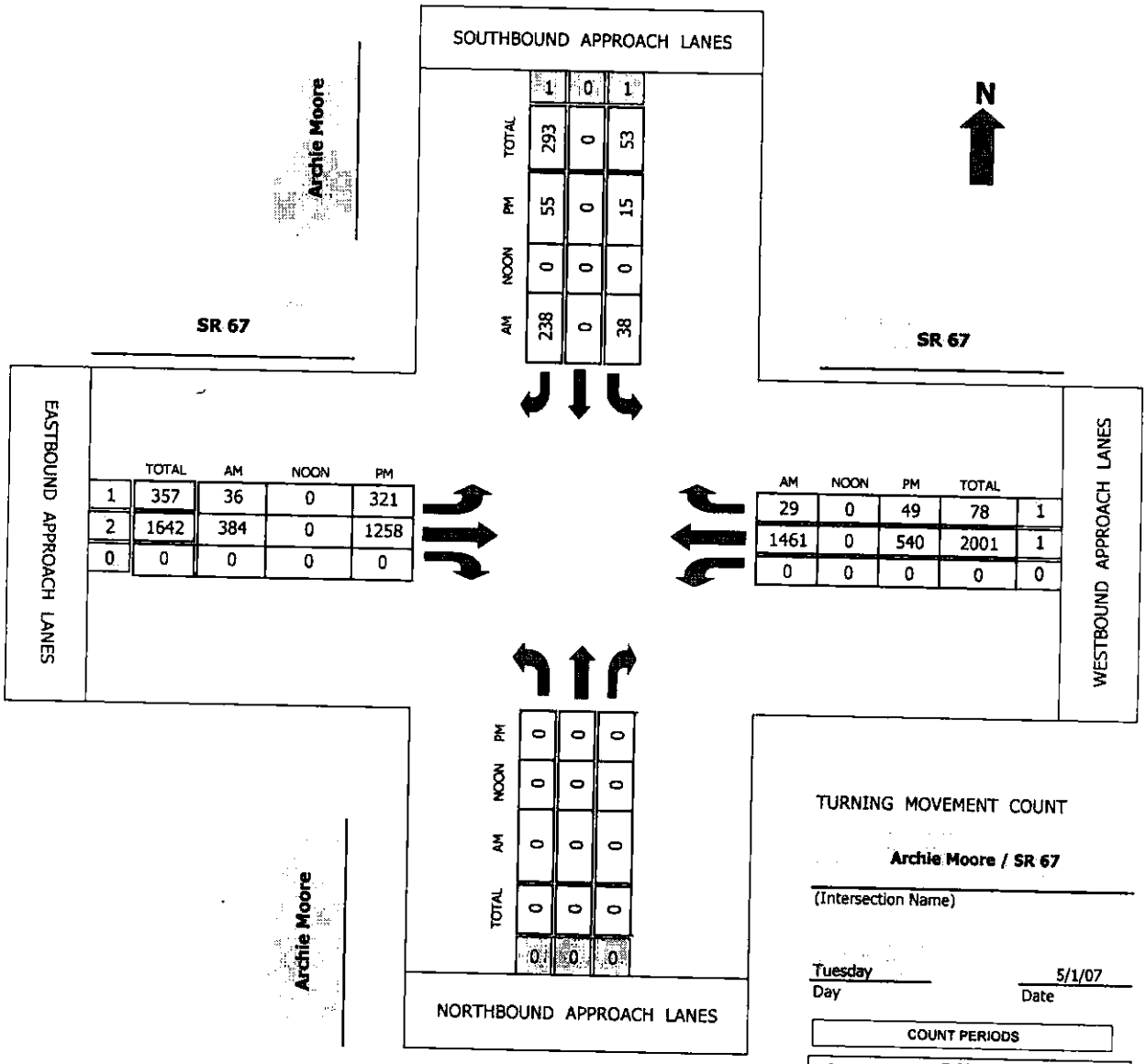
Intersection Turning Movement

Prepared by:

National Data & Surveying Services

TMC Summary of Archie Moore/SR 67

Project #: 07-4089-006



	TOTAL	AM	NOON	PM
	1	0		1
	293	0		53
PM	55	0		15
NOON	0	0		0
AM	238	0		38

	TOTAL	AM	NOON	PM
1	357	36	0	321
2	1642	384	0	1258
0	0	0	0	0

AM	NOON	PM	TOTAL	
29	0	49	78	1
1461	0	540	2001	1
0	0	0	0	0

	TOTAL	AM	NOON	PM
PM	0	0	0	0
NOON	0	0	0	0
AM	0	0	0	0
TOTAL	0	0	0	0
	0	0	0	0

TURNING MOVEMENT COUNT

Archie Moore / SR 67

(Intersection Name)

Tuesday — Day

5/1/07 — Date

COUNT PERIODS		
am	7:00 AM -	9:00 AM
noon	11:00 AM -	1:00 PM
pm	4:00 PM -	6:00 PM

AM PEAK HOUR	700 AM
NOON PEAK HOUR	0 AM
PM PEAK HOUR	415 PM

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Archie Moore DATE: 05/01/2007 LOCATION: City of Ramona

E-W STREET: SR 67 DAY: TUESDAY PROJECT# 07-4089-006

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1	0	1	1	2	0	0	1	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM				4		48	4	98			360	7	521
7:15 AM				8		61	9	88			362	5	533
7:30 AM				10		77	10	101			370	9	577
7:45 AM				16		52	13	97			369	8	555
8:00 AM				5		41	14	85			321	18	484
8:15 AM				8		51	8	92			301	26	486
8:30 AM				12		36	8	80			248	24	408
8:45 AM				5		34	5	93			232	7	376
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 68	ST 0	SR 400	EL 71	ET 734	ER 0	WL 0	WT 2563	WR 104	TOTAL 3940

AM Peak Hr Begins at: 700 AM

PEAK VOLUMES =	0	0	0	38	0	238	36	384	0	0	1461	29	2186
PEAK HR. FACTOR:		0.000			0.793			0.946			0.983		0.947

CONTROL: 1-WAY STOP SIGN (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Archie Moore | DATE: 05/01/2007 | LOCATION: City of Ramona

E-W STREET: SR 67 | DAY: TUESDAY | PROJECT# 07-4089-006

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1	0	1	1	2	0	0	1	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM				3		16	47	331			117	8	522
4:15 PM				5		15	62	339			155	1	577
4:30 PM				8		11	61	316			133	14	543
4:45 PM				0		16	98	304			138	17	573
5:00 PM				2		13	100	299			114	17	545
5:15 PM				2		16	98	270			142	7	535
5:30 PM				2		10	99	274			113	7	505
5:45 PM				2		8	74	257			107	9	457
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 24	ST 0	SR 105	EL 639	ET 2390	ER 0	WL 0	WT 1019	WR 80	TOTAL 4257

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES =	0	0	0	15	0	55	321	1258	0	0	540	49	2238
PEAK HR. FACTOR:		0.000			0.875			0.982			0.944		0.970

CONTROL: 1-WAY STOP SIGN (SB)

Volumes for: Tuesday, May 01, 2007 City: Ramona Project #: 07-4088-005

Location: Hwy 67 E/o Archie Moore

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			23		7			12:00			151		148		
00:15			23		6			12:15			162		165		
00:30			23		7			12:30			166		155		
00:45			12	81	1	21	102	12:45			161	640	155	623	1263
01:00			15		5			13:00			148		118		
01:15			7		3			13:15			183		159		
01:30			10		4			13:30			188		169		
01:45			7	39	7	19	58	13:45			156	675	179	625	1300
02:00			9		10			14:00			169		131		
02:15			5		8			14:15			190		138		
02:30			4		12			14:30			229		154		
02:45			8	26	14	44	70	14:45			230	818	161	584	1402
03:00			4		12			15:00			293		150		
03:15			6		11			15:15			287		164		
03:30			6		25			15:30			310		152		
03:45			7	23	22	70	93	15:45			302	1192	151	617	1809
04:00			14		38			16:00			289		131		
04:15			12		59			16:15			314		159		
04:30			7		99			16:30			295		161		
04:45			18	51	82	278	329	16:45			285	1183	140	591	1774
05:00			16		109			17:00			292		142		
05:15			24		236			17:15			314		135		
05:30			39		278			17:30			312		140		
05:45			42	121	301	924	1045	17:45			324	1242	91	508	1750
06:00			50		347			18:00			331		118		
06:15			71		348			18:15			289		98		
06:30			75		320			18:30			236		81		
06:45			112	308	332	1347	1655	18:45			216	1072	79	376	1448
07:00			88		353			19:00			187		85		
07:15			103		354			19:15			178		90		
07:30			108		330			19:30			154		69		
07:45			94	393	317	1354	1747	19:45			153	672	67	311	983
08:00			100		353			20:00			134		67		
08:15			94		331			20:15			137		55		
08:30			110		329			20:30			144		64		
08:45			109	413	292	1305	1718	20:45			113	528	51	237	765
09:00			110		251			21:00			118		48		
09:15			88		230			21:15			109		62		
09:30			108		176			21:30			108		56		
09:45			118	424	168	825	1249	21:45			89	424	32	198	622
10:00			113		151			22:00			102		28		
10:15			91		147			22:15			81		30		
10:30			118		165			22:30			68		29		
10:45			115	437	165	628	1065	22:45			62	313	22	109	422
11:00			137		153			23:00			41		15		
11:15			119		141			23:15			41		14		
11:30			125		126			23:30			35		7		
11:45			153	534	131	551	1085	23:45			34	151	6	42	193
Total Vol.				2850		7366	**10216**					8910		4821	**13731**

Daily Totals

NB	SB	EB	WB	Combined
		11760	12187	**23947**

	AM			PM		
Split %	27.9%	72.1%	**42.7%**	64.9%	35.1%	**57.3%**
Peak Hour	11:45	06:45	**06:45**	17:15	13:15	**15:00**
Volume	632	1369	**1780**	1281	638	**1809**
P.H.F.	0.95	0.97	**0.97**	0.97	0.89	**0.98**

Prepared by NDS/ATD

Volumes for: Sunday, August 30, 2009	City: Ramona	Daily Totals NB	SB	EB	WB	Total
Location: SR 67 E/o Highland Valley Rd	Project: 09-4320-003	0	0	7,639	8,048	15,687

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			35		21			12:00			133		188		
00:15			29		15			12:15			141		166		
00:30			34		17			12:30			136		190		
00:45			31	129	15	68	197	12:45			135	545	168	712	1257
01:00			19		18			13:00			123		140		
01:15			15		6			13:15			132		158		
01:30			15		10			13:30			130		179		
01:45			11	60	15	49	109	13:45			131	516	171	648	1164
02:00			18		6			14:00			118		141		
02:15			12		10			14:15			132		142		
02:30			11		8			14:30			112		117		
02:45			8	49	3	27	76	14:45			163	525	160	560	1085
03:00			14		4			15:00			156		127		
03:15			9		11			15:15			157		146		
03:30			14		10			15:30			145		163		
03:45			4	41	6	31	72	15:45			152	610	141	577	1187
04:00			10		9			16:00			128		141		
04:15			2		21			16:15			148		150		
04:30			6		11			16:30			123		118		
04:45			16	34	12	53	87	16:45			122	521	130	539	1060
05:00			16		17			17:00			158		143		
05:15			5		24			17:15			128		104		
05:30			14		25			17:30			127		115		
05:45			16	51	13	79	130	17:45			121	534	109	471	1005
06:00			21		37			18:00			126		112		
06:15			21		58			18:15			121		96		
06:30			31		47			18:30			140		103		
06:45			38	111	34	176	287	18:45			129	516	92	403	919
07:00			35		41			19:00			109		109		
07:15			46		69			19:15			115		91		
07:30			57		52			19:30			115		101		
07:45			91	229	66	228	457	19:45			118	457	99	400	857
08:00			82		81			20:00			115		112		
08:15			104		97			20:15			104		71		
08:30			75		102			20:30			103		73		
08:45			109	370	113	393	763	20:45			82	404	66	322	726
09:00			98		127			21:00			74		53		
09:15			101		138			21:15			60		57		
09:30			109		132			21:30			58		45		
09:45			109	417	173	570	987	21:45			59	251	34	189	440
10:00			123		138			22:00			34		32		
10:15			114		163			22:15			50		34		
10:30			110		161			22:30			46		20		
10:45			139	486	151	613	1099	22:45			34	164	16	102	266
11:00			131		220			23:00			24		21		
11:15			153		194			23:15			28		16		
11:30			116		197			23:30			15		7		
11:45			136	536	175	786	1322	23:45			16	83	8	52	135
Total Vol.				2513		3073	**5586**					5126		4975	**10101**

