APPENDIX 4.10

Traffic Study, Austin-Foust Associates, Inc., April 2011

VIA PRINCESSA EXTENSION

TRAFFIC ANALYSIS

April 2011

AUSTIN-FOUST ASSOCIATES, INC.

City of Santa Clarita

Via Princessa Extension
Traffic Analysis

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CONTENTS

LIST OF FIGURES AND TABLES

Page

FIGURES

TABLES

VIA PRINCESSA EXTENSION
Traffic Analysis

This traffic study addresses the traffic impacts of the Via Princessa extension in the City of Santa Clarita, in Los Angeles County. It has been prepared to provide the traffic and circulation material for the overall project Environmental Impact Report (EIR).

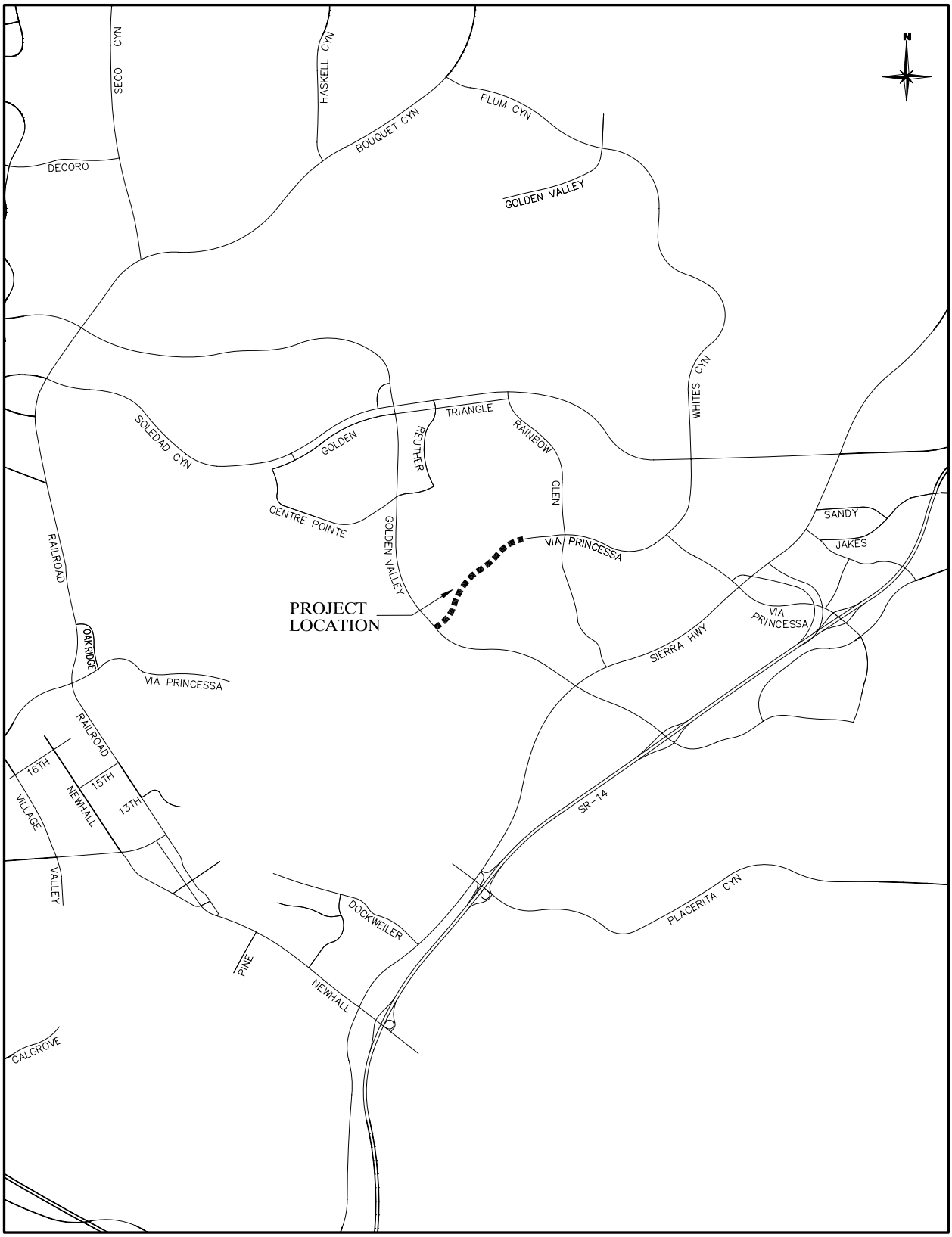
PROJECT DESCRIPTION

The Via Princessa extension will be one of the primary east-west arterials through the City of Santa Clarita. The project addressed in this analysis consists of the portion of Via Princessa between Golden Valley Road and Rainbow Glen Drive to the east. A future project will construct the final gap closure segment between Golden Valley Road and Claiborne Lane to the west. The project study area is illustrated in Figure 1, and a detail of the project location is provided in Figure 2.

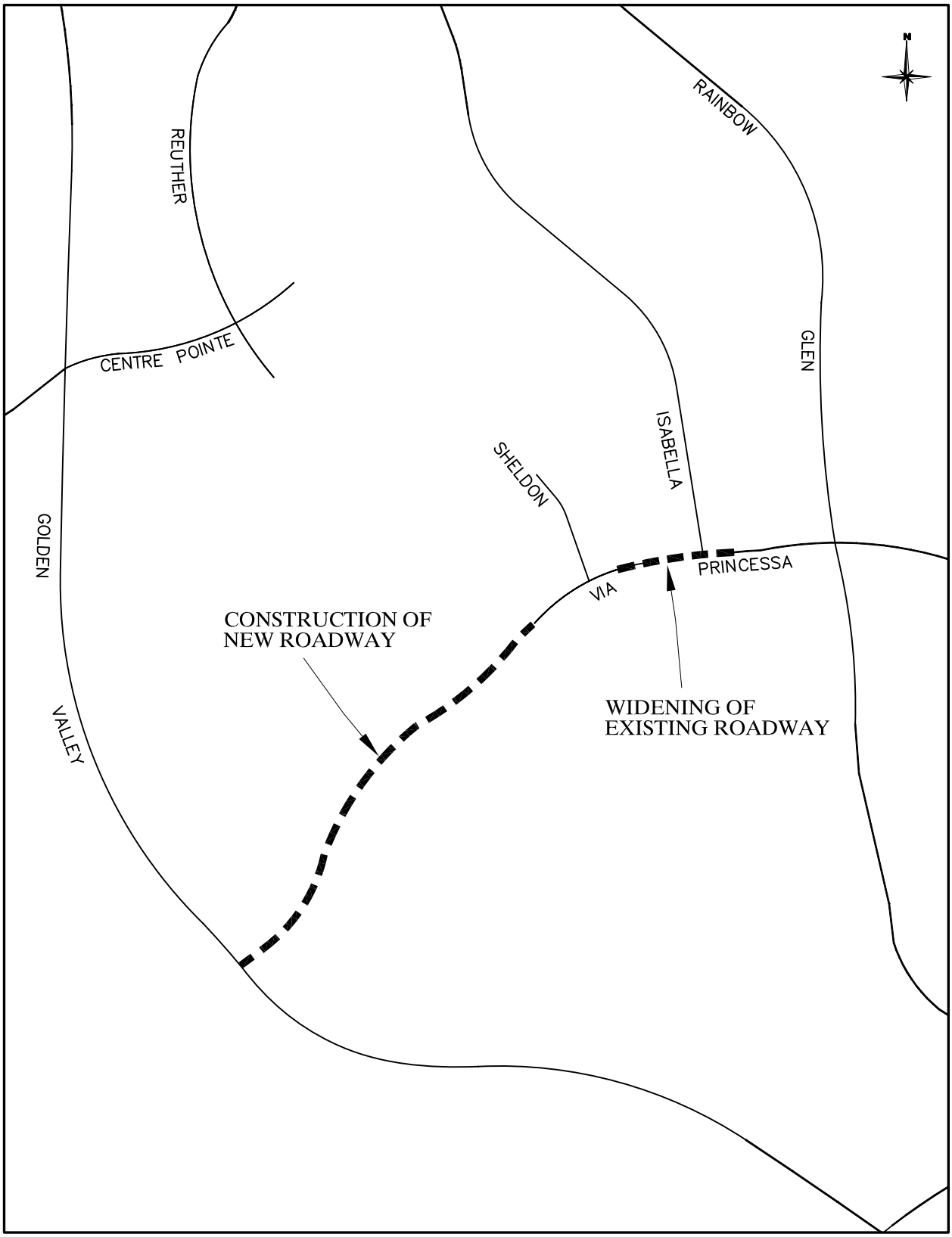
The project is about 1.2 miles in length and the proposed roadway is designated as a Major Arterial Highway per the City of Santa Clarita's Master Highway Plan. The project includes the construction of a new roadway segment between Golden Valley Road and the existing roadway terminus near Sheldon Avenue, the completion of the existing section of Via Princessa between Sheldon Avenue and Rainbow Glen Drive (currently constructed as a half-section) by constructing the south side of the roadway, and the re-striping of the existing section of Via Princessa between Sheldon Avenue and Rainbow Glen Drive to add additional vehicle lanes.