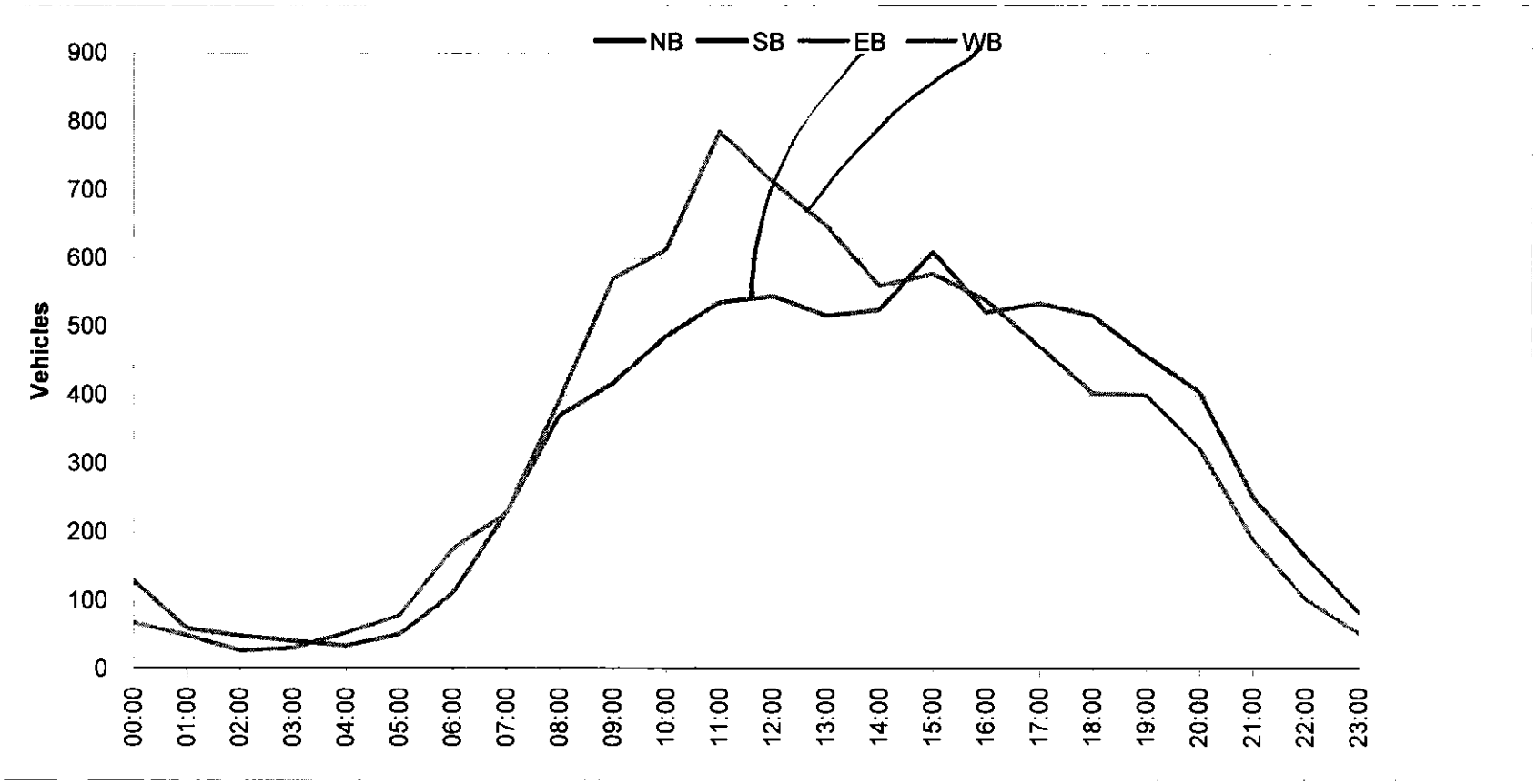
	NB	SB	EB	WB	Total
Daily Totals :	0	0	7,639	8,048	15,687

			AM					PM				
Split %			45.0%	55.0%	35.6%			50.7%	49.3%	64.4%		
AM						PM						
Peak Hr.			11:45	11:00	11:00	Peak Hr.		12:45	12:00	12:00		
Volume			546	786	1322	Volume		621	712	1257		
P.H.F.			0.956	0.893	0.932	P.H.F.		0.952	0.937	0.964		
7 - 9 AM	0	0	599	621	1220	4 - 6 PM	0	0	1055	1010	2065	
Peak Hr.			08:00	08:00	08:00	Peak Hr.			16:15	16:15	16:15	
Volume	0	0	370	393	763	Volume	0	0	551	541	1092	
P.H.F.	0.000	0.000	0.849	0.869	0.859	P.H.F.	0.000	0.000	0.872	0.902	0.907	

Prepared by [redacted]

Project #: 09-4320-003 City: Ramona

Location: SR 67 E/o Highland Valley Rd Date: Sunday, August 30, 2009



Volumes for: Tuesday, May 01, 2007 City: Ramona Project #: 07-4088-008

Location: Hwy 67 N/o Highland Valley

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			16		10			12:00			138		162		
00:15			18		3			12:15			145		153		
00:30			15		8			12:30			162		157		
00:45			14	63	5	26	89	12:45			173	618	165	637	1255
01:00			12		6			13:00			160		131		
01:15			12		6			13:15			177		167		
01:30			6		5			13:30			182		193		
01:45			9	39	5	22	61	13:45			165	684	155	646	1330
02:00			8		8			14:00			176		146		
02:15			7		10			14:15			187		159		
02:30			6		10			14:30			204		175		
02:45			8	29	13	41	70	14:45			217	784	193	673	1457
03:00			7		13			15:00			241		194		
03:15			7		11			15:15			303		167		
03:30			8		21			15:30			274		179		
03:45			8	30	29	74	104	15:45			300	1118	173	713	1831
04:00			14		40			16:00			272		162		
04:15			14		69			16:15			274		170		
04:30			11		90			16:30			310		169		
04:45			22	61	79	278	339	16:45			296	1152	148	649	1801
05:00			24		129			17:00			279		161		
05:15			36		211			17:15			282		166		
05:30			40		253			17:30			293		139		
05:45			51	151	295	888	1039	17:45			294	1148	126	592	1740
06:00			70		345			18:00			304		135		
06:15			73		307			18:15			265		121		
06:30			82		310			18:30			264		105		
06:45			112	337	321	1283	1620	18:45			192	1025	110	471	1496
07:00			136		328			19:00			171		95		
07:15			110		317			19:15			150		102		
07:30			127		325			19:30			149		89		
07:45			118	491	292	1262	1753	19:45			125	595	90	376	971
08:00			113		313			20:00			126		73		
08:15			132		313			20:15			101		68		
08:30			142		286			20:30			116		68		
08:45			125	512	267	1179	1691	20:45			86	429	53	262	691
09:00			130		198			21:00			97		56		
09:15			95		260			21:15			95		56		
09:30			103		213			21:30			84		63		
09:45			128	456	206	877	1333	21:45			69	345	35	210	555
10:00			113		196			22:00			82		35		
10:15			106		197			22:15			69		26		
10:30			100		206			22:30			56		26		
10:45			110	429	198	797	1226	22:45			47	254	20	107	361
11:00			119		204			23:00			40		15		
11:15			122		208			23:15			28		14		
11:30			124		183			23:30			31		7		
11:45			134	499	175	770	1269	23:45			25	124	8	44	168
Total Vol.				3097		7497	**10594**					8276		5380	**13656**

Daily Totals

	NB	SB	EB	WB	Combined
			11373	12877	**24250**
			PM		
Split %			60.6%	39.4%	**56.3%**

	AM		
Split %	29.2%	70.8%	**43.7%**
Peak Hour	11:45	06:45	**06:45**
Volume	579	1291	**1776**
P.H.F.	0.89	0.98	**0.96**

	PM		
Split %	60.6%	39.4%	**56.3%**
Peak Hour	17:15	14:45	**15:00**
Volume	1173	733	**1831**
P.H.F.	0.96	0.94	**0.97**

Prepared by NDS/ATD

Volumes for: Sunday, August 23, 2009	City:	Ramona	Daily Totals NB	SB	EB	WB	Total
Location: SR 67 W/o Highland Valley Rd	Project:	09-4320-002	0	0	8,898	9,439	18,337

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			39		32			12:00			169		199		
00:15			31		28			12:15			178		233		
00:30			44		22			12:30			151		193		
00:45			25	139	30	112	251	12:45			168	666	207	832	1498
01:00			16		15			13:00			157		226		
01:15			18		19			13:15			185		223		
01:30			17		24			13:30			199		174		
01:45			15	66	12	70	136	13:45			154	695	168	791	1486
02:00			10		10			14:00			169		195		
02:15			22		12			14:15			175		188		
02:30			16		7			14:30			176		200		
02:45			14	62	7	36	98	14:45			201	721	188	771	1492
03:00			9		6			15:00			124		159		
03:15			4		7			15:15			170		158		
03:30			6		13			15:30			160		144		
03:45			8	27	10	36	63	15:45			178	632	155	616	1248
04:00			7		19			16:00			173		155		
04:15			6		22			16:15			144		178		
04:30			5		20			16:30			165		190		
04:45			6	24	19	80	104	16:45			132	614	179	702	1316
05:00			11		18			17:00			166		166		
05:15			6		28			17:15			187		166		
05:30			9		24			17:30			152		148		
05:45			17	43	22	92	135	17:45			142	647	120	600	1247
06:00			18		44			18:00			128		133		
06:15			20		58			18:15			142		127		
06:30			48		55			18:30			135		131		
06:45			36	122	38	195	317	18:45			125	530	106	497	1027
07:00			34		51			19:00			135		99		
07:15			43		84			19:15			143		93		
07:30			70		66			19:30			126		80		
07:45			95	242	72	273	515	19:45			113	517	98	370	887
08:00			71		121			20:00			137		98		
08:15			86		101			20:15			129		92		
08:30			95		108			20:30			96		84		
08:45			115	367	111	441	808	20:45			73	435	73	347	782
09:00			108		117			21:00			81		63		
09:15			129		150			21:15			76		50		
09:30			115		151			21:30			75		55		
09:45			128	480	146	564	1044	21:45			79	311	38	206	517
10:00			121		172			22:00			63		50		
10:15			157		202			22:15			60		31		
10:30			172		203			22:30			53		21		
10:45			146	596	191	768	1364	22:45			47	223	25	127	350
11:00			152		226			23:00			39		16		
11:15			163		201			23:15			35		18		
11:30			138		200			23:30			29		13		
11:45			157	610	228	855	1465	23:45			26	129	11	58	187
Total Vol.			2778		3522		**6300**				6120		5917		**12037**

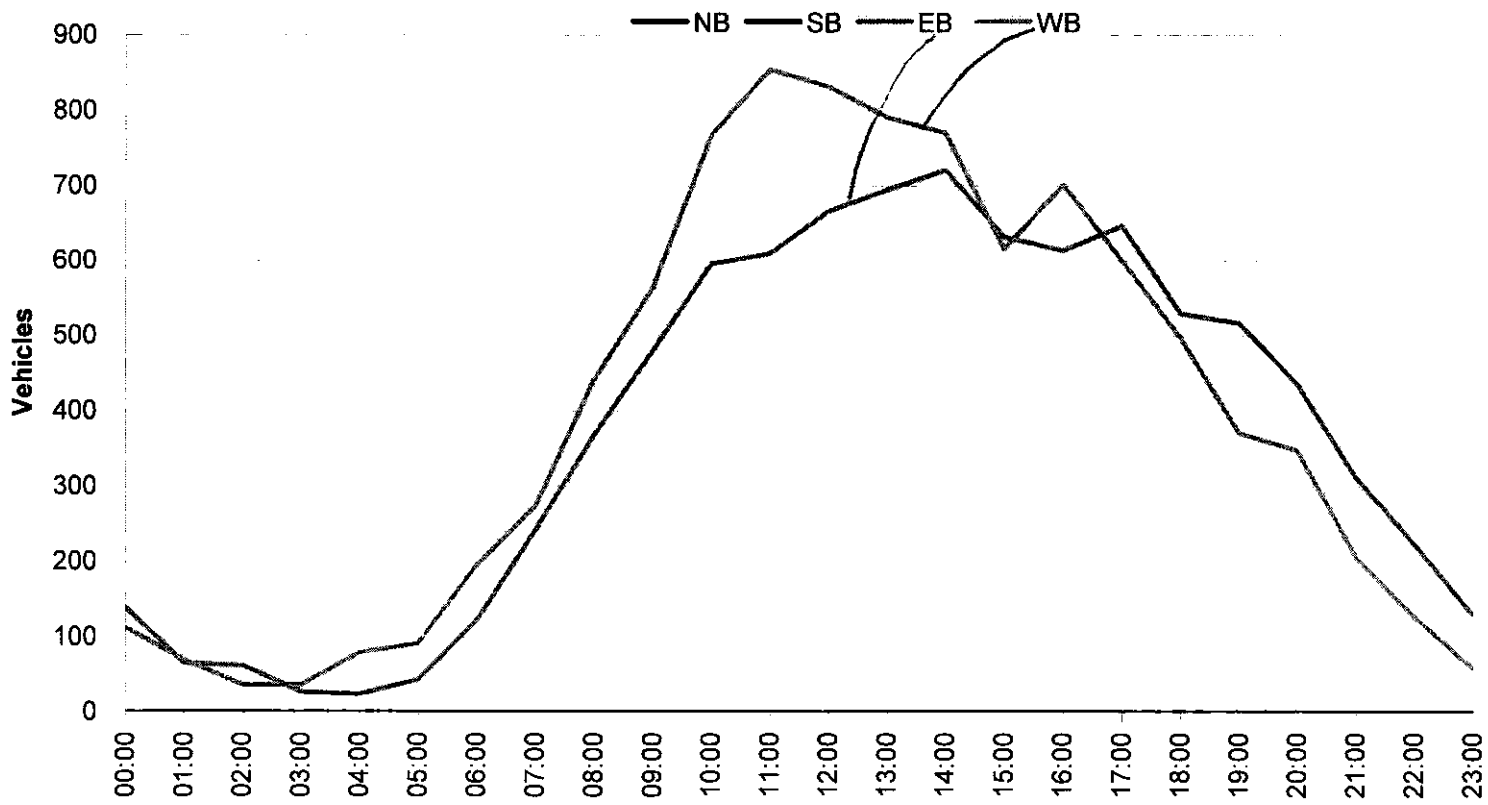
	NB	SB	EB	WB	Total
Daily Totals :	0	0	8,898	9,439	18,337

	AM				PM				
Split %			44.1%	55.9%	34.2%		50.8%	49.2%	65.8%
	AM				PM				
Peak Hr.			11:45	11:30	11:45	Peak Hr.	14:00	12:15	12:45
Volume			610	860	1465	Volume	721	859	1559
P.H.F.			0.900	0.923	0.917	P.H.F.	0.897	0.922	0.943
24 - 8 Vol.	0	0	2169	2134	4303	24 - 8 Vol.	0	0	4261	4302	8563
Peak Hr.			08:00	08:00	08:00	Peak Hr.			16:30	16:15	16:30
Volume	0	0	367	441	808	Volume	0	0	650	713	1351
P.H.F.	0.000	0.000	0.798	0.911	0.893	P.H.F.	0.000	0.000	0.869	0.938	0.951

Prepared by NDS, Inc.

Project #: 09-4320-002 City: Ramona

Location: SR 67 W/o Highland Valley Rd Date: Sunday, August 23, 2009



Prepared by NDS/ATD

Volumes for: Sunday, August 23, 2009	City: Ramona	Daily Totals NB	SB	EB	WB	Total
Location: SR 67 W/o Mussey Grade Rd	Project: 09-4320-001	0	0	8,523	9,165	17,688

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			38		34			12:00			162		187		
00:15			32		19			12:15			167		231		
00:30			43		22			12:30			133		189		
00:45			26	139	27	102	241	12:45			164	626	193	800	1426
01:00			14		14			13:00			150		227		
01:15			19		18			13:15			183		213		
01:30			16		22			13:30			201		185		
01:45			17	66	14	68	134	13:45			139	673	156	781	1454
02:00			11		11			14:00			172		180		
02:15			22		10			14:15			174		173		
02:30			15		6			14:30			174		199		
02:45			14	62	8	35	97	14:45			188	708	187	739	1447
03:00			11		5			15:00			128		169		
03:15			3		5			15:15			159		158		
03:30			6		13			15:30			171		137		
03:45			7	27	10	33	60	15:45			177	635	153	617	1252
04:00			8		19			16:00			169		152		
04:15			4		24			16:15			154		171		
04:30			5		18			16:30			150		181		
04:45			9	26	19	80	106	16:45			126	599	195	699	1298
05:00			7		17			17:00			174		157		
05:15			7		27			17:15			186		143		
05:30			8		26			17:30			143		145		
05:45			16	38	27	97	135	17:45			139	642	111	556	1198
06:00			14		43			18:00			118		137		
06:15			24		58			18:15			131		116		
06:30			40		59			18:30			139		123		
06:45			34	112	37	197	309	18:45			126	514	107	483	997
07:00			31		47			19:00			132		87		
07:15			37		81			19:15			136		89		
07:30			71		71			19:30			120		73		
07:45			83	222	81	280	502	19:45			105	493	87	336	829
08:00			66		112			20:00			130		97		
08:15			68		105			20:15			130		74		
08:30			82		108			20:30			87		76		
08:45			98	314	119	444	758	20:45			74	421	72	319	740
09:00			107		115			21:00			79		57		
09:15			118		150			21:15			71		42		
09:30			109		140			21:30			74		49		
09:45			100	434	158	563	997	21:45			79	303	39	187	490
10:00			118		172			22:00			62		41		
10:15			168		207			22:15			65		25		
10:30			125		194			22:30			54		18		
10:45			139	550	199	772	1322	22:45			45	226	21	105	331
11:00			137		199			23:00			41		15		
11:15			154		201			23:15			34		15		
11:30			131		195			23:30			32		16		
11:45			138	560	221	816	1376	23:45			26	133	10	56	189
Total Vol.				2550		3487	**6037**					5973		5678	**11651**

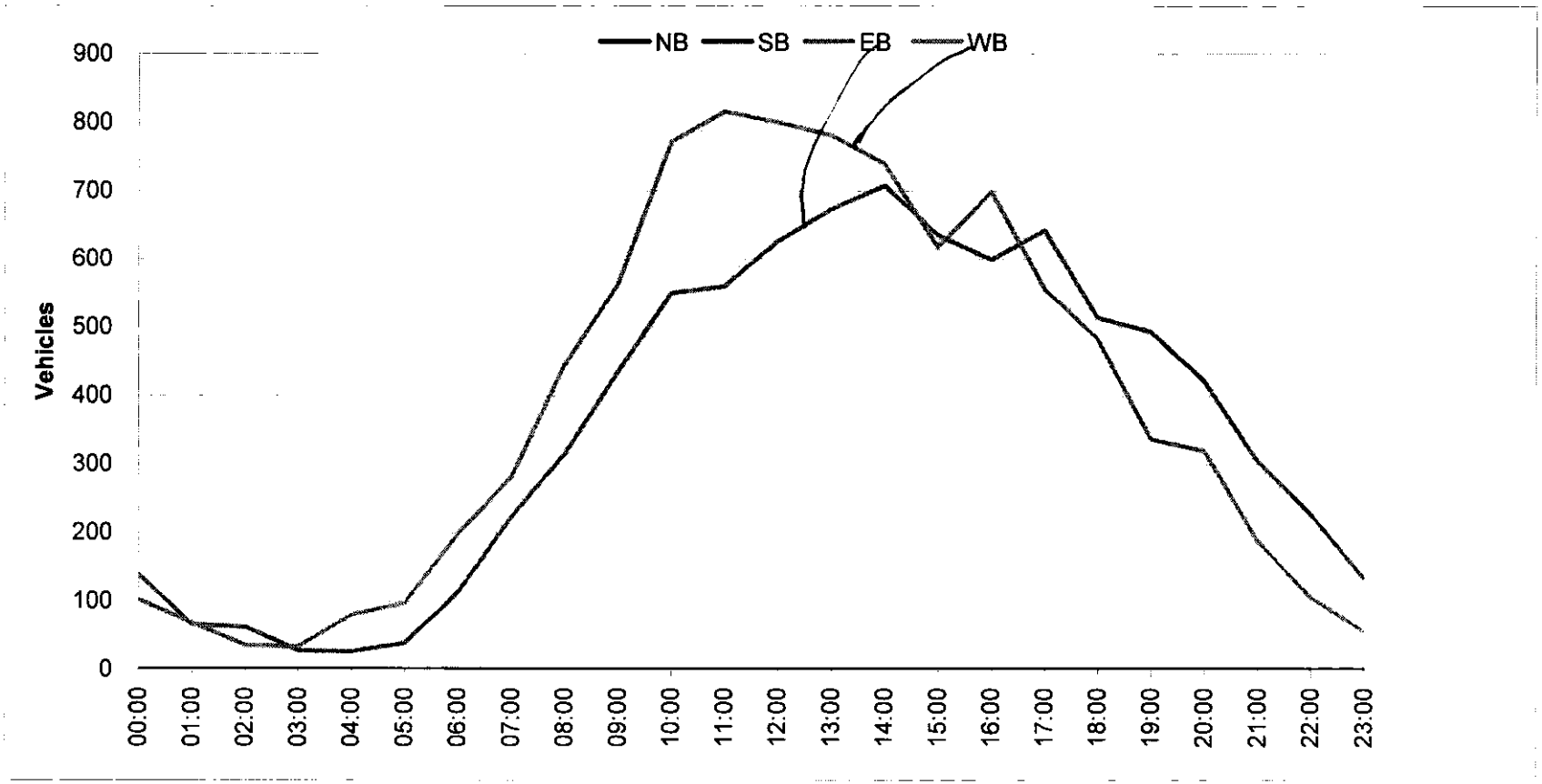
	NB	SB	EB	WB	Total
Daily Totals :	0	0	8,523	9,165	17,688

	AM				PM				
Split %			42.5%	57.5%			51.2%	48.7%	100.0%
AM					PM				
Peak Hr.			11:45	11:30	Peak Hr.		14:00	12:15	12:45
Volume			800	854	Volume		708	840	1516
P.H.F.			0.848	0.903	P.H.F.		0.941	0.909	0.957
7 - 9 Vol.	0	0	556	724	4 - 6 Vol.	0	0	1241	1255	2496
Peak Hr.			08:00	08:00	Peak Hr.		17:00	16:15	16:30
Volume	0	0	314	444	Volume	0	0	642	704	1312
P.H.F.	0.000	0.000	0.801	0.933	P.H.F.	0.000	0.000	0.863	0.903	0.991

Prepared by [illegible]

Project #: 09-4320-001 City: Ramona

Location: SR 67 W/o Mussey Grade Rd Date: Sunday, August 23, 2009



Prepared by NDS/ATD

Volumes for: Sunday, August 23, 2009	City: Ramona	Daily Totals NB	SB	EB	WB	Total
Location: Highland Valley Rd N/o SR-67	Project: 09-4320-005	790	905	0	0	1,695

AM Period	NB		SB		EB		WB		PM Period	NB		SB		EB		WB	
00:00	1		1						12:00	18		21					
00:15	4		7						12:15	17		19					
00:30	1		3						12:30	26		18					
00:45	0	6	0	11				17	12:45	15	76	17	75				151
01:00	3		4						13:00	13		11					
01:15	0		0						13:15	21		12					
01:30	1		0						13:30	10		12					
01:45	1	5	0	4				9	13:45	20	64	12	47				111
02:00	0		3						14:00	21		12					
02:15	0		1						14:15	21		19					
02:30	0		0						14:30	26		16					
02:45	2	2	0	4				6	14:45	15	83	14	61				144
03:00	0		2						15:00	16		20					
03:15	1		0						15:15	10		11					
03:30	0		1						15:30	11		14					
03:45	1	2	3	6				8	15:45	10	47	9	54				101
04:00	2		1						16:00	11		6					
04:15	0		0						16:15	9		10					
04:30	0		1						16:30	17		9					
04:45	0	2	0	2				4	16:45	12	49	10	35				84
05:00	1		0						17:00	17		18					
05:15	0		2						17:15	9		11					
05:30	1		2						17:30	5		8					
05:45	7	9	1	5				14	17:45	13	44	11	48				92
06:00	3		5						18:00	11		8					
06:15	0		1						18:15	12		11					
06:30	0		7						18:30	10		14					
06:45	3	6	4	17				23	18:45	8	41	12	45				86
07:00	1		3						19:00	10		9					
07:15	2		13						19:15	12		13					
07:30	7		9						19:30	8		18					
07:45	13	23	9	34				57	19:45	9	39	9	49				88
08:00	6		14						20:00	6		15					
08:15	11		14						20:15	20		9					
08:30	15		24						20:30	4		8					
08:45	9	41	17	69				110	20:45	2	32	4	36				68
09:00	3		17						21:00	5		16					
09:15	10		16						21:15	4		5					
09:30	13		22						21:30	4		1					
09:45	15	41	28	83				124	21:45	4	17	1	23				40
10:00	15		20						22:00	4		3					
10:15	21		21						22:15	3		8					
10:30	18		29						22:30	0		3					
10:45	17	71	24	94				165	22:45	1	8	2	16				24
11:00	20		20						23:00	2		1					
11:15	24		21						23:15	0		0					
11:30	12		25						23:30	1		1					
11:45	20	76	19	85				161	23:45	3	6	0	2				8
Total Vol.		284		414				**698**			506		491				**997**

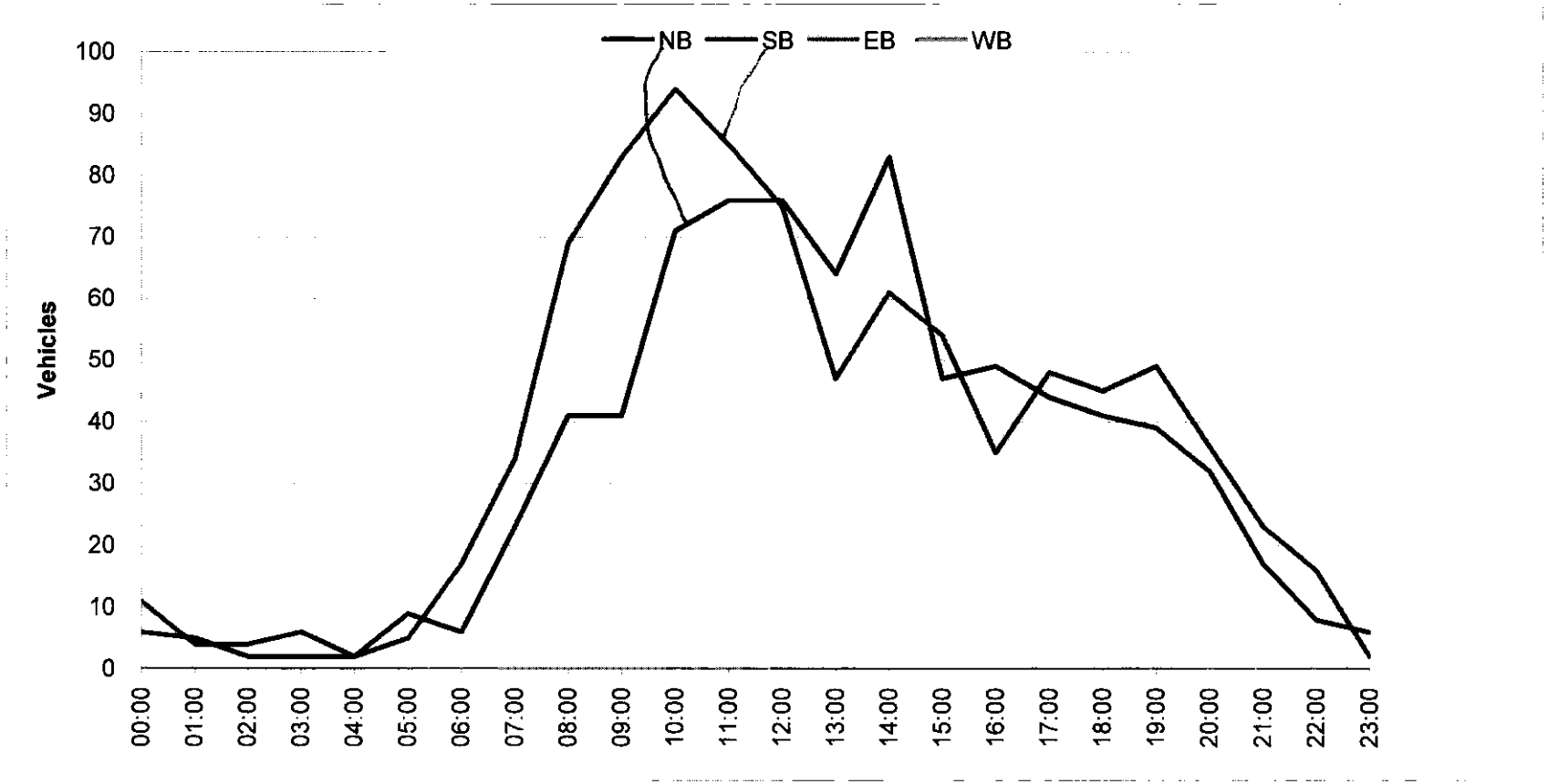
	NB	SB	EB	WB	Total
Daily Totals :	790	905	0	0	1,695

	AM					PM				
Split %	59.7%	59.3%			41.2%	50.8%	49.2%	0	0	50.0%
Peak Hr.	09:45	09:45			10:30	12:45	12:00			12:00
Volume	83	98			173	88	75			151
P.H.F.	0.796	0.843			0.926	0.846	0.893			0.858
7-9 Vol.	64	103	0	0	167	93	85	0	0	178
Peak Hr.	07:45	08:00			08:00	16:15	16:30			16:30
Volume	45	69	0	0	110	55	48	0	0	103
P.H.F.	0.750	0.719	0.000	0.000	0.7059	0.809	0.667	0.000	0.000	0.736