The new roadway construction between Golden Valley Road and the existing roadway terminus near Sheldon Avenue will be a six-lane facility with a raised landscaped median, a parkway/sidewalk on each side and a 2-way bike path along the south side. The vehicle lanes adjacent to the median will be 12 feet wide, the middle lanes 11 feet wide, and the lanes adjacent to the curb will be 12 feet wide. The typical Right-of-Way width for this section will be 116 feet.

The portion of Via Princessa between Sheldon Avenue and Rainbow Glen Drive that is currently constructed as a half-section will be completed by constructing the south side of the roadway. In this section, the roadway will be constructed to a typical Right-of-Way width of 104 feet, consistent with the original design for this section.



Legend	Figure 1
▬▬▬ Proposed Project Roadway Extension	STUDY AREA



Legend

Proposed Project

Figure 2

PROJECT LOCATION

SCOPE AND METHODOLOGY

For this analysis a summary of existing conditions is first presented. Future year traffic volumes are then presented and analyzed for two scenarios, Interim Year (approximately 10 to 15 years from the present) and Long-Range Buildout conditions.

The extension is evaluated in the Interim Year horizon, with and without the proposed project. Interim Year With Project traffic forecasts are based on the proposed extension of Via Princessa east of Golden Valley Road, and do not include the planned future extension of Via Princessa west of Golden Valley Road. The future No Build network assumes the existing configuration of Via Princessa and provides the basis of comparison for the With Project conditions. Interim Year traffic forecasts represent a comprehensive cumulative setting that includes the proposed and approved future development projects within the Santa Clarita area.

The proposed project represents part of a long range improvement that ultimately proposes the gap closure of Via Princessa through the center of the Santa Clarita Valley. Long-Range Buildout conditions based on the proposed One Valley One Vision (OVOV) plan are included in this analysis to illustrate the ultimate traffic conditions when Via Princessa is extended west of Golden Valley Road to close the final gap in the roadway.

The analysis information presented here shows existing conditions (2010), and then Interim Year conditions without and with the proposed project. As noted above, Long-Range Buildout conditions are also provided to illustrate the ultimate traffic conditions for the area. Level of service (LOS) analysis is carried out for intersections using the intersection capacity utilization (ICU) procedure in accordance with the City of Santa Clarita traffic study guidelines. An intersection operational analysis is also conducted for the Via Princessa corridor using the delay based methodology of the Highway Capacity Manual and the Synchro micro-simulation analysis model. In addition, roadway link analysis is provided based on volume to capacity (V/C) ratios consistent with the OVOV traffic analysis.

The traffic forecasts used in this analysis have been prepared using data from the Santa Clarita Valley Consolidated Traffic Model (SCVCTM). The SCVCTM was developed jointly by the County of Los Angeles Department of Public Works and the City of Santa Clarita Department of Public Works and is the primary tool used for forecasting traffic volumes for the Santa Clarita Valley. The SCVCTM has the ability to provide traffic volume forecasts for a long-range setting, which represents buildout

conditions (generally considered as year 2035 or later), as well as an interim year (approximately 10 to 15 years from the present). For this analysis, the SCVCTM Interim Year setting is used to provide a comparison of conditions with and without the project. As noted above, the SCVCTM Long-Range Buildout forecasts based on the proposed OVOV plan are also provided to illustrate the ultimate traffic conditions in the area.

PERFORMANCE CRITERIA

The performance criteria used for evaluating volumes and capacities in the study area is based on average daily traffic (ADT) and peak hour intersection volumes. ADT is a useful measure to show general levels of traffic on a facility. In addition, using peak hour intersection turn movement volumes and the intersection lane geometry, ICU values are calculated for each of the AM and PM peak hours for intersections in the immediate vicinity of the proposed project. The ICUs represent volume/capacity (V/C) ratios for these time periods, and thereby provide a suitable measure of system performance. Traffic LOS is designated "A" through "F", with LOS "A" representing free flow conditions and LOS "F" representing severe traffic congestion.

The performance criteria used for evaluating LOS for the study area roadways is based on the methodology used in the OVOV traffic study. ADT V/C ratios and LOS are calculated using the criteria outlined in Table 1. The City strives to maintain LOS D or better on arterial roads to the extent feasible given right-of-way and physical constraints, while recognizing that in higher density urban areas there is generally a tradeoff between vehicle LOS and other factors such as pedestrian mobility, and that LOS E is acceptable in those types of urban settings.

The performance criteria used for evaluating LOS for the study area intersections is based on the methodology outlined in the City's traffic study guidelines, as summarized in Table 2. The City generally attempts to maintain LOS "D" (ICU < .91) or better during the peak hour. Presented in Table 3 are intersection LOS criteria based on the Highway Capacity Manual delay methodology. The delay based LOS is applied to non-signalized intersections as well as signalized intersections for the purpose of evaluating corridor performance.

Table 1: Arterial Roadway Performance Criteria

V/C Calculation Methodology

Level of service to be based on average daily traffic (ADT) values calculated using the following assumptions:

General Plan Designation	Lanes	Capacity
Major Arterial Highway	8	72,000
Major Arterial Highway	6	54,000
Secondary Arterial Highway	4	36,000
Limited Secondary Arterial Highway	2	18,000
Collector	2	15,000

Source: One Valley One Vision Valley-Wide Traffic Study, June 2010

Level of Service (LOS)

LOS ranges for V/C Ratios are as follows:

LOS	Arterial V/C Ranges
A	0.00 – 0.60
B	0.61 – 0.70
C	0.71 – 0.80
D	0.81 – 0.90
E	0.91 – 1.00
F	Above 1.00

Abbreviations:
V/C – Volume/Capacity Ratio
LOS – Level of Service
ADT – Average Daily Traffic

Table 2: Arterial Intersection Performance Criteria – ICU Method

ICU Calculation Methodology

Level of service (LOS) to be based on peak hour intersection capacity utilization (ICU) values calculated using the following assumptions:

Saturation Flow Rate: 1,750 vehicles/hour/lane

Clearance Interval: .10

Performance Targets

LOS D or existing LOS, whichever is greater.

Impact Thresholds

An intersection is considered to be significantly impacted if compared to the ICU in the no-project alternative, the ICU in the with-project alternative increases the ICU by the following:

With-Project ICU	Project Increment
.81 - .90 (LOS D)	greater than or equal to .02
.91 or more (LOS E & F)	greater than or equal to .01

Level of Service (LOS)

LOS ranges for ICU values are as follows:

LOS	Intersection ICU Ranges
A	0.00 – 0.60
B	0.61 – 0.70
C	0.71 – 0.80
D	0.81 – 0.90
E	0.91 – 1.00
F	Above 1.00

Abbreviations:
LOS – Level of Service
ICU – Intersection Capacity Utilization

Table 3: Arterial/Local Intersection Performance Criteria – HCM Method

HCM Calculation Methodology

Level of service (LOS) to be based on average vehicle delay (sec/veh) values calculated using the delay based methodology outlined in the Highway Capacity Manual.

Performance Targets

LOS D or existing LOS, whichever is greater.