Prepared by: DS / KTB

Project #: 09-4320-005 City: Ramona

Location: Highland Valley Rd N/o SR-67 Date: Sunday, August 23, 2009



Volumes for: Tuesday, May 01, 2007 City: Ramona Project #: 07-4088-007

Location: Highland Valley W/o Hwy 67

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	2		0					12:00	17		13				
00:15	0		1					12:15	11		9				
00:30	1		0					12:30	13		12				
00:45	1	4	1	2			6	12:45	25	66	14	48			114
01:00	1		0					13:00	15		17				
01:15	0		1					13:15	13		14				
01:30	0		0					13:30	30		11				
01:45	2	3	0	1			4	13:45	13	71	18	60			131
02:00	0		0					14:00	21		22				
02:15	0		0					14:15	29		18				
02:30	0		0					14:30	34		20				
02:45	1	1	1	1			2	14:45	54	138	22	82			220
03:00	2		1					15:00	50		20				
03:15	1		0					15:15	22		28				
03:30	0		2					15:30	23		29				
03:45	0	3	1	4			7	15:45	31	126	41	118			244
04:00	0		1					16:00	14		51				
04:15	1		1					16:15	22		51				
04:30	1		2					16:30	21		87				
04:45	0	2	4	8			10	16:45	21	78	80	269			347
05:00	2		2					17:00	23		85				
05:15	5		3					17:15	23		98				
05:30	6		3					17:30	14		67				
05:45	4	17	4	12			29	17:45	20	80	95	345			425
06:00	8		5					18:00	21		53				
06:15	16		3					18:15	15		53				
06:30	29		11					18:30	17		41				
06:45	38	91	15	34			125	18:45	19	72	26	173			245
07:00	22		18					19:00	17		19				
07:15	34		15					19:15	6		14				
07:30	38		12					19:30	19		8				
07:45	28	122	19	64			186	19:45	22	64	7	48			112
08:00	50		20					20:00	16		4				
08:15	72		50					20:15	13		8				
08:30	37		81					20:30	12		7				
08:45	20	179	31	182			361	20:45	15	56	3	22			78
09:00	28		16					21:00	6		5				
09:15	15		12					21:15	10		3				
09:30	30		11					21:30	8		3				
09:45	17	90	22	61			151	21:45	6	30	3	14			44
10:00	17		12					22:00	8		4				
10:15	15		20					22:15	2		3				
10:30	18		8					22:30	1		4				
10:45	21	71	16	56			127	22:45	2	13	2	13			26
11:00	29		13					23:00	0		2				
11:15	21		22					23:15	0		1				
11:30	23		23					23:30	1		0				
11:45	16	89	22	80			169	23:45	0	1	0	3			4
Total Vol.		672		505			**1177**			795		1195			**1990**

Daily Totals

	NB	SB	EB	WB	Combined
	1467	1700			**3167**

	AM			PM		
Split %	57.1%	42.9%	**37.2%**	39.9%	60.1%	**62.8%**
Peak Hour	07:30	08:00	**08:00**	14:15	16:30	**16:30**
Volume	188	182	**361**	167	350	**438**
P.H.F.	0.65	0.56	**0.74**	0.79	0.89	**0.90**

Prepared by NDS/ATD

Volumes for: Sunday, August 23, 2009	City: Ramona	Daily Totals NB	SB	EB	WB	Total
Location: SR 67 E/o Ramona St	Project: 09-4320-004	0	0	9,892	8,814	18,706

AM Period	NB	SB	EB	WB		PM Period	NB	SB	EB	WB	
00:00			27	28		12:00			222	199	
00:15			34	28		12:15			200	207	
00:30			43	22		12:30			207	204	
00:45			18 122	21 99	221	12:45			168 797	185 795	1592
01:00			21	18		13:00			208	190	
01:15			18	8		13:15			197	170	
01:30			14	28		13:30			195	153	
01:45			19 72	15 69	141	13:45			168 768	167 680	1448
02:00			12	9		14:00			176	181	
02:15			21	10		14:15			204	157	
02:30			17	11		14:30			183	159	
02:45			19 69	4 34	103	14:45			218 781	163 660	1441
03:00			12	5		15:00			180	168	
03:15			6	6		15:15			143	115	
03:30			8	11		15:30			162	139	
03:45			12 38	6 28	66	15:45			151 636	126 548	1184
04:00			8	14		16:00			174	169	
04:15			5	13		16:15			142	184	
04:30			2	12		16:30			143	161	
04:45			12 27	11 50	77	16:45			146 605	152 666	1271
05:00			11	15		17:00			157	134	
05:15			13	16		17:15			148	142	
05:30			14	20		17:30			159	133	
05:45			27 65	25 76	141	17:45			141 605	129 538	1143
06:00			14	29		18:00			122	129	
06:15			27	33		18:15			125	137	
06:30			42	32		18:30			131	138	
06:45			39 122	29 123	245	18:45			119 497	125 529	1026
07:00			38	42		19:00			137	124	
07:15			69	51		19:15			158	92	
07:30			72	55		19:30			162	108	
07:45			120 299	67 215	514	19:45			131 588	114 438	1026
08:00			74	73		20:00			139	104	
08:15			111	78		20:15			157	115	
08:30			123	85		20:30			99	96	
08:45			173 481	97 333	814	20:45			64 459	104 419	878
09:00			126	114		21:00			92	62	
09:15			133	120		21:15			71	51	
09:30			156	141		21:30			68	57	
09:45			196 611	157 532	1143	21:45			66 297	48 218	515
10:00			170	177		22:00			52	66	
10:15			213	187		22:15			64	31	
10:30			225	197		22:30			59	25	
10:45			199 807	186 747	1554	22:45			37 212	19 141	353
11:00			210	195		23:00			37	21	
11:15			219	203		23:15			23	21	
11:30			184	207		23:30			38	15	
11:45			199 812	200 805	1617	23:45			24 122	14 71	193
Total Vol.			3525	3111	**6636**				6367	5703	**12070**

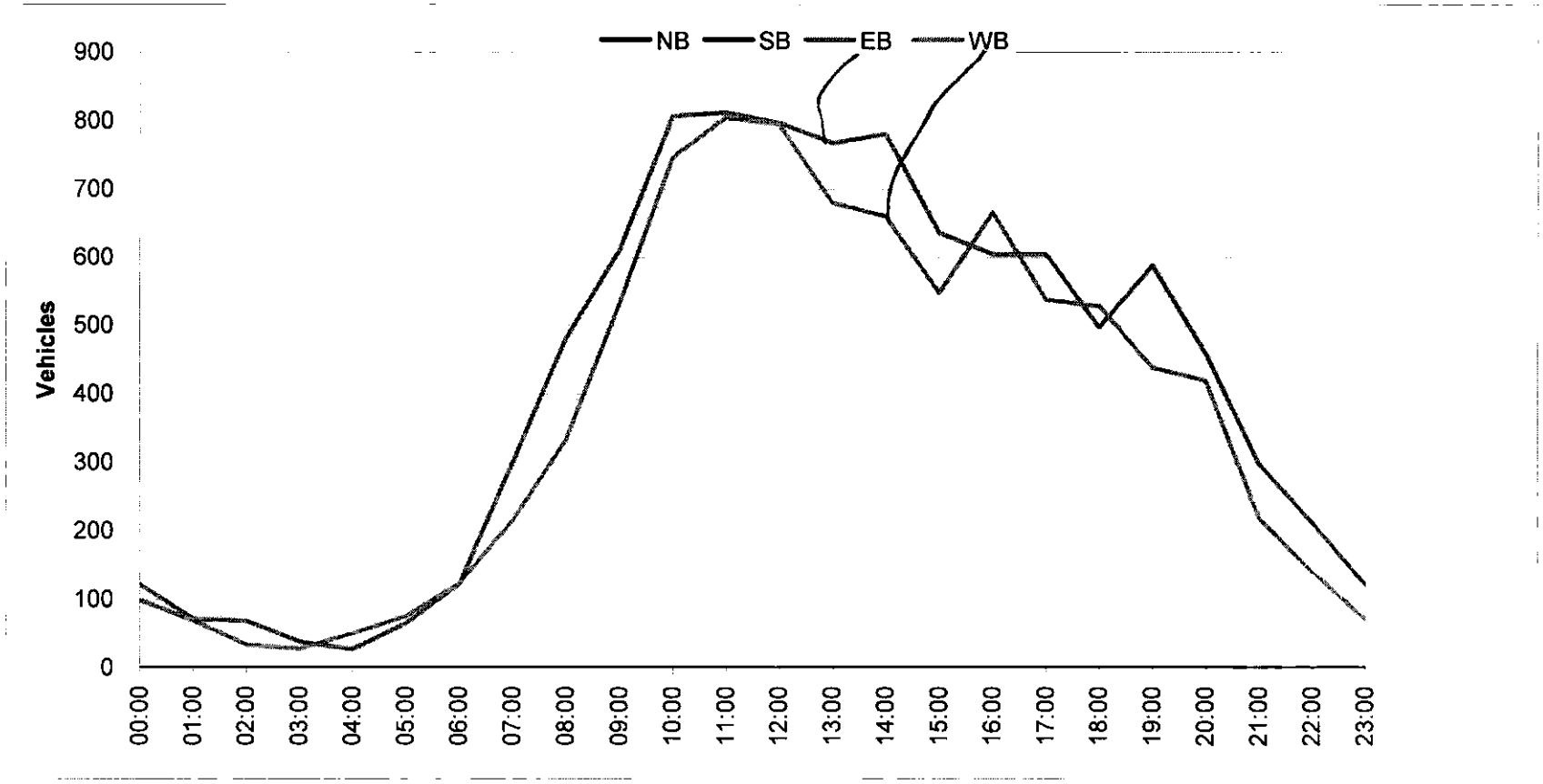
	NB	SB	EB	WB	Total
Daily Totals :	0	0	9,892	8,814	18,706

	AM					PM					
Split %			53.1%	46.9%	35.5%				52.8%	47.2%	64.5%
AM						PM					
Peak Hr.			10:30	11:00	11:45	Peak Hr.			12:00	12:00	12:00
Volume			853	805	1617	Volume			797	795	1592
P.H.F.			0.949	0.932	0.933	P.H.F.			0.898	0.950	0.945
2-Hr Vol.	0	0	780	948	1728	2-Hr Vol.	0	0	1210	1204	2414
Peak Hr.			08:00	08:00	08:00	Peak Hr.			16:45	16:00	16:00
Volume	0	0	481	333	814	Volume	0	0	610	666	1271
P.H.F.	0.000	0.000	0.695	0.858	0.754	P.H.F.	0.000	0.000	0.959	0.905	0.926

Prepared by: KDS / ATD

Project #: 09-4320-004 City: Ramona

Location: SR 67 E/o Ramona St Date: Sunday, August 23, 2009



APPENDIX B

LOS Calculations

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 12/12/2007
Analysis Time Period: AM Exist Sunday
Intersection: SR-67 & Archie Moore
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2009
Project ID: Spirit of Joy Church
East/West Street: SR-67
North/South Street: Archie Moore
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	39	544			744	17
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	39	544			744	17
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?						No
Lanes	1	2			1	1
Configuration	L	T			T	R
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				26		
Peak Hour Factor, PHF				1.00		
Hourly Flow Rate, HFR				26		
Percent Heavy Vehicles				0		
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1		
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		
v (vph)	39					26		
C(m) (vph)	860					433		
v/c	0.05					0.06		
95% queue length	0.14					0.19		
Control Delay	9.4					13.8		
LOS	A					B		
Approach Delay							13.8	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 12/12/2007
Analysis Time Period: AM ex + project Sunday
Intersection: SR-67 & Archie Moore
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2009
Project ID: Spirit of Joy Church
East/West Street: SR-67
North/South Street: Archie Moore
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	39	551			751	23
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	39	551			751	23
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?						No
Lanes	1	2			1	1
Configuration	L	T			T	R
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				32		
Peak Hour Factor, PHF				1.00		
Hourly Flow Rate, HFR				32		
Percent Heavy Vehicles				0		
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1		
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		
v (vph)	39					32		
C(m) (vph)	851					429		
v/c	0.05					0.07		
95% queue length	0.14					0.24		
Control Delay	9.4					14.1		
LOS	A					B		
Approach Delay							14.1	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 12/12/2007
Analysis Time Period: AM Exist Weekday
Intersection: SR-67 & Archie Moore
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2009
Project ID: Spirit of Joy Church
East/West Street: SR-67
North/South Street: Archie Moore
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	36	384			1461	29
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	36	384			1461	29
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?						No
Lanes	1	2			1	1
Configuration	L	T			T	R
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				38		
Peak Hour Factor, PHF				1.00		
Hourly Flow Rate, HFR				38		
Percent Heavy Vehicles				0		
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1		
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		
v (vph)	36					38		
C(m) (vph)	457					182		
v/c	0.08					0.21		
95% queue length	0.26					0.76		
Control Delay	13.5					29.9		
LOS	B					D		
Approach Delay							29.9	
Approach LOS							D	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 12/12/2007
Analysis Time Period: AM - exist + project Weekday
Intersection: SR-67 & Archie Moore
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2009
Project ID: Spirit of Joy Church
East/West Street: SR-67
North/South Street: Archie Moore
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	36	384			1461	30
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	36	384			1461	30
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?						No
Lanes	1	2			1	1
Configuration	L	T			T	R
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				39		
Peak Hour Factor, PHF				1.00		
Hourly Flow Rate, HFR				39		
Percent Heavy Vehicles				0		
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes				1		
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		
v (vph)	36					39		
C(m) (vph)	456					182		
v/c	0.08					0.21		
95% queue length	0.26					0.78		
Control Delay	13.6					30.1		
LOS	B					D		
Approach Delay							30.1	
Approach LOS							D	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 6/6/2007
Analysis Time Period: PM existing Weekday
Intersection: SR-67 & Archie Moore
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2007
Project ID:
East/West Street: SR-67
North/South Street: Archie Moore
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	321	1258			540	49
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	321	1258			540	49
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?						No
Lanes	1	2			1	1
Configuration	L	T			T	R
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				15		
Peak Hour Factor, PHF				1.00		
Hourly Flow Rate, HFR				15		
Percent Heavy Vehicles				0		
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes				1		
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		
v (vph)	321					15		
C(m) (vph)	996					156		
v/c	0.32					0.10		
95% queue length	1.40					0.31		
Control Delay	10.3					30.5		
LOS	B					D		
Approach Delay							30.5	
Approach LOS							D	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 6/6/2007
Analysis Time Period: PM existing + project Weekday
Intersection: SR-67 & Archie Moore
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2007
Project ID: Spirit of Joy
East/West Street: SR-67
North/South Street: Archie Moore
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	321	1258			540	50
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	321	1258			540	50
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?						No
Lanes	1	2			1	1
Configuration	L	T			T	R
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				15		
Peak Hour Factor, PHF				1.00		
Hourly Flow Rate, HFR				15		
Percent Heavy Vehicles				0		
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes				1		
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		
v (vph)	321					15		
C(m) (vph)	995					155		
v/c	0.32					0.10		
95% queue length	1.41					0.32		
Control Delay	10.3					30.7		
LOS	B					D		
Approach Delay							30.7	
Approach LOS							D	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 12/12/2007
Analysis Time Period: AM existing Sunday
Intersection: SR-67 & Mussey Grade
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2009
Project ID: Spirit of Joy Church
East/West Street: SR-67
North/South Street: Mussey Grade
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		524	15	51	713	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		524	15	51	713	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?			No			
Lanes		1	1	1	1	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	56		64			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	56		64			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		51	56		64			
C(m) (vph)		1040	413		557			
v/c		0.05	0.14		0.11			
95% queue length		0.15	0.47		0.39			
Control Delay		8.6	15.1		12.3			
LOS		A	C		B			
Approach Delay				13.6				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 12/12/2007
Analysis Time Period: AM existing + project Sunday
Intersection: SR-67 & Mussey Grade
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2009
Project ID: Spirit of Joy Church
East/West Street: SR-67
North/South Street: Mussey Grade
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		539	15	57	728	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		539	15	57	728	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?			No			
Lanes		1	1	1	1	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	56		70			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	56		70			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		57	56		70			
C(m) (vph)		1026	399		546			
v/c		0.06	0.14		0.13			
95% queue length		0.18	0.48		0.44			
Control Delay		8.7	15.5		12.6			
LOS		A	C		B			
Approach Delay				13.9				
Approach LOS				B				

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 6/6/2007
Analysis Time Period: AM weekday existing
Intersection: SR-67 & Mussey Grade
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2007
Project ID: Spirit of Joy
East/West Street: SR-67
North/South Street: Mussey Grade
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		448	14	56	1253	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		448	14	56	1253	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?			No			
Lanes		1	1	1	1	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	75		94			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	75		94			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		56	75		94			
C(m) (vph)		1110	227		615			
v/c		0.05	0.33		0.15			
95% queue length		0.16	1.38		0.54			
Control Delay		8.4	28.5		11.9			
LOS		A	D		B			
Approach Delay				19.3				
Approach LOS				C				

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 6/6/2007
Analysis Time Period: AM weekday existing + proj
Intersection: SR-67 & Mussey Grade
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2007
Project ID: Spirit of Joy
East/West Street: SR-67
North/South Street: Mussey Grade
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		449	14	56	1253	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		449	14	56	1253	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?			No			
Lanes		1	1	1	1	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	75		94			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	75		94			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		56	75		94			
C(m) (vph)		1109	227		614			
v/c		0.05	0.33		0.15			
95% queue length		0.16	1.38		0.54			
Control Delay		8.4	28.5		11.9			
LOS		A	D		B			
Approach Delay				19.3				
Approach LOS				C				

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 6/6/2007
Analysis Time Period: PM weekday existing
Intersection: SR-67 & Mussey Grade
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2007
Project ID: Spirit of Joy
East/West Street: SR-67
North/South Street: Mussey Grade
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		1070	72	93	560	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		1070	72	93	560	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?			No			
Lanes		1	1	1	1	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	23		69			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	23		69			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes	1		1			
Configuration	L		R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		93	23		69			
C(m) (vph)		619	323		271			
v/c		0.15	0.07		0.25			
95% queue length		0.53	0.23		0.99			
Control Delay		11.8	17.0		22.8			
LOS		B	C		C			
Approach Delay				21.3				
Approach LOS				C				

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 6/6/2007
Analysis Time Period: PM weekday existing + proj
Intersection: SR-67 & Mussey Grade
Jurisdiction: County of San Diego
Units: U. S. Customary
Analysis Year: 2007
Project ID: Spirit of Joy
East/West Street: SR-67
North/South Street: Mussey Grade
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		1071	72	93	561	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		1071	72	93	561	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	TWLTL			/ 9		
RT Channelized?			No			
Lanes		1	1	1	1	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	23		69			
Peak Hour Factor, PHF	1.00		1.00			
Hourly Flow Rate, HFR	23		69			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes		1	1			
Configuration		L	R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		93	23		69			
C(m) (vph)		619	323		271			
v/c		0.15	0.07		0.25			
95% queue length		0.53	0.23		0.99			
Control Delay		11.8	17.0		22.8			
LOS		B	C		C			
Approach Delay				21.3				
Approach LOS				C				

HCS+: Signalized Intersections Release 5.21

Analyst: RHC
Agency: RCE
Date: 12/12/2007
Period: Sunday - AM existing
Project ID: Spirit of Joy Church
E/W St: SR-67

Inter.: Highland & SR-67
Area Type: All other areas
Jurisd: County of San Diego
Year : 2009

N/S St: Highland

SIGNALIZED INTERSECTION SUMMARY

	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	0	1	1	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	11	474	97	19	561	50	178	9	26	79	19	6
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A	A		
	Thru		A				Thru		A	A	
	Right		A				Right		A	A	
	Peds		X				Peds			X	
WB	Left	A				SB	Left	A			
	Thru		A				Thru			A	
	Right		A				Right			A	
	Peds		X				Peds			X	
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		5.0	60.0	0.0				10.0	10.0	5.0	
Yellow		4.0	4.0					4.0	0.0	4.0	
All Red		0.0	0.0					0.0	0.0	0.0	

Cycle Length: 106.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	85	1805	0.14	0.05	49.2	D		
T	1075	1900	0.49	0.57	14.2	B	14.2	B
R	914	1615	0.12	0.57	10.8	B		
Westbound								
L	85	1805	0.25	0.05	50.2	D		
T	1075	1900	0.58	0.57	15.6	B	16.3	B
R	914	1615	0.06	0.57	10.4	B		
Northbound								
L	409	1805	0.48	0.23	36.5	D		
TR	239	1688	0.16	0.14	40.3	D	37.1	D
Southbound								
L	170	1805	0.52	0.09	48.5	D		
TR	86	1829	0.33	0.05	51.1	D	49.1	D

Intersection Delay = 20.6 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.21

Analyst: RHC
Agency: RCE
Date: 12/12/2007
Period: Sunday - AM existing + project
Project ID: Spirit of Joy Church
E/W St: SR-67

Inter.: Highland & SR-67
Area Type: All other areas
Jurisd: County of San Diego
Year : 2009

N/S St: Highland

SIGNALIZED INTERSECTION SUMMARY

	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	0	1	1	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	33	474	97	19	561	83	178	31	26	112	41	28
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination		1	2	3	4			5	6	7	8
EB	Left	A				NB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds		X				Peds		X		
WB	Left	A				SB	Left	A			
	Thru		A				Thru		A		
	Right		A				Right		A		
	Peds		X				Peds		X		
NB	Right					EB	Right				
SB	Right					WB	Right				
Green		4.7	59.6	0.0				12.3	12.4		
Yellow		4.0	4.0					4.0	4.0		
All Red		0.0	0.0					0.0	0.0		

Cycle Length: 105.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	81	1805	0.46	0.04	52.9	D		
T	1078	1900	0.49	0.57	13.9	B	15.5	B
R	917	1615	0.12	0.57	10.6	B		
Westbound								
L	81	1805	0.26	0.04	50.2	D		
T	1078	1900	0.58	0.57	15.4	B	15.8	B
R	917	1615	0.10	0.57	10.5	B		
Northbound								
L	211	1805	0.94	0.12	90.8	F		
TR	209	1769	0.30	0.12	43.2	D	79.3	E
Southbound								
L	211	1805	0.59	0.12	48.2	D		
TR	211	1785	0.36	0.12	43.7	D	46.5	D

Intersection Delay = 27.9 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.21

Analyst: RHC
Agency: RCE
Date: 6/7/2007
Period: AM existing - Weekday
Project ID: Spirit of Joy
E/W St: SR-67

Inter.: Highland & SR-67
Area Type: All other areas
Jurisd: County of San Diego
Year : 2007

N/S St: Highland

SIGNALIZED INTERSECTION SUMMARY

	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	0	1	1	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	5	477	55	13	897	124	366	55	28	94	11	8
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			55			55			10			8

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds		X				Peds		X	X	
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds		X				Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	5.0	160.0	0.0				31.1	5.0	15.0	
Yellow	3.2	6.0					3.2	0.0	5.0	
All Red	1.0	2.5					1.0	0.0	2.0	

Cycle Length: 240.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	38	1805	0.13	0.02	116.9	F		
T	1267	1900	0.41	0.67	18.5	B	19.5	B
R	1077	1615	0.00	0.67	13.3	B		
Westbound								
L	38	1805	0.37	0.02	121.9	F		
T	1267	1900	0.77	0.67	30.3	C	30.4	C
R	1077	1615	0.07	0.67	14.0	B		
Northbound								
L	303	1805	1.31	0.17	262.5	F		
TR	152	1829	0.53	0.08	108.8	F	236.8	F
Southbound								
L	234	1805	0.44	0.13	97.7	F		
TR	119	1900	0.10	0.06	106.5	F	98.6	F

Intersection Delay = 76.6 (sec/veh) Intersection LOS = E

HCS+: Signalized Intersections Release 5.21

Analyst: RHC
Agency: RCE
Date: 6/7/2007
Period: AM existing + proj- Weekday
Project ID: Spirit of Joy
E/W St: SR-67

Inter.: Highland & SR-67
Area Type: All other areas
Jurisd: County of San Diego
Year : 2007

N/S St: Highland

SIGNALIZED INTERSECTION SUMMARY

	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	0	1	1	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	6	477	55	13	897	126	366	56	28	95	12	9
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			55			55			10			8

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds		X				Peds		X	X	
WB Left	A				SB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds		X				Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	5.0	160.0	0.0				31.1	5.0	15.0	
Yellow	3.2	6.0					3.2	0.0	5.0	
All Red	1.0	2.5					1.0	0.0	2.0	

Cycle Length: 240.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	38	1805	0.18	0.02	117.8	F		
T	1267	1900	0.41	0.67	18.5	B	19.9	B
R	1077	1615	0.00	0.67	13.3	B		
Westbound								
L	38	1805	0.37	0.02	121.9	F		
T	1267	1900	0.77	0.67	30.3	C	30.4	C
R	1077	1615	0.07	0.67	14.0	B		
Northbound								
L	303	1805	1.31	0.17	262.5	F		
TR	153	1830	0.53	0.08	108.9	F	236.6	F
Southbound								
L	234	1805	0.44	0.13	97.7	F		
TR	118	1880	0.12	0.06	106.7	F	98.8	F

Intersection Delay = 76.7 (sec/veh) Intersection LOS = E

HCS+: Signalized Intersections Release 5.21

Analyst: RHC
Agency: RCE
Date: 6/7/2007
Period: PM existing - Weekday
Project ID: Spirit of Joy
E/W St: SR-67

Inter.: Highland & SR-67
Area Type: All other areas
Jurisd: County of San Diego
Year : 2007

N/S St: Highland

SIGNALIZED INTERSECTION SUMMARY

	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	0	1	1	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	1	874	267	40	553	61	87	10	44	219	68	14
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds		X				Peds			X	
WB Left	A				SB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds		X				Peds			X	
NB Right					EB	Right				
SB Right					WB	Right				
Green	8.0	80.0	0.0				12.0	10.0	5.4	
Yellow	3.2	6.0					3.2	0.0	5.0	
All Red	1.0	2.5					1.0	0.0	2.0	

Cycle Length: 139.3 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	104	1805	0.01	0.06	62.0	E		
T	1091	1900	0.89	0.57	35.1	D	30.6	C
R	927	1615	0.32	0.57	15.7	B		
Westbound								
L	104	1805	0.42	0.06	66.2	E		
T	1091	1900	0.56	0.57	19.3	B	21.6	C
R	927	1615	0.07	0.57	13.2	B		
Northbound								
L	155	1805	0.63	0.09	69.2	E		
TR	65	1667	0.92	0.04	151.5	F	100.7	F
Southbound								
L	339	1805	0.72	0.19	60.2	E		
TR	205	1850	0.45	0.11	59.5	E	60.0	E

Intersection Delay = 36.4 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.21

Analyst: RHC
Agency: RCE
Date: 6/7/2007
Period: PM existing + proj- Weekday
Project ID: Spirit of Joy
E/W St: SR-67

Inter.: Highland & SR-67
Area Type: All other areas
Jurisd: County of San Diego
Year : 2007

N/S St: Highland

SIGNALIZED INTERSECTION SUMMARY

	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	0	1	1	0
LGConfig	L	T	R	L	T	R	L	TR		L	TR	
Volume	2	874	267	40	553	63	87	11	44	221	69	15
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left	A			
Thru		A				Thru			A	
Right		A				Right			A	
Peds		X				Peds			X	
WB Left	A				SB	Left	A	A		
Thru		A				Thru		A	A	
Right		A				Right		A	A	
Peds		X				Peds			X	
NB Right					EB	Right				
SB Right					WB	Right				
Green	8.0	80.0	0.0				12.0	10.0	5.4	
Yellow	3.2	6.0					3.2	0.0	5.0	
All Red	1.0	2.5					1.0	0.0	2.0	

Cycle Length: 139.3 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	104	1805	0.02	0.06	62.0	E		
T	1091	1900	0.89	0.57	35.1	D	30.6	C
R	927	1615	0.32	0.57	15.7	B		
Westbound								
L	104	1805	0.42	0.06	66.2	E		
T	1091	1900	0.56	0.57	19.3	B	21.6	C
R	927	1615	0.08	0.57	13.2	B		
Northbound								
L	155	1805	0.63	0.09	69.2	E		
TR	65	1671	0.94	0.04	156.7	F	103.0	F
Southbound								
L	339	1805	0.73	0.19	60.7	E		
TR	204	1848	0.46	0.11	59.7	E	60.5	E

Intersection Delay = 36.6 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.21

Analyst: RHC
Agency: RCE
Date: 12/12/2007
Period: Sunday - AM existing
Project ID: Spirit of Joy Church
E/W St: SR-67

Inter.: Ramona & SR-67
Area Type: All other areas
Jurisd: County of San Diego
Year : 2009