Impact Thresholds

Not applicable. See Table 2: Arterial Intersection Performance Criteria – ICU Method for intersection impact criteria based on ICU methodology.

Level of Service (LOS)

LOS ranges for Average Vehicle Delay (sec/veh) are as follows:

LOS	Un-signalized Intersection Control Delay per Vehicle (sec/veh)	Signalized Intersection Control Delay per Vehicle (sec/veh)
A	0.0 – 10.0	0.0 – 10.0
B	10.1 – 15.0	10.1 – 20.0
C	15.1 – 25.0	20.1 – 35.0
D	25.1 – 35.0	35.1 – 55.0
E	35.1 – 50.0	55.1 – 80.0
F	Above 50.0	Above 80.0

Abbreviations:
LOS – Level of Service
ICU – Intersection Capacity Utilization

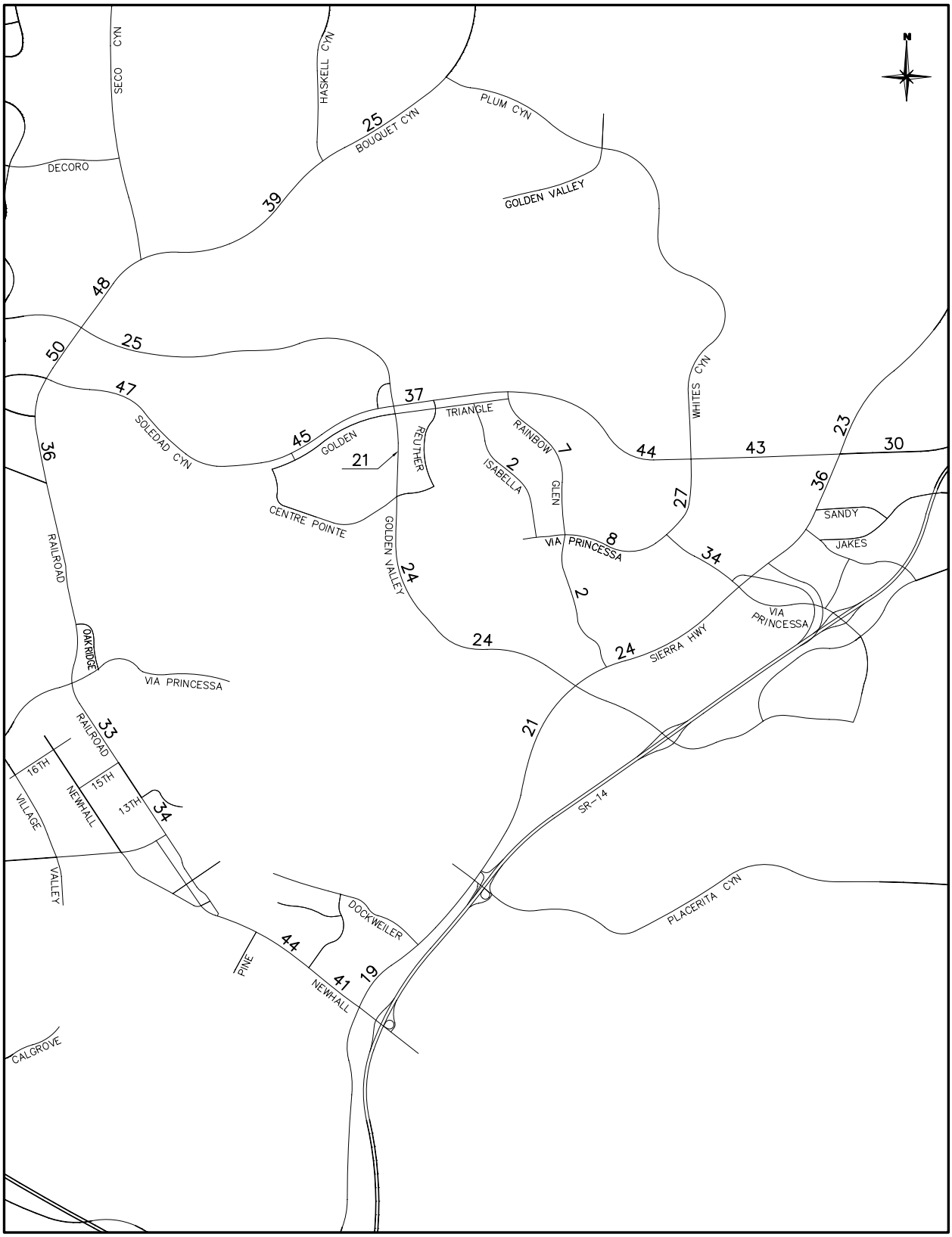
EXISTING CONDITIONS TRAFFIC VOLUMES

Year 2010 average daily traffic (ADT) volume counts have been provided by the City of Santa Clarita from multiple permanent count stations located within the study area. Those counts have been augmented by additional 24-hour machine counts collected specifically for this study in July 2010. Detailed intersection turning movement counts have also been collected in November 2010 during the critical AM and PM peak periods for intersections along the Via Princessa corridor.

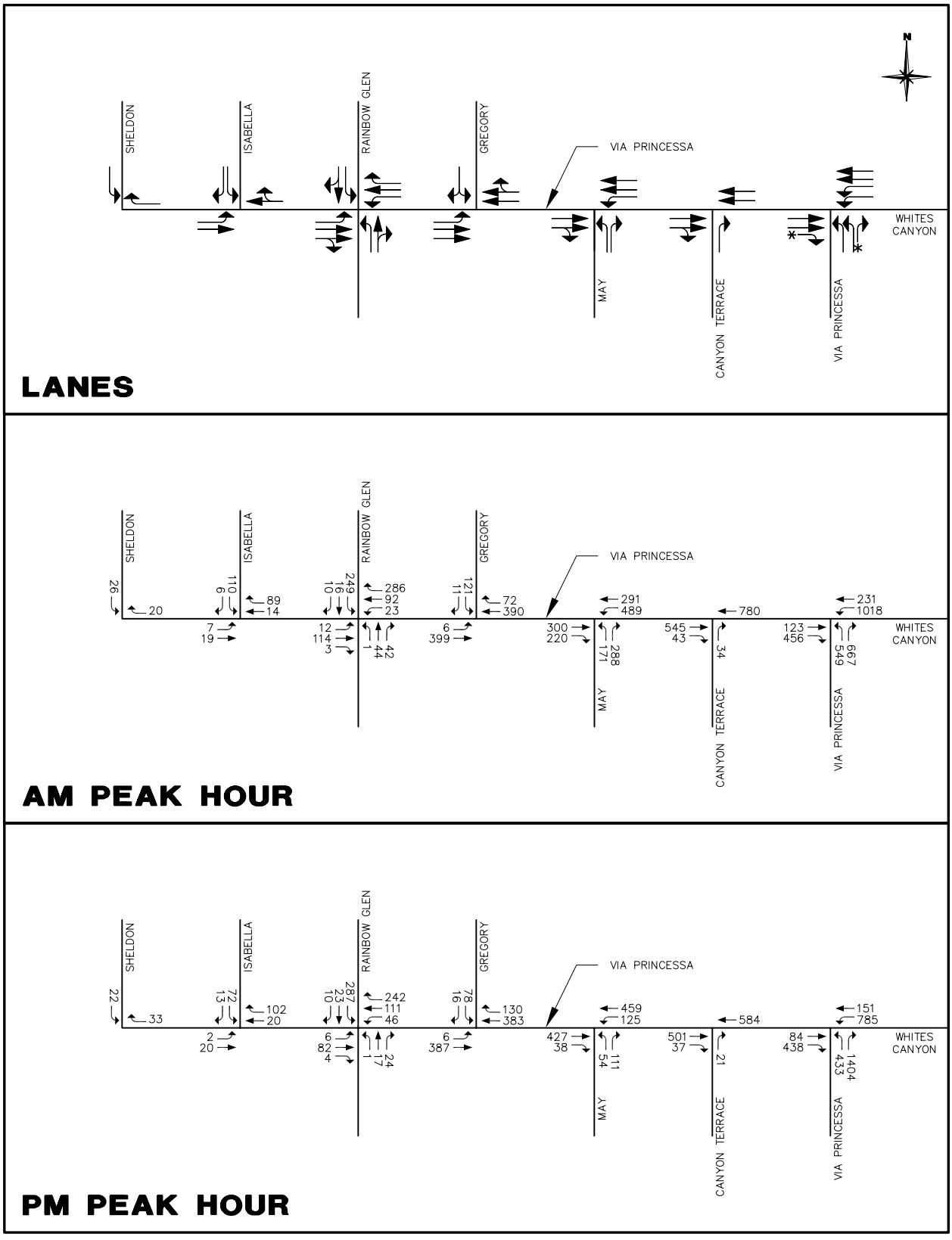
Figure 3 shows existing (2010) ADT volumes in the vicinity of the project. As can be seen, approximately 8,000 average daily trips currently utilize Via Princessa between Whites Canyon Road and Rainbow Glen Drive. Figure 4 shows existing turning movement volumes collected in November 2010.