N/S St: Ramona

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	0	1	0	0	1	1
LGConfig	L	TR		L	TR			LTR			LT	R
Volume	5	582	55	34	585	66	140	54	83	94	41	22
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds		X				Peds		X		
WB Left	A				SB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds		X				Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	4.4	25.7	0.0				14.9	18.0		
Yellow	4.0	4.0					4.0	0.0		
All Red	0.0	0.0					0.0	0.0		

Cycle Length: 75.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	106	1805	0.06	0.06	33.6	C		
TR	1224	3571	0.58	0.34	20.9	C	21.0	C
Westbound								
L	106	1805	0.36	0.06	36.0	D		
TR	1221	3563	0.59	0.34	21.1	C	21.8	C
Northbound								
LTR	427	1778	0.72	0.24	32.1	C	32.1	C
Southbound								
LT	365	1836	0.41	0.20	27.0	C	26.6	C
R	321	1615	0.07	0.20	24.5	C		

Intersection Delay = 23.6 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.21

Analyst: RHC
Agency: RCE
Date: 12/12/2007
Period: Sunday - AM existing + project
Project ID: Spirit of Joy Church
E/W St: SR-67

Inter.: Ramona & SR-67
Area Type: All other areas
Jurisd: County of San Diego
Year : 2009
N/S St: Ramona

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	0	1	0	0	1	1
LGConfig	L	TR		L	TR			LTR			LT	R
Volume	8	593	63	34	596	66	148	54	83	94	41	25
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds		X				Peds		X		
WB Left	A				SB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds		X				Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	4.4	28.7	0.0				14.9	18.0		
Yellow	4.0	4.0					4.0	0.0		
All Red	0.0	0.0					0.0	0.0		

Cycle Length: 78.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	102	1805	0.09	0.06	35.3	D		
TR	1312	3565	0.56	0.37	20.1	C	20.3	C
Westbound								
L	102	1805	0.37	0.06	37.8	D		
TR	1311	3564	0.56	0.37	20.2	C	21.0	C
Northbound								
LTR	411	1779	0.77	0.23	36.7	D	36.7	D
Southbound								
LT	351	1836	0.43	0.19	28.6	C	28.2	C
R	309	1615	0.09	0.19	26.1	C		

Intersection Delay = 23.9 (sec/veh) Intersection LOS = C

HCS+: Signalized Intersections Release 5.21

Analyst: RHC
Agency: RCE
Date: 12/12/2007
Period: AM weekday existing
Project ID: Spirit of Joy Church
E/W St: SR-67

Inter.: Ramona & SR-67
Area Type: All other areas
Jurisd: County of San Diego
Year : 2009

N/S St: Ramona

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	0	1	0	0	1	1
LGConfig	L	TR		L	TR			LTR			LT	R
Volume	18	490	65	119	761	40	205	44	202	68	46	34
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds		X				Peds		X		
WB Left	A				SB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds		X				Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	6.6	21.6	0.0				6.4	23.2		
Yellow	3.2	3.6					3.2	3.2		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 75.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	159	1805	0.13	0.09	31.9	C		
TR	1024	3554	0.60	0.29	24.0	C	24.2	C
Westbound								
L	159	1805	0.83	0.09	63.0	E		
TR	1034	3591	0.86	0.29	32.8	C	36.7	D
Northbound								
LTR	540	1746	0.93	0.31	47.6	D	47.6	D
Southbound								
LT	157	1845	0.81	0.09	59.8	E	53.7	D
R	138	1615	0.28	0.09	33.2	C		

Intersection Delay = 36.8 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.21

Analyst: RHC
Agency: RCE
Date: 12/12/2007
Period: AM weekday existing + proj
Project ID: Spirit of Joy Church
E/W St: SR-67

Inter.: Ramona & SR-67
Area Type: All other areas
Jurisd: County of San Diego
Year : 2009

N/S St: Ramona

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	0	1	0	0	1	1
LGConfig	L	TR		L	TR			LTR			LT	R
Volume	18	490	65	119	762	40	205	44	202	68	46	34
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds		X				Peds		X		
WB Left	A				SB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds		X				Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	6.6	21.6	0.0				6.4	23.2		
Yellow	3.2	3.6					3.2	3.2		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 75.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	159	1805	0.13	0.09	31.9	C		
TR	1024	3554	0.60	0.29	24.0	C	24.2	C
Westbound								
L	159	1805	0.83	0.09	63.0	E		
TR	1034	3591	0.86	0.29	32.9	C	36.8	D
Northbound								
LTR	540	1746	0.93	0.31	47.6	D	47.6	D
Southbound								
LT	157	1845	0.81	0.09	59.8	E	53.7	D
R	138	1615	0.28	0.09	33.2	C		

Intersection Delay = 36.9 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.21

Analyst: RHC
Agency: RCE
Date: 12/12/2007
Period: PM weekday existing
Project ID: Spirit of Joy Church
E/W St: SR-67

Inter.: Ramona & SR-67
Area Type: All other areas
Jurisd: County of San Diego
Year : 2009

N/S St: Ramona

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	0	1	0	0	1	1
LGConfig	L	TR		L	TR			LTR			LT	R
Volume	22	853	184	89	604	80	220	67	137	161	77	33
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left		A		
Thru		A			Thru		A		
Right		A			Right		A		
Peds		X			Peds		X		
WB Left	A				SB Left	A			
Thru		A			Thru	A			
Right		A			Right	A			
Peds		X			Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	6.3	38.2	0.0			18.9	34.4		
Yellow	3.2	3.6				3.2	3.2		
All Red	1.0	1.0				1.0	1.0		

Cycle Length: 115.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	99	1805	0.24	0.05	53.3	D		
TR	1170	3522	0.98	0.33	60.7	E	60.5	E
Westbound								
L	99	1805	1.00	0.05	144.8	F		
TR	1181	3554	0.64	0.33	33.8	C	46.6	D
Northbound								
LTR	530	1771	0.89	0.30	55.0-	D	55.0-	D
Southbound								
LT	302	1838	0.88	0.16	71.0	E	67.3	E
R	265	1615	0.14	0.16	41.3	D		

Intersection Delay = 56.1 (sec/veh) Intersection LOS = E

HCS+: Signalized Intersections Release 5.21

Analyst: RHC
Agency: RCE
Date: 12/12/2007
Period: PM weekday existing + proj
Project ID: Spirit of Joy Church
E/W St: SR-67

Inter.: Ramona & SR-67
Area Type: All other areas
Jurisd: County of San Diego
Year : 2009

N/S St: Ramona

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	2	0	1	2	0	0	1	0	0	1	1
LGConfig	L	TR		L	TR			LTR			LT	R
Volume	22	854	184	89	605	80	220	67	137	161	77	33
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	12.0
RTOR Vol			0			0			0			0

Duration 0.25 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4			5	6	7	8
EB Left	A				NB	Left		A		
Thru		A				Thru		A		
Right		A				Right		A		
Peds		X				Peds		X		
WB Left	A				SB	Left	A			
Thru		A				Thru	A			
Right		A				Right	A			
Peds		X				Peds				
NB Right					EB	Right				
SB Right					WB	Right				
Green	6.3	38.2	0.0				18.9	34.4		
Yellow	3.2	3.6					3.2	3.2		
All Red	1.0	1.0					1.0	1.0		

Cycle Length: 115.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	99	1805	0.24	0.05	53.3	D		
TR	1170	3522	0.99	0.33	60.9	E	60.7	E
Westbound								
L	99	1805	1.00	0.05	144.8	F		
TR	1181	3554	0.64	0.33	33.8	C	46.6	D
Northbound								
LTR	530	1771	0.89	0.30	55.0-	D	55.0-	D
Southbound								
LT	302	1838	0.88	0.16	71.0	E	67.3	E
R	265	1615	0.14	0.16	41.3	D		

Intersection Delay = 56.2 (sec/veh) Intersection LOS = E

APPENDIX C

Schedule

Spirit of Joy Lutheran Church
Scheduling of regular hours, events, and special events
Revised 8/20/07

Regular Scheduling:

Sunday: **Worship** (Sanctuary) hours: 8:15am and 9:45am (200 in attendance)
Youth Ministry (Fellowship Hall & outdoors) gathering: 5:00-7:00pm (20)

Monday**: Office Hours, Monday through Friday** 9:00am –1:00pm (4 in office)
Adult Bible Studies: (FH & Education) 6:00am-7:00am (25)
7:00pm-8:00pm (40)
AA Meetings: (FH & ED) 12:00-1:30pm (15)

Tuesday:
Prayers and Squares Quilters: (FH) 9:00am-1:00pm (15)
Kids Klub: (FH & Outdoors) 4:00pm-6:00pm (35)
Evening Meetings: **Council Meeting** (ED) (once per month 7:00pm-9:00pm (10)**, & Stephen Ministry** meeting(twice per month, 6:30pm-9:00pm, (12)

Wednesday:
Men's Ministry: (FH) 7:00am-8:00am (15)
Adult Bible Studies: (FH) 9:30am-11:30am (25), 7:00pm-9:00pm (20)

Thursday:
Confirmation class, junior high youth: (FH) 4:00pm-6:00pm (15)
Choirs, Praise team (ED) 6:00pm-7:00pm (5)
Spirit of Joy Choir (ED) 7:00pm-9:00pm (15)
AA Meetings: (FH & ED) 12:00-1:30pm (15)
7:00pm-9:00pm (15)

Friday:
NA Meeting: (FH & ED) 7:00pm-9:00pm (10)

Saturday:
Men's Bible Study (ED) (twice per month); 7:30am-9:00am (15)
NA Meeting: (FH & ED) 10:00am-11:30am (20)

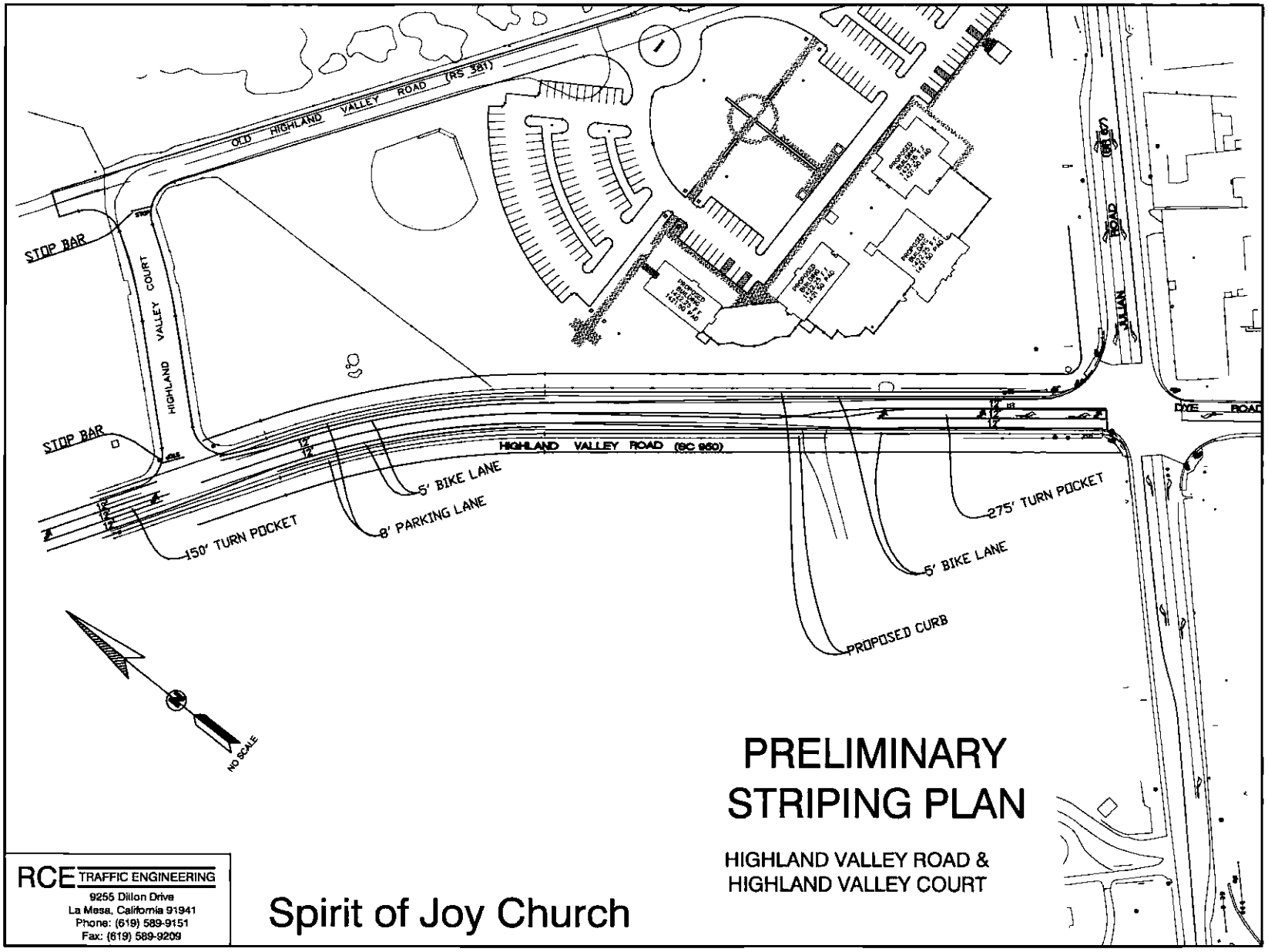
Special Events:
Stewardship Banquet: (FH & Outdoor) (once per year) November: Sunday, 5:00pm-7:00pm (120)
Christmas Gathering: (All) (once per year) December: Sunday, 5:00pm-7:00pm (120)
Easter Worship Service: (Center Lawn) 6am Sunrise Service outside, 8:15am and 9:45am (150) at each service.
Christmas Worship: (Sanctuary) 5:00pm, 7:00pm (150 at each), 11:00pm (100).
Lenten services: (Sanctuary & FH) 5 Wednesday evenings during Lent(February and March), 6:30pm-7:30pm, (70).

Vacation Bible School: (FH & ED) week long in summer, 9:00am-noon,(75) children preschool through sixth grade.
Special Choir Rehearsal for Easter and Christmas: (Sanctuary & ED) 5 Saturdays prior to worship, 9:00am-11:00am, (15).

Additional special events may include speakers, additional fellowship events, youth functions, children functions(most of which will be held in fellowship area).