The existing segment of Via Princessa from approximately 400 feet west of Rainbow Glen Drive to Canyon Terrace Way (just west of the intersection with Whites Canyon Road) has been constructed with a typical Right-of-Way width of 80 feet, which allows for a total of four vehicles lanes (two lanes in each direction) and a painted median. Immediately west of this, a short segment of Via Princessa (approximately 270 feet) has been constructed as a half-street section based on an ultimate Right-of-Way width of 104 feet, which will allow for a total of six vehicles lanes and a raised median when the street is built out to its ultimate section. From the end of that segment to the current roadway terminus (approximately 525 feet), the roadway has been constructed based on a typical Right-of-Way width of 100 feet, which will allow for a total of six vehicles lanes and a raised median. (Right-of-Way source is the Road Alignment for Via Princessa East street plan by Sikand Engineering, October 2009.)

In the project area, Via Princessa is currently configured as a four-lane roadway between Whites Canyon Road and Rainbow Glen Drive. West of Rainbow Glen Drive, Via Princessa is currently configured as a two-lane roadway and ends just west of Sheldon Avenue. As shown in Figure 5, the proposed extension will expand Via Princessa to six lanes with a raised median except in the vicinity of Rainbow Glen Drive, where the existing Right-of-Way limits the roadway to four lanes with a painted median.



Legend	Figure 3
XX Average Daily Traffic Counts	EXISTING (2010) ADT VOLUMES (000s)

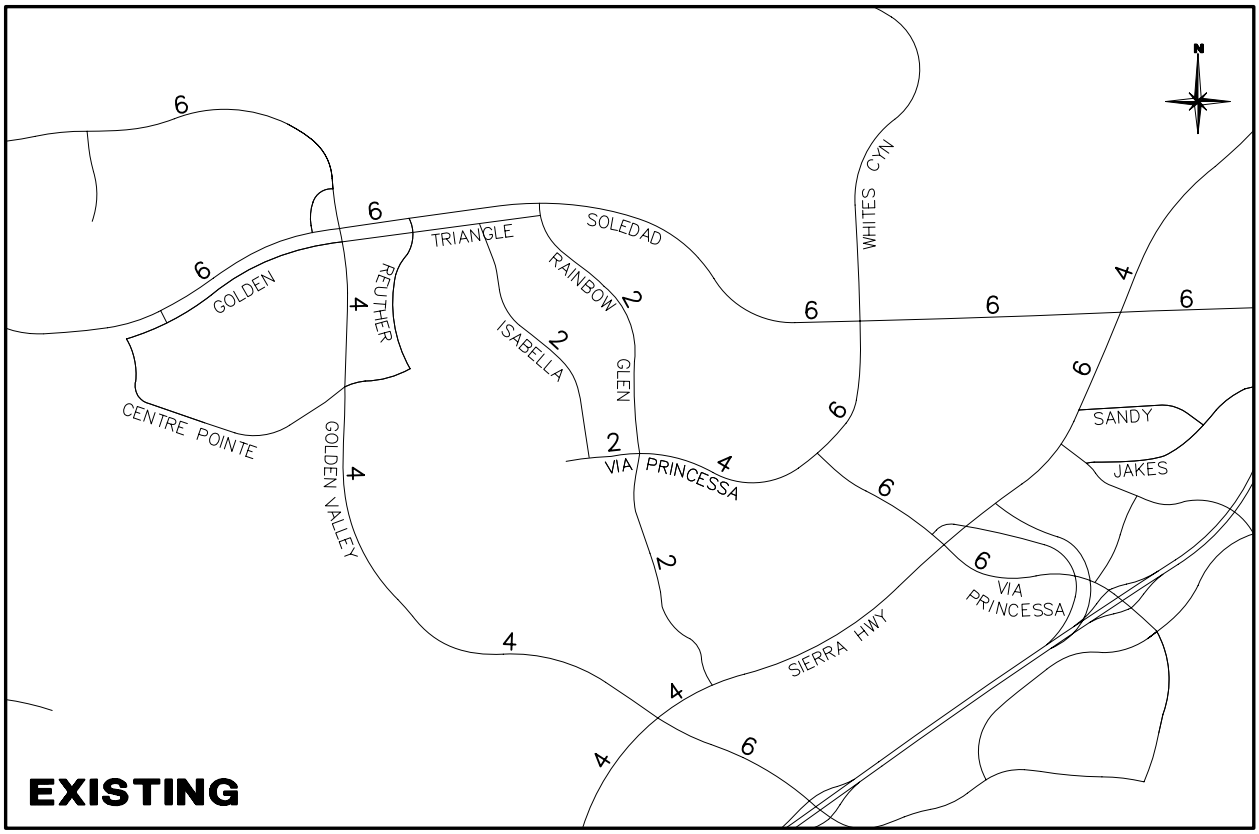


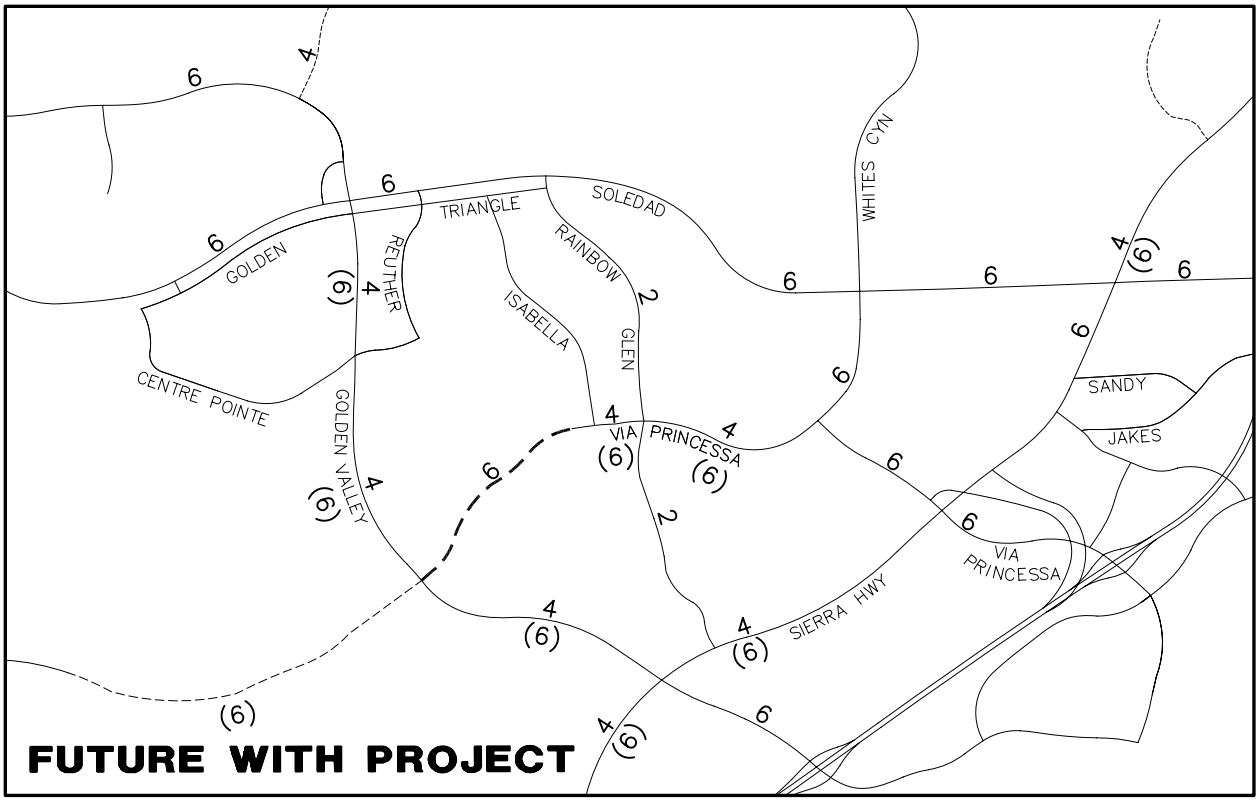
Legend

Free Right Turn

Figure 4

EXISTING (2010) INTERSECTION LANES & PEAK HOUR VOLUMES





Legend

X	Lanes (Two-way) - Existing & Interim Year
(Y)	Ultimate Lanes (Two-way) - General Plan
— — —	Proposed Project Roadway Extension
------	Future GP Roadway

Figure 5

EXISTING AND FUTURE
MIDBLOCK LANES

EXISTING CONDITIONS PERFORMANCE RESULTS

ADT V/C ratios have been calculated for existing (2010) conditions, as shown in Table 4, which summarizes the V/C and LOS for each roadway within the study area. The summary shows that the roadways in the general vicinity of the project location (e.g., Via Princessa, Rainbow Glen, Isabella, and Golden Valley Road) operate at LOS A and LOS B currently. Other heavily traveled arterials are currently operating at LOS E (e.g., Bouquet Canyon Road and Railroad Avenue), however none are currently shown at LOS F.

Existing intersection ICU values for signalized intersections near the project are summarized in Table 5, and the corresponding ICU worksheets are provided in Appendix A. Table 6 summarizes the average vehicle delay and the corresponding LOS for existing intersections along Via Princessa in the vicinity of the project (see Appendix C for worksheets and Figure 6 for location map). The delay analysis shows that each intersection along the Via Princessa corridor currently operates at LOS C or better.

FUTURE TRAFFIC VOLUMES

Figure 7 shows Interim Year No Build ADT volumes based on the existing Via Princessa configuration, and Figure 8 shows the corresponding peak hour volumes. Figure 9 shows Interim Year With Project ADT Volumes as well as the change in volume associated with the extension of Via Princessa. Figure 10 shows the corresponding peak hour volumes for Interim Year With Project conditions.

As can be seen, the extension of Via Princessa is anticipated to carry approximately 5,000 ADT in the Interim Year and Golden Valley Road is forecast to gain approximately 1,000 ADT in the vicinity of the extension.

The existing segment of Via Princessa that is east of Rainbow Glen Drive is shown to increase by approximately 2,000 ADT due to the proposed extension of Via Princessa. Rainbow Glen Drive north of Via Princessa is shown to decrease by approximately 1,000 ADT, and Isabella Parkway shows no measurable change in ADT volumes due to the extension. The peak hour volumes shown in the previously referenced Figure 8 (without extension) and Figure 10 (with extension) indicate a change in traffic patterns that result in minor net changes in traffic volumes to these three existing roadway segments.

Table 4: ADT V/C and LOS – Existing (2010) Conditions

			Existing (2010) Conditions		
Roadway Segment	**Lanes**	**Capacity**	**Volume**	**V/C**	**LOS**
55 Newhall Ranch e/o Bouquet Cyn	4	36,000	25,000	.69	B
76 Bouquet Cyn e/o Haskell Cyn	4	36,000	25,000	.69	B
77 Bouquet Cyn w/o Haskell Cyn	5	45,000	39,000	.87	D
78 Bouquet Cyn w/o Seco Cyn	8	72,000	48,000	.67	B
79 Bouquet Cyn s/o Newhall Ranch	8	72,000	50,000	.69	B
80 Bouquet Cyn n/o Magic Mtn	4	36,000	36,000	1.00	E
82 Railroad s/o Oak Ridge	4	36,000	33,000	.92	E
84 Railroad n/o Lyons Cyn	4	36,000	34,000	.94	E
101 Soledad Cyn e/o Bouquet Cyn	6	54,000	47,000	.87	D
111 Newhall n/o Valle Del Oro	6	54,000	44,000	.81	D
143 Soledad Cyn w/o Golden Valley	6	54,000	45,000	.83	D
144 Soledad Cyn w/o Whites Cyn	6	54,000	44,000	.81	D
145 Soledad Cyn e/o Whites Cyn	6	54,000	43,000	.80	C
146 Soledad Cyn e/o Sierra Hwy	6	54,000	30,000	.56	A
150 Whites Cyn s/o Soledad Cyn	6	54,000	27,000	.50	A
152 Via Princessa e/o Rainbow Glen	4	36,000	8,000	.22	A
153 Via Princessa s/o Whites Cyn	6	54,000	34,000	.63	B
156 Golden Valley n/o Sierra Hwy	4	36,000	24,000	.67	B
158 Sierra Hwy n/o Newhall	4	36,000	19,000	.53	A
160 Sierra Hwy s/o Golden Valley	4	36,000	21,000	.58	A
161 Sierra Hwy s/o Via Princesssa	4	36,000	24,000	.67	B
162 Sierra Hwy s/o Soledad Cyn	6	54,000	36,000	.67	B
163 Sierra Hwy n/o Soledad Cyn	4	36,000	23,000	.64	B
198 Golden Valley s/o Soledad Cyn	4	36,000	21,000	.58	A
199 Golden Valley s/o Centre Pointe	4	36,000	24,000	.67	B
226 Soledad Cyn e/o Golden Valley	6	54,000	37,000	.69	B
229 Rainbow Glen n/o Via Princessa	2	18,000	7,000	.39	A
288 Newhall n/o Sierra Hwy	6	54,000	41,000	.76	C
364 Rainbow Glen s/o Via Princessa	2	15,000	2,000	.13	A
365 Isabella n/o Via Princessa	2	15,000	2,000	.13	A

Level of service ranges: .00 - .60 A .61 - .70 B .71 - .80 C
.81 - .90 D .91 – 1.00 E Above 1.00 F

Table 5: ICU and LOS Summary – Existing (2010) Conditions

Intersection	Existing (2010) Conditions			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
167. Rainbow Glen & Via Princessa	.35	A	.34	A
171. Whites Cyn & Via Princessa	.59	A	.46	A
300. May Way & Via Princessa	.63	B	.33	A

Level of service ranges: .00 - .60 A; .61 - .70 B; .71 - .80 C; .81 - .90 D; .91 – 1.00 E; Above 1.00 F