APPENDIX D

Preliminary Striping
Highland Valley Road



PRELIMINARY STRIPING PLAN

HIGHLAND VALLEY ROAD &
HIGHLAND VALLEY COURT

RCE TRAFFIC ENGINEERING
9255 Dillon Drive
La Mesa, California 91941
Phone: (619) 589-9151
Fax: (619) 589-9209

Spirit of Joy Church

APPENDIX E

County of San Diego
LOS Table
Roadway Segments

TABLE 1

AVERAGE DAILY VEHICLE TRIPS

CIRCULATION ELEMENT ROADS		LEVEL OF SERVICE				
CLASS	X-SECTION	A	B	C	D	E
Expressway	126/146	<36,000	<54,000	<70,000	<86,000	<108,000
Prime Arterial	102/122	<22,200	<37,000	<44,600	<50,000	<57,000
Major Road	78/98	<14,800	<24,700	<29,600	<33,400	<37,000
Collector	64/84	<13,700	<22,800	<27,400	<30,800	<34,200
Town Collector	54/74	<3,000	<6,000	<9,500	<13,500	<19,000
Light Collector	40/60	<1,900	<4,100	<7,100	<10,900	<16,200
Rural Collector	40/84	<1,900	<4,100	<7,100	<10,900	<16,200
Rural Light Collector	40/60	<1,900	<4,100	<7,100	<10,900	<16,200
Recreational Parkway	40/100	<1,900	<4,100	<7,100	<10,900	<16,200
Rural Mountain	40/100	<1,900	<4,100	<7,100	<10,900	<16,200

NON – CIRCULATION ELEMENT ROADS		LEVEL OF SERVICE				
CLASS	X-SECTION	A	B	C	D	E
Residential Collector	40/60	*	*	<4,500	*	*
Residential Road	36/56	*	*	<1,500	*	*
Residential Cul-de-sac or Loop Road	32/52	*	*	< 200	*	*

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

APPENDIX F

Parking Schedules

PARKING SCHEDULES

6766 PARKING REQUIREMENTS: **PUBLIC ASSEMBLY**

Type of Occupancy, Use or Structure	Required Parking and Bicycle Spaces
Public Assembly (including, but not limited to, dance halls, mortuaries, auditoriums and such not named elsewhere)	1 Parking space for every 4 persons based on the total occupancy permitted by the Uniform Building Code. 1 Bicycle space for every 10 parking spaces.
Participant Sports and Recreation (all types), See Section 6762 Spectator Sports and Entertainment*1 (limited use type) See Section 6762	1 Parking space for every 3 persons based on the total occupancy permitted by the Uniform Building Code.
Spectator Sports and Entertainment*1 (general use type)	1 Parking space for every 3 persons permitted to occupy the premises.
Religious Assembly	1 Parking space for every 4 persons based on the total occupancy of the largest assembly room permitted by the Uniform Building Code.

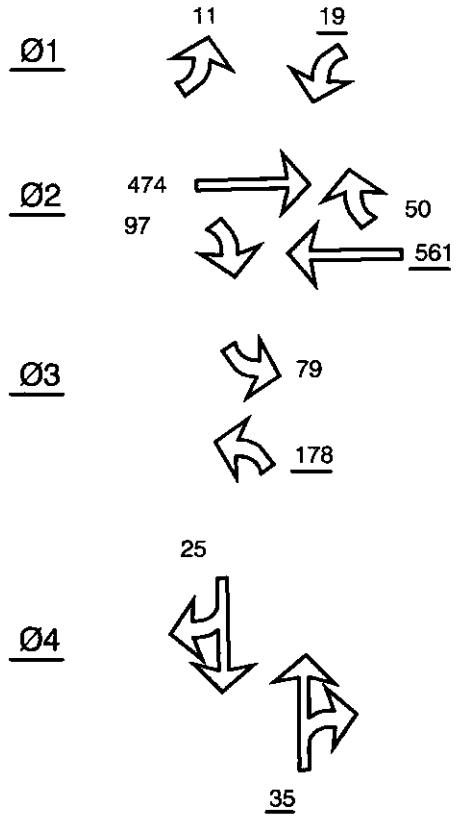
*1 Excluding theatres and dance halls.

(Added by Ord. No. 6940 (N.S.) adopted 4-10-85.)

APPENDIX G

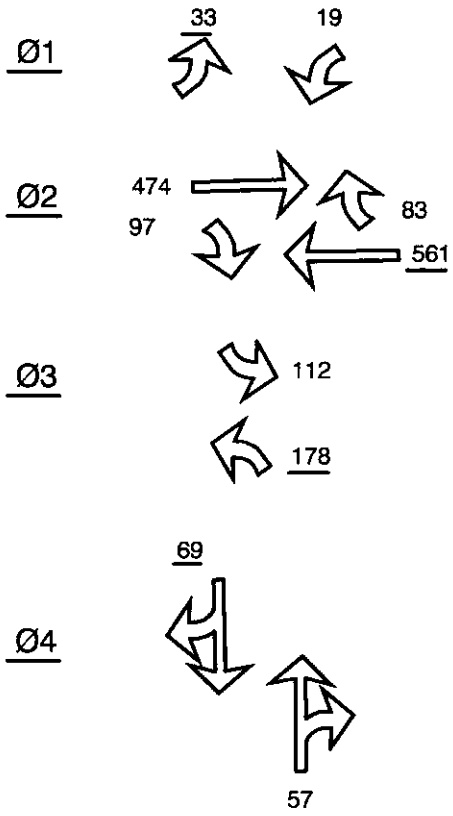
ILV Calculations

SR-67 & Highland Valley Rd.
Existing Conditions



total = 793

SR-67 & Highland Valley Rd.
Existing + Project Conditions



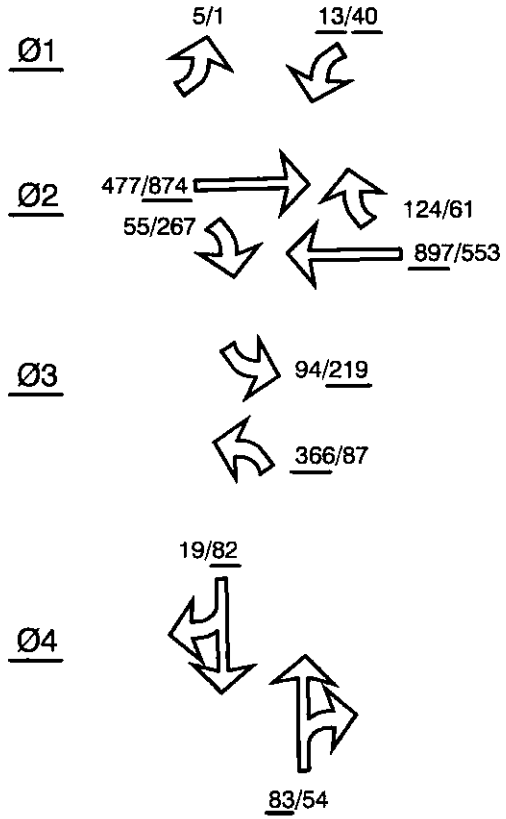
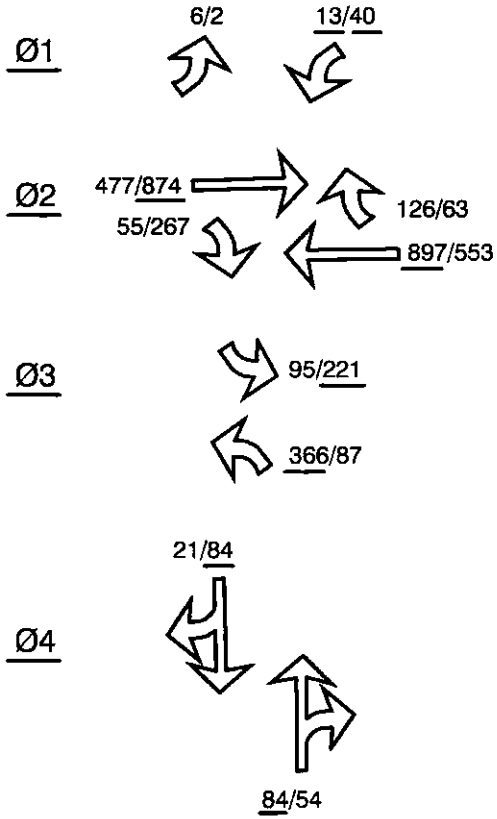
total = 841

XX = AM peak volume (Sunday)

SPIRIT OF JOY CHURCH

SUNDAY AM PEAK HOUR

ILV CALCULATIONS

SR-67 & Highland Valley Rd. Existing Conditions	SR-67 & Highland Valley Rd. Existing + Project Conditions
	
total = 1,359/1,215	total = 1,360/1,219

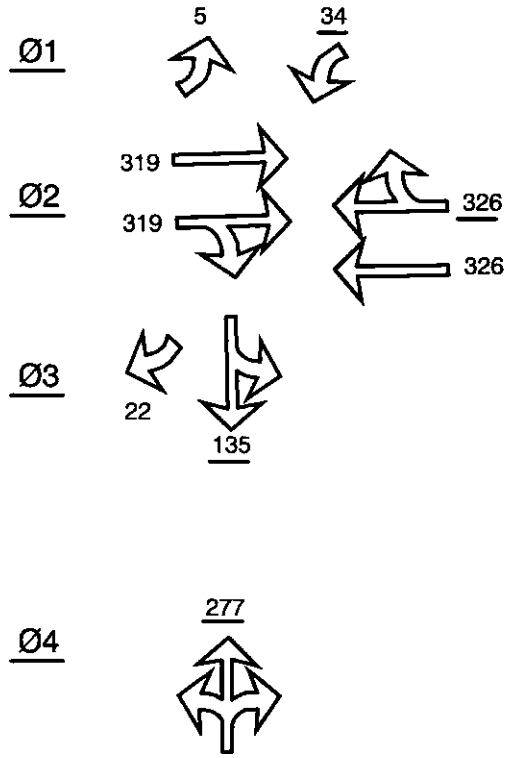
XX = AM/PM peak volume (Weekday)

SPIRIT OF JOY CHURCH

WEEKDAY AM/PM PEAK HOUR

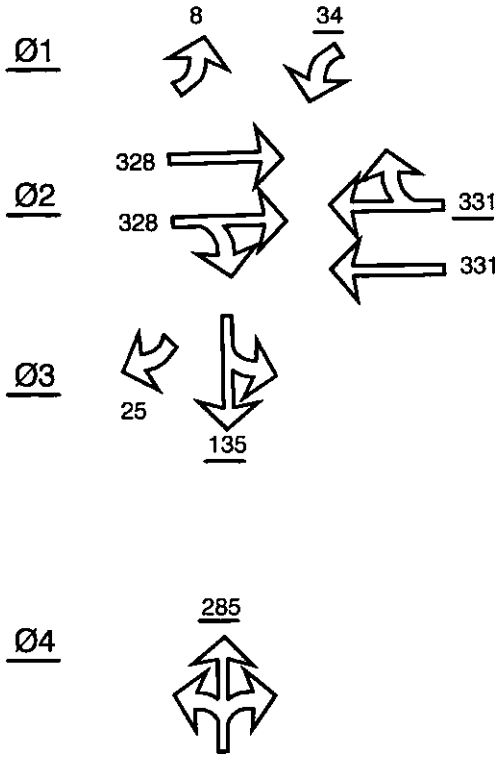
ILV CALCULATIONS

SR-67 & Ramona Street
Existing Conditions



total = 772

SR-67 & Ramona Street
Existing + Project Conditions



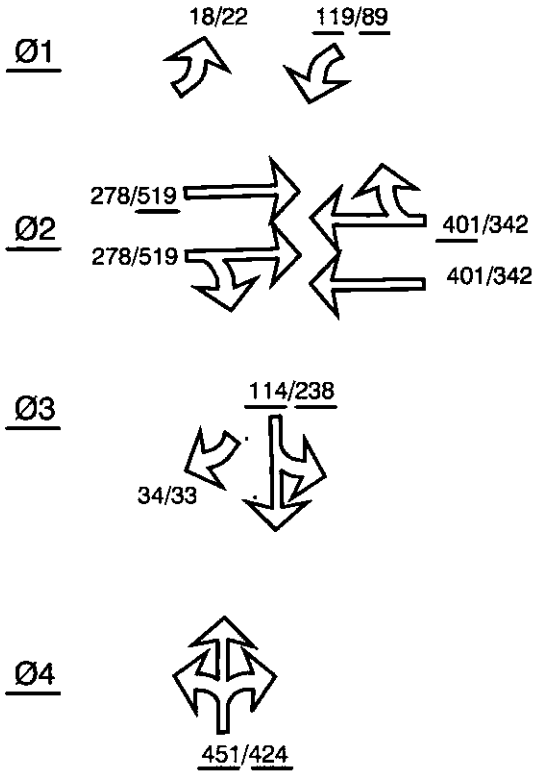
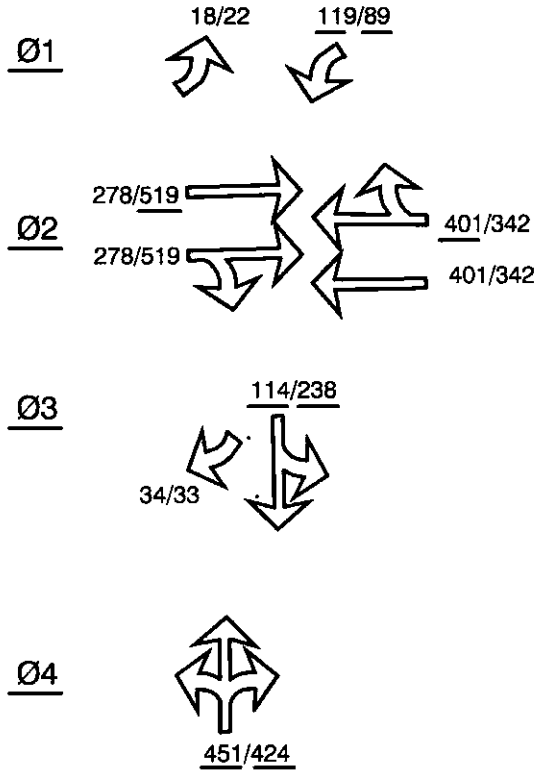
total = 785

XX = AM peak volume (Sunday)

SPIRIT OF JOY CHURCH

SUNDAY AM PEAK HOUR

ILV CALCULATIONS

SR-67 & Ramona Street Existing Conditions	SR-67 & Ramona Street Existing + Project Conditions
	
total = 1,085/1,270	total = 1,085/1,270

XX = AM/PM peak volume (Weekday)