Table 6: Intersection Delay and LOS Summary – Existing (2010) Conditions

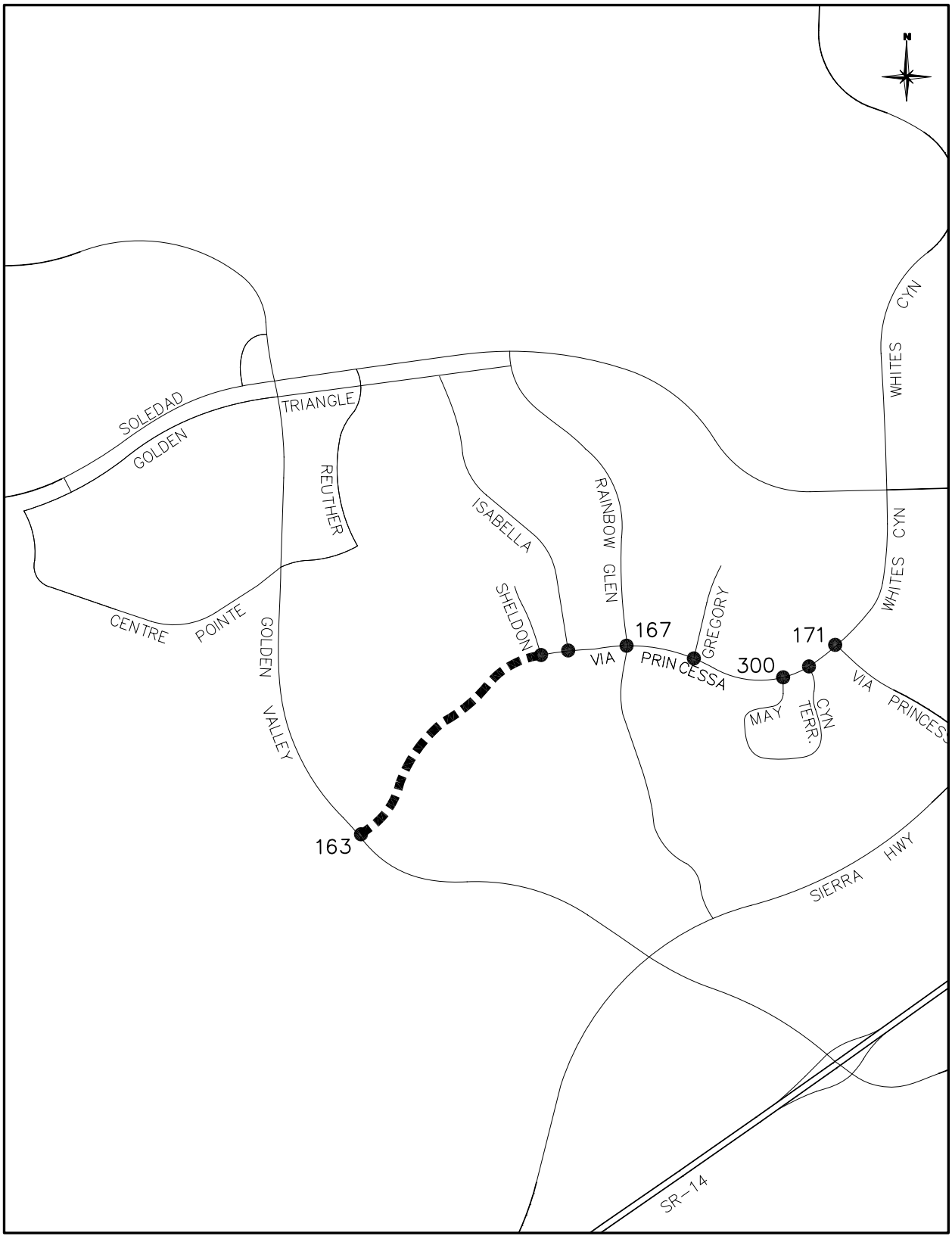
Intersection	Control Type	Existing (2010) Conditions			
		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
Sheldon & Via Princessa	Side Street Stop	0.0[1]	A	0.0[1]	A
Isabella & Via Princessa	Side Street Stop	9.6	A	9.3	A
Rainbow Glen & Via Princessa	All-Way Stop	11.5	B	13.2	B
Gregory & Via Princessa	Side Street Stop	19.1	C	18.4	C
May Way & Via Princessa	Signal	16.8	B	10.7	B
Canyon Terrace & Via Princessa	Side Street Stop	10.6	B	9.2	A
Whites Cyn & Via Princessa	Signal	16.6	B	15.1	B

Level of service ranges:

	Unsignalized		Signalized	
	0.0 – 10.0	A	0.0 – 10.0	A
	10.1 – 15.0	B	10.1 – 20.0	B
	15.1 – 25.0	C	20.1 – 35.0	C
	25.1 – 35.0	D	35.1 – 55.0	D
	35.1 – 50.0	E	55.1 – 80.0	E
	Above 50.0	F	Above 80.0	F

Notes:
Delay = Average Control Delay (sec/veh)
The indicated delay for Side Street Stop control represents the average vehicle delay for the worst-case movement.
The indicated delay for All-Way Stop control and Signal control represents the average vehicle delay for the intersection.

[1]No conflicting movements for existing conditions.

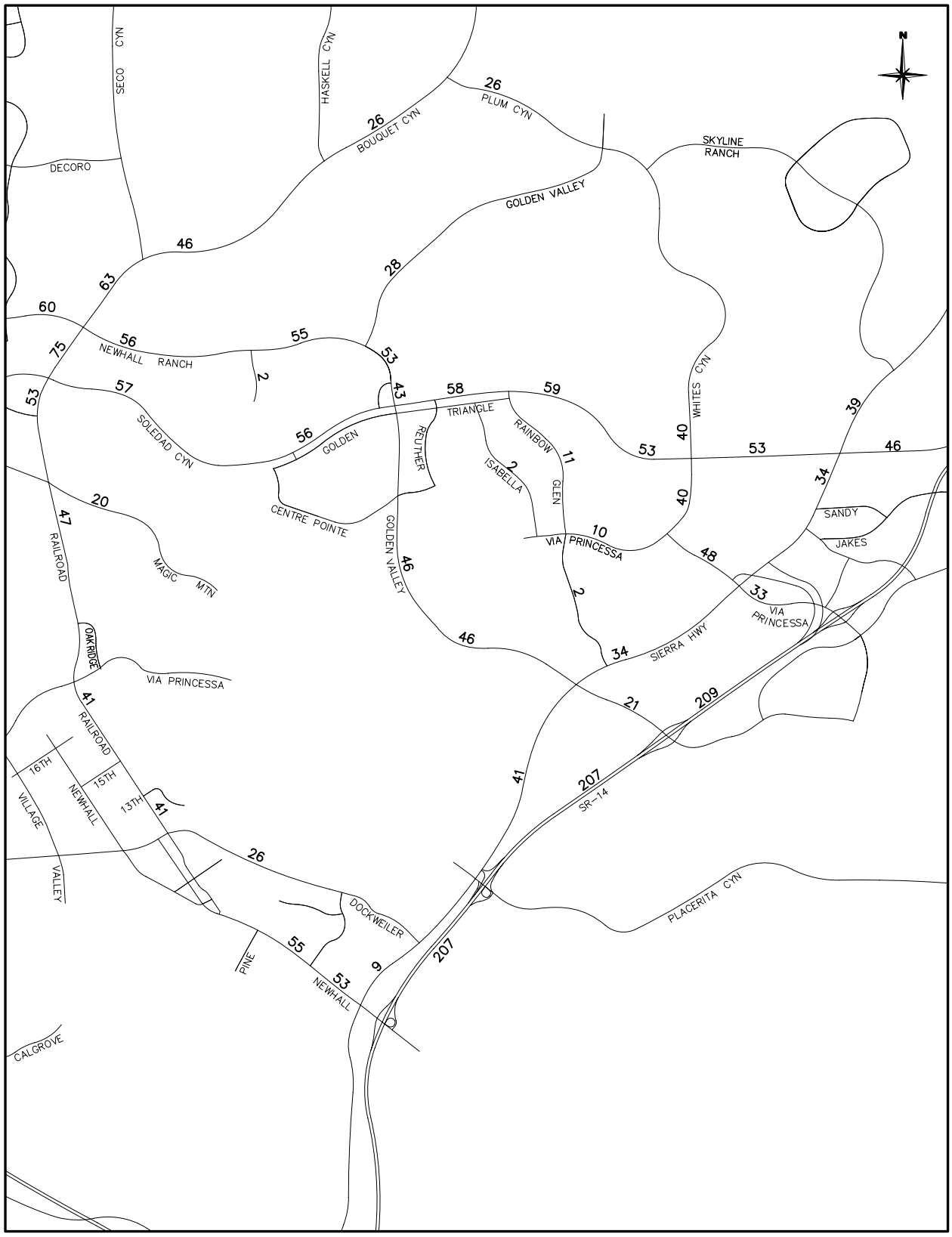


Legend

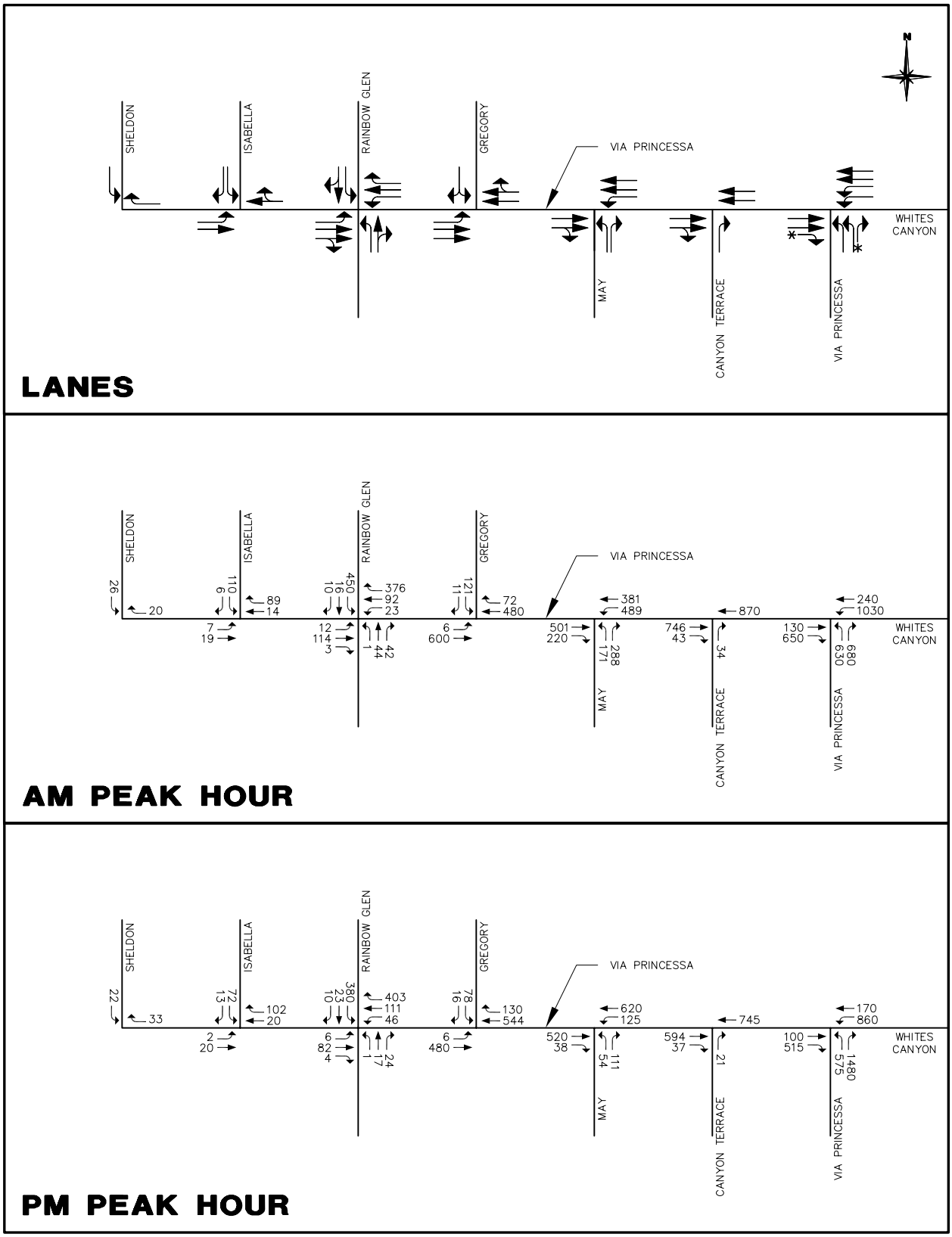
- Intersection Location
- xxx Signal (Exist and Future)
- Project Location

Figure 6

INTERSECTION LOCATION MAP



Legend	Figure 7
XX Average Daily Traffic	INTERIM YEAR ADT VOLUMES (000s) - NO BUILD



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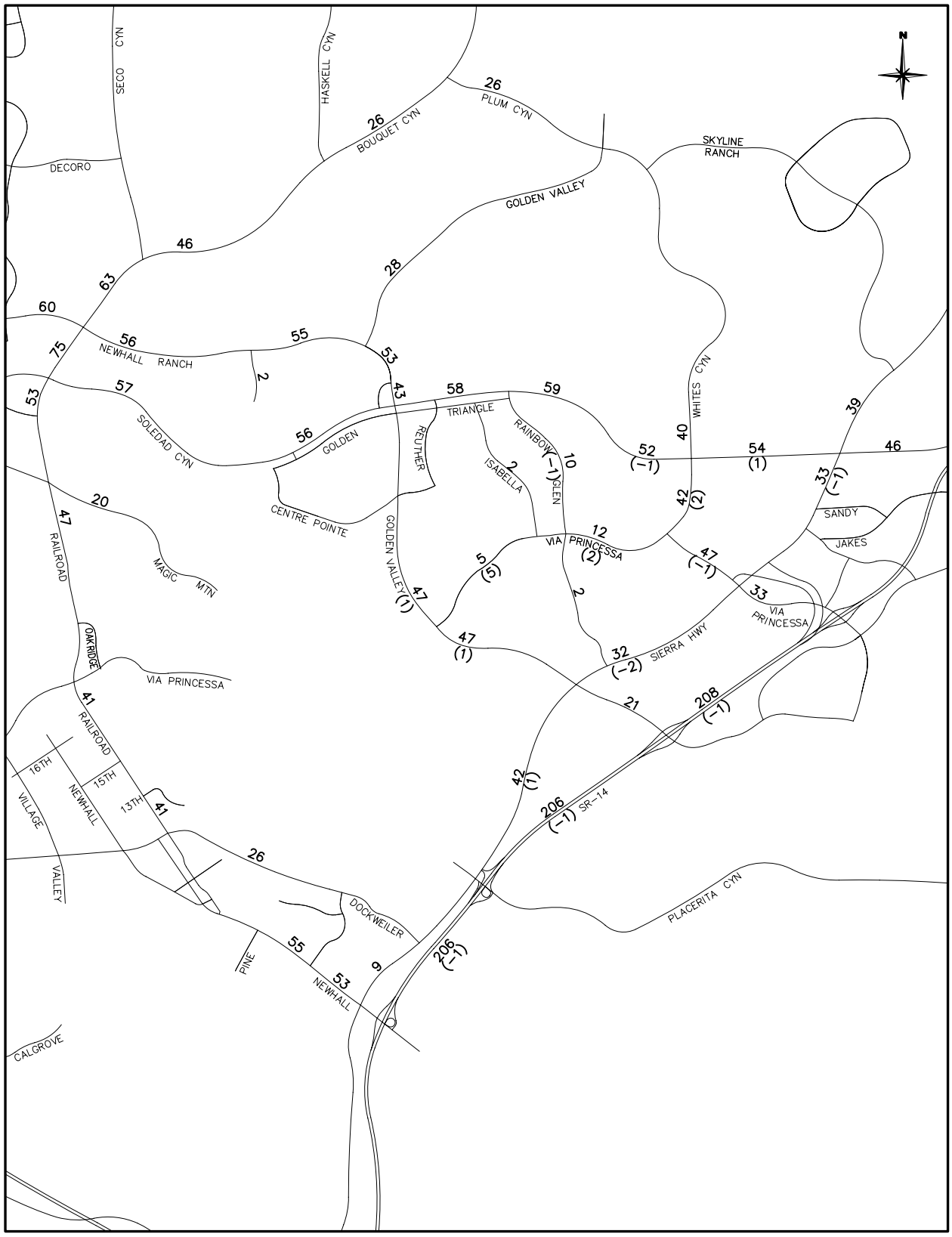
Free Right Turn