SPIRIT OF JOY CHURCH

WEEKDAY AM/PM PEAK HOUR

ILV CALCULATIONS

APPENDIX H

Arterial Speed Calculations

HCS+: Urban Streets Release 5.21

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 10/14/2009
Analysis Time Period: PM - existing Weekday
Urban Street: SR-67
Direction of Travel: West-bound
Jurisdiction: County & Caltrans
Analysis Year: 2008
Project ID: Spirit of Joy

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Ramona					
1	Highland	2.00	2	45	160.0	2
2	Archie Moore	2.00	2	45	160.0	1
3						
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Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	139.3	0.570	0.560	1091		3	0.725	3.0	0	19.4	0.0	B
2	65.0	0.920	0.340	1754		3	0.808	0.0	0	0.7	0.0	A
3												
4												
5												
6												

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Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	2	160.0	19.4	0.0	179.4	2.00	40.1	A
2	1	160.0	0.7	0.0	160.7	2.00	44.8	A
3								
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11								
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13								
14								
15								

Total travel time (x) = 340.1 sec
Total length (y) = 4.00 miles
Total travel speed, Sa = 3600 x (y)/(x) = 42.3 mph
Total urban street LOS (Exhibit 15-2) = A

Intersection Files in the Analysis

1: Highland -PM weekday existing
2: Archie PM weekday existing - d
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15:

HCS+: Urban Streets Release 5.21

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 10/14/2009
Analysis Time Period: PM - existing + proj Weekday
Urban Street: SR-67
Direction of Travel: West-bound
Jurisdiction: County & Caltrans
Analysis Year: 2008
Project ID: Spirit of Joy

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Ramona					
1	Highland	2.00	2	45	160.0	2
2	Archie Moore	2.00	2	45	160.0	1
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Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	139.3	0.570	0.560	1091		3	0.725	3.0	0	19.4	0.0	B
2	65.0	0.920	0.340	1754		3	0.808	0.0	0	0.7	0.0	A
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Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	2	160.0	19.4	0.0	179.4	2.00	40.1	A
2	1	160.0	0.7	0.0	160.7	2.00	44.8	A
3								
4								
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14								
15								

Total travel time (x) = 340.1 sec
Total length (y) = 4.00 miles
Total travel speed, Sa = 3600 x (y)/(x) = 42.3 mph
Total urban street LOS (Exhibit 15-2) = A

Intersection Files in the Analysis

1: Highland -PM weekday existing
2: Archie PM weekday existing + p
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Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 10/14/2009
Analysis Time Period: AM - existing Weekday
Urban Street: SR-67
Direction of Travel: West-bound
Jurisdiction: County & Caltrans
Analysis Year: 2008
Project ID: Spirit of Joy

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Ramona					
1	Highland	2.00	2	45	160.0	2
2	Archie Moore	2.00	2	45	160.0	1
3						
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Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	240.0	0.670	0.770	1267		3	0.393	3.0	0	28.2	0.0	C
2	65.0	0.920	0.930	1754		3	0.548	0.0	0	7.7	0.0	A
3												
4												
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Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	2	160.0	28.2	0.0	188.2	2.00	38.3	A
2	1	160.0	7.7	0.0	167.7	2.00	42.9	A
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13								
14								
15								

Total travel time (x) = 355.9 sec
Total length (y) = 4.00 miles
Total travel speed, Sa = 3600 x (y)/(x) = 40.5 mph
Total urban street LOS (Exhibit 15-2) = A

Intersection Files in the Analysis

1: Highland - AM weekday existing
2: Archie AM weekday existing - d
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Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 10/14/2009
Analysis Time Period: AM - existing + proj Weekday
Urban Street: SR-67
Direction of Travel: West-bound
Jurisdiction: County & Caltrans
Analysis Year: 2008
Project ID: Spirit of Joy

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Ramona					
1	Highland	2.00	2	45	160.0	2
2	Archie Moore	2.00	2	45	160.0	1
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Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	240.0	0.670	0.770	1267		3	0.393	3.0	0	28.2	0.0	C
2	65.0	0.920	0.930	1754		3	0.548	0.0	0	7.7	0.0	A
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4												
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Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	2	160.0	28.2	0.0	188.2	2.00	38.3	A
2	1	160.0	7.7	0.0	167.7	2.00	42.9	A
3								
4								
5								
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7								
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10								
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13								
14								
15								

Total travel time (x) = 355.9 sec
Total length (y) = 4.00 miles
Total travel speed, Sa = 3600 x (y)/(x) = 40.5 mph
Total urban street LOS (Exhibit 15-2) = A

Intersection Files in the Analysis

1: Highland - AM weekday existing
2: Archie AM weekday existing + p
3:
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HCS+: Urban Streets Release 5.21

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 10/14/2009
Analysis Time Period: PM - existing Weekday
Urban Street: SR-67
Direction of Travel: East-bound
Jurisdiction: County & Caltrans
Analysis Year: 2008
Project ID: Spirit of Joy

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Archie Moore					
1	Highland	2.00	2	45	160.0	1
2	Ramona	2.00	2	45	160.0	2
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14						
15						

Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	139.3	0.570	0.890	1091		3	0.500	3.0	0	31.2	0.0	C
2	115.0	0.330	0.980	1170		3	0.334	3.0	0	49.1	0.0	D
3												
4												
5												
6												

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Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	160.0	31.2	0.0	191.2	2.00	37.7	A
2	2	160.0	49.1	0.0	209.1	2.00	34.4	B
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15								

Total travel time (x) = 400.3 sec
Total length (y) = 4.00 miles
Total travel speed, Sa = 3600 x (y)/(x) = 36.0 mph
Total urban street LOS (Exhibit 15-2) = A

Intersection Files in the Analysis

1: Highland -PM weekday existing
2: Ramona - PM weekday existing
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Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 10/14/2009
Analysis Time Period: PM - existing + proj. Weekday
Urban Street: SR-67
Direction of Travel: East-bound
Jurisdiction: County & Caltrans
Analysis Year: 2008
Project ID: Spirit of Joy

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Archie Moore					
1	Highland	2.00	2	45	160.0	1
2	Ramona	2.00	2	45	160.0	2
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14						
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Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	139.3	0.570	0.890	1091		3	0.500	3.0	0	31.2	0.0	C
2	115.0	0.330	0.990	1170		3	0.334	3.0	0	51.3	0.0	D
3												
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Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	160.0	31.2	0.0	191.2	2.00	37.7	A
2	2	160.0	51.3	0.0	211.3	2.00	34.1	B
3								
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Total travel time (x) = 402.4 sec
Total length (y) = 4.00 miles
Total travel speed, Sa = 3600 x (y)/(x) = 35.8 mph
Total urban street LOS (Exhibit 15-2) = A

Intersection Files in the Analysis

1: Highland -PM weekday existing
2: Ramona - PM weekday existing +
3:
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15:

HCS+: Urban Streets Release 5.21

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 10/14/2009
Analysis Time Period: AM - existing Weekday
Urban Street: SR-67
Direction of Travel: East-bound
Jurisdiction: County & Caltrans
Analysis Year: 2008
Project ID: Spirit of Joy

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Archie Moore					
1	Highland	2.00	2	45	160.0	1
2	Ramona	2.00	2	45	160.0	2
3						
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14						
15						

Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	240.0	0.670	0.410	1267		3	0.980*	3.0	0	18.2	0.0	B
2	75.0	0.290	0.600	1024		3	0.917	3.0	0	23.8	0.0	C
3												
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5												
6												

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Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	160.0	18.2	0.0	178.2	2.00	40.4	A
2	2	160.0	23.8	0.0	183.8	2.00	39.2	A
3								
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14								
15								

Total travel time (x) = 362.0 sec
Total length (y) = 4.00 miles
Total travel speed, Sa = 3600 x (y)/(x) = 39.8 mph
Total urban street LOS (Exhibit 15-2) = A

Intersection Files in the Analysis

1: Highland - AM weekday existing
2: Ramona - AM weekday existing
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HCS+: Urban Streets Release 5.21

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 10/14/2009
Analysis Time Period: AM - existing + proj. Weekday
Urban Street: SR-67
Direction of Travel: East-bound
Jurisdiction: County & Caltrans
Analysis Year: 2008
Project ID: Spirit of Joy

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Archie Moore					
1	Highland	2.00	2	45	160.0	1
2	Ramona	2.00	2	45	160.0	2
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Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	240.0	0.670	0.410	1267		3	0.980*	3.0	0	18.2	0.0	B
2	75.0	0.290	0.600	1024		3	0.917	3.0	0	23.8	0.0	C
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Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	160.0	18.2	0.0	178.2	2.00	40.4	A
2	2	160.0	23.8	0.0	183.8	2.00	39.2	A
3								
4								
5								
6								
7								
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10								
11								
12								
13								
14								
15								

Total travel time (x) = 362.0 sec
Total length (y) = 4.00 miles
Total travel speed, Sa = 3600 x (y)/(x) = 39.8 mph
Total urban street LOS (Exhibit 15-2) = A

Intersection Files in the Analysis

1: Highland - AM weekday existing
2: Ramona - AM weekday existing
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HCS+: Urban Streets Release 5.21

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 10/14/2009
Analysis Time Period: AM - existing Sunday
Urban Street: SR-67
Direction of Travel: West-bound
Jurisdiction: County & Caltrans
Analysis Year: 2008
Project ID: Spirit of Joy

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Ramona					
1	Highland	2.00	2	45	160.0	2
2	Archie Moore	2.00	2	45	160.0	1
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Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	106.0	0.570	0.580	1075		3	0.779	3.0	0	15.3	0.0	B
2	65.0	0.920	0.470	1754		3	0.789	0.0	0	1.1	0.0	A
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5												
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Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	2	160.0	15.1	0.0	175.1	2.00	41.1	A
2	1	160.0	1.1	0.0	161.1	2.00	44.7	A
3								
4								
5								
6								
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13								
14								
15								

Total travel time (x) = 336.3 sec
Total length (y) = 4.00 miles
Total travel speed, Sa = 3600 x (y)/(x) = 42.8 mph
Total urban street LOS (Exhibit 15-2) = A

Intersection Files in the Analysis

1: Highland - AM existing + proje
2: Archie AM Sunday existing + pr
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HCS+: Urban Streets Release 5.21

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 10/14/2009
Analysis Time Period: AM - existing + project Sunday
Urban Street: SR-67
Direction of Travel: West-bound
Jurisdiction: County & Caltrans
Analysis Year: 2008
Project ID: Spirit of Joy

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Ramona					
1	Highland	2.00	2	45	160.0	2
2	Archie Moore	2.00	2	45	160.0	1
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Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	105.0	0.570	0.580	1078		3	0.808	3.0	0	15.1	0.0	B
2	65.0	0.920	0.480	1754		3	0.789	0.0	0	1.1	0.0	A
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Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	2	160.0	15.3	0.0	175.3	2.00	41.1	A
2	1	160.0	1.1	0.0	161.1	2.00	44.7	A
3								
4								
5								
6								
7								
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12								
13								
14								
15								

Total travel time (x) = 336.3 sec
Total length (y) = 4.00 miles
Total travel speed, Sa = 3600 x (y)/(x) = 42.8 mph
Total urban street LOS (Exhibit 15-2) = A

Intersection Files in the Analysis

1: Highland - AM existing Sunday
2: Archie AM Sunday existing - du
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HCS+: Urban Streets Release 5.21

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst:	Rick Crafts
Agency/Co.:	RCE
Date Performed:	10/14/2009
Analysis Time Period:	AM - existing Sunday
Urban Street:	SR-67
Direction of Travel:	East-bound
Jurisdiction:	County & Caltrans
Analysis Year:	2008
Project ID: Spirit of Joy	

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Archie Moore					
1	Highland	2.00	2	45	160.0	1
2	Ramona	2.00	2	45	160.0	2
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Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	106.0	0.570	0.490	1075		3	0.949	3.0	0	13.9	0.0	B
2	75.0	0.340	0.580	1224		3	0.865	3.0	0	21.0	0.0	C
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Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	160.0	13.8	0.0	173.8	2.00	41.4	A
2	2	160.0	20.0	0.0	180.0	2.00	40.0	A
3								
4								
5								
6								
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10								
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15								

Total travel time (x) = 353.8 sec
Total length (y) = 4.00 miles
Total travel speed, Sa = 3600 x (y)/(x) = 40.7 mph
Total urban street LOS (Exhibit 15-2) = A

Intersection Files in the Analysis

1: Highland - AM existing + proje
2: Ramona - AM existing + project
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HCS+: Urban Streets Release 5.21

Phone: Fax:
E-Mail:

OPERATIONAL ANALYSIS

Analyst: Rick Crafts
Agency/Co.: RCE
Date Performed: 10/14/2009
Analysis Time Period: AM - existing + project Sunday
Urban Street: SR-67
Direction of Travel: East-bound
Jurisdiction: County & Caltrans
Analysis Year: 2008
Project ID: Spirit of Joy

Description of Arterial

Analysis period length 0.25 hr

Seg.	Cross street name	Length of segment (mi)	Urban street class	Free flow speed (mph)	Running time (sec)	Section
0	Archie Moore					
1	Highland	2.00	2	45	160.0	1
2	Ramona	2.00	2	45	160.0	2
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Intersection Delay Estimates

Seg	Cycle length C	Green ratio g/C	v/c ratio X	Lane cap. c	PVG if Input	Arr. type AT	I fac-tor	Unit ext. (sec)	Init. queue (veh)	Cntrl. delay (sec)	Other delay (sec)	Inter. LOS
1	105.0	0.570	0.490	1078		3	0.945	3.0	0	13.8	0.0	B
2	78.0	0.370	0.560	1312		3	0.865	3.0	0	20.0	0.0	B
3												
4												
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Arterial Level of Service

Seg.	Sect.	Running time (sec)	Inter. control. delay (sec)	Other delay (sec)	Sum of time by section (sec)	Sum of length by section (mi)	Arterial speed (mph)	Arterial LOS by section
1	1	160.0	13.9	0.0	173.9	2.00	41.4	A
2	2	160.0	21.0	0.0	181.0	2.00	39.8	A
3								
4								
5								
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13								
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15								

Total travel time (x) = 354.9 sec
Total length (y) = 4.00 miles
Total travel speed, Sa = 3600 x (y)/(x) = 40.6 mph
Total urban street LOS (Exhibit 15-2) = A

Intersection Files in the Analysis

1: Highland - AM existing Sunday
2: Ramona - AM existing Sunday
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