Figure 8

INTERIM YEAR INTERSECTION LANES & PEAK HOUR VOLUMES -NO BUILD

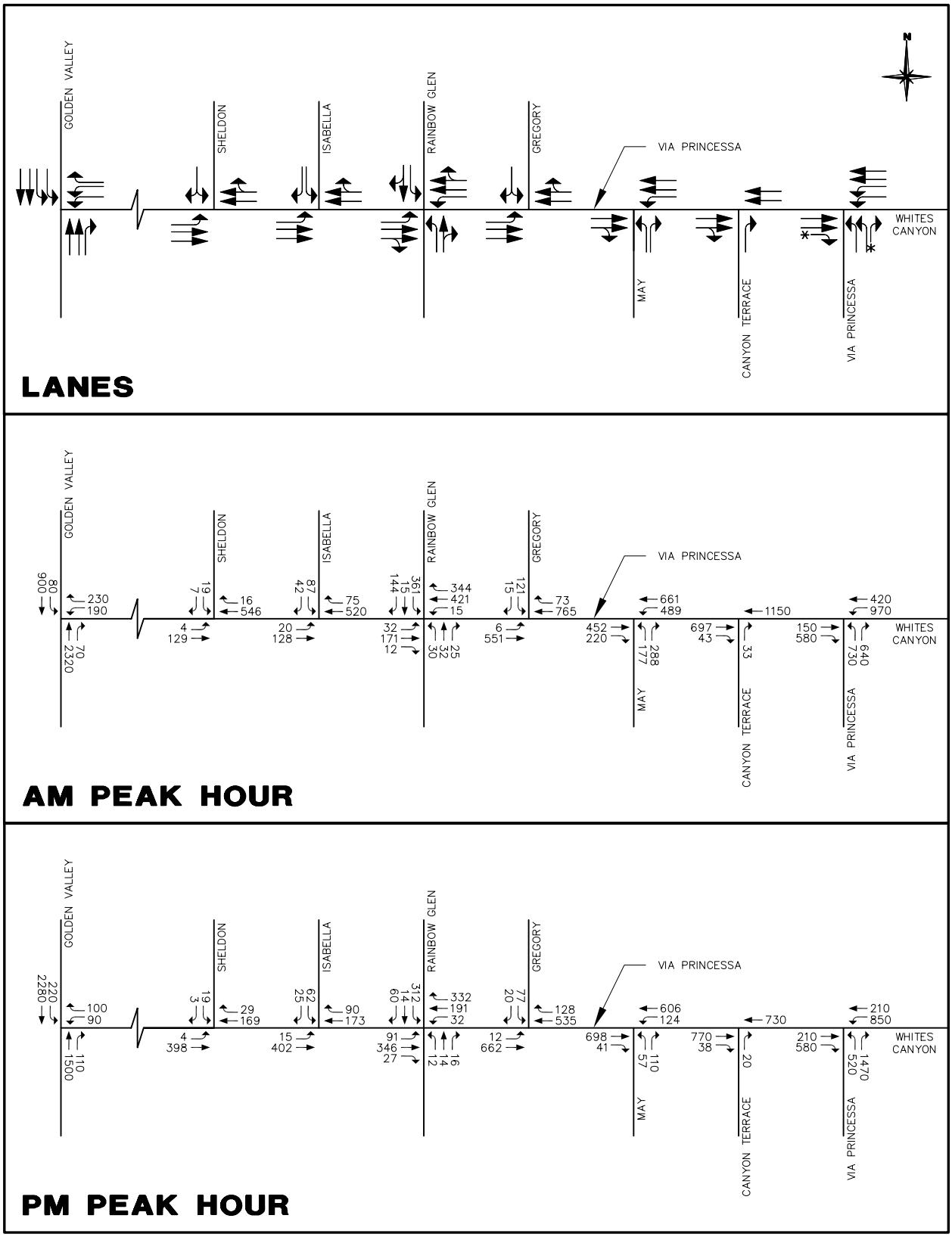


Legend

XX — Average Daily Traffic
(X) — Difference from No Build

Figure 9

INTERIM YEAR ADT VOLUMES (000s)
- WITH PROJECT



Legend

* Free Right Turn

Figure 10

INTERIM YEAR INTERSECTION LANES & PEAK HOUR VOLUMES - WITH PROJECT

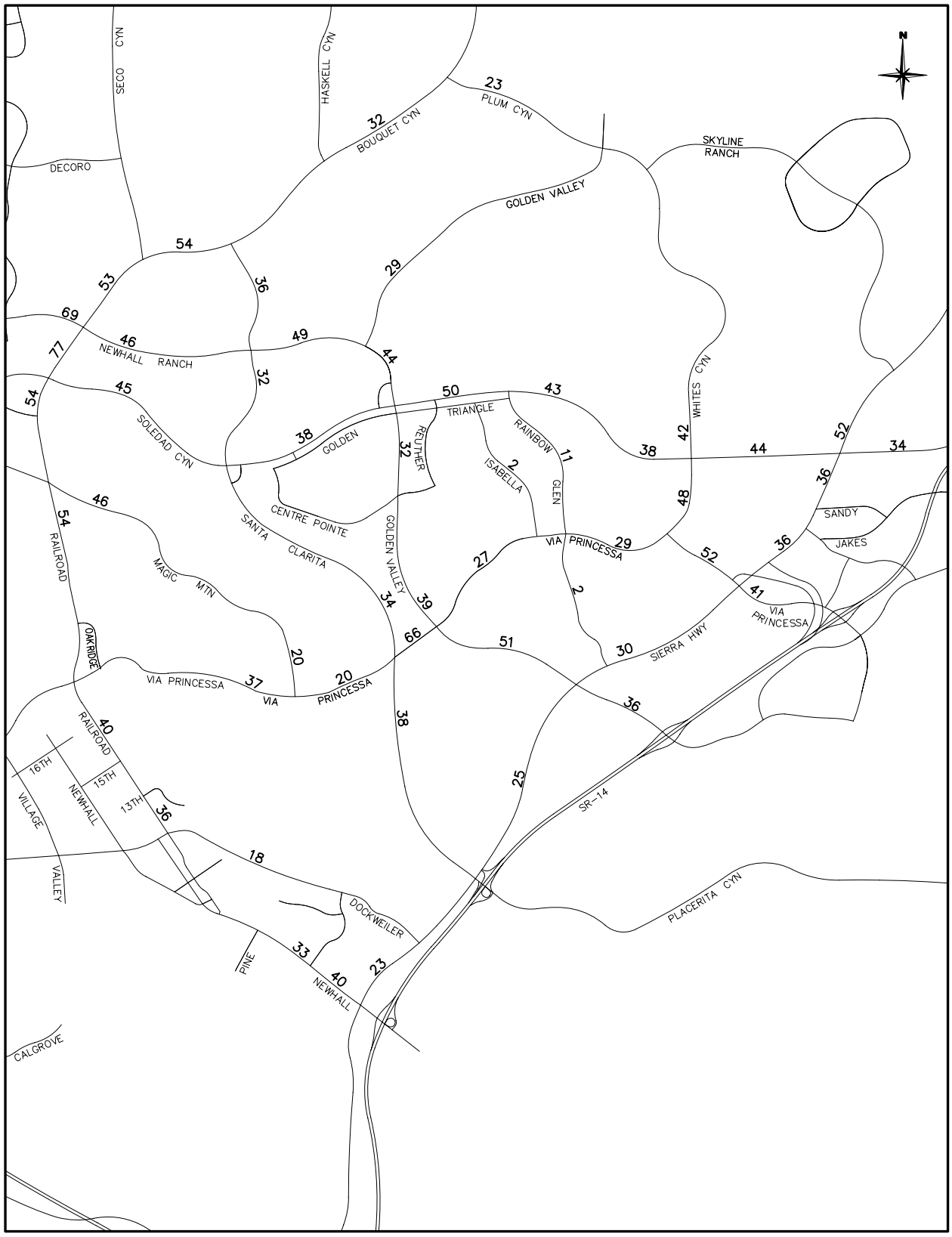
At the Via Princessa/Rainbow Glen Drive intersection, the extension of Via Princessa reduces the southbound left-turn volume while increasing the southbound right-turn volume. Likewise, the westbound right-turn volume decreases while an increase is shown to the westbound through volume. In general, the amount of new traffic added to these existing roadway segments is somewhat offset by a similar reduction in traffic that is the result of the change in traffic patterns due to the new roadway.

During the AM peak hour, southbound volumes on Rainbow Glen Drive (north of Via Princessa) increase by approximately 44 vehicles per hour (vph), while northbound volumes (north of Via Princessa) decrease by approximately 24 vph, for a net increase of 20 vph. Westbound volumes on Via Princessa (east of Rainbow Glen Drive) increase by 289 vph, while eastbound volumes (east of Rainbow Glen Drive) decrease by 49 vph, for a net increase of 240 vph.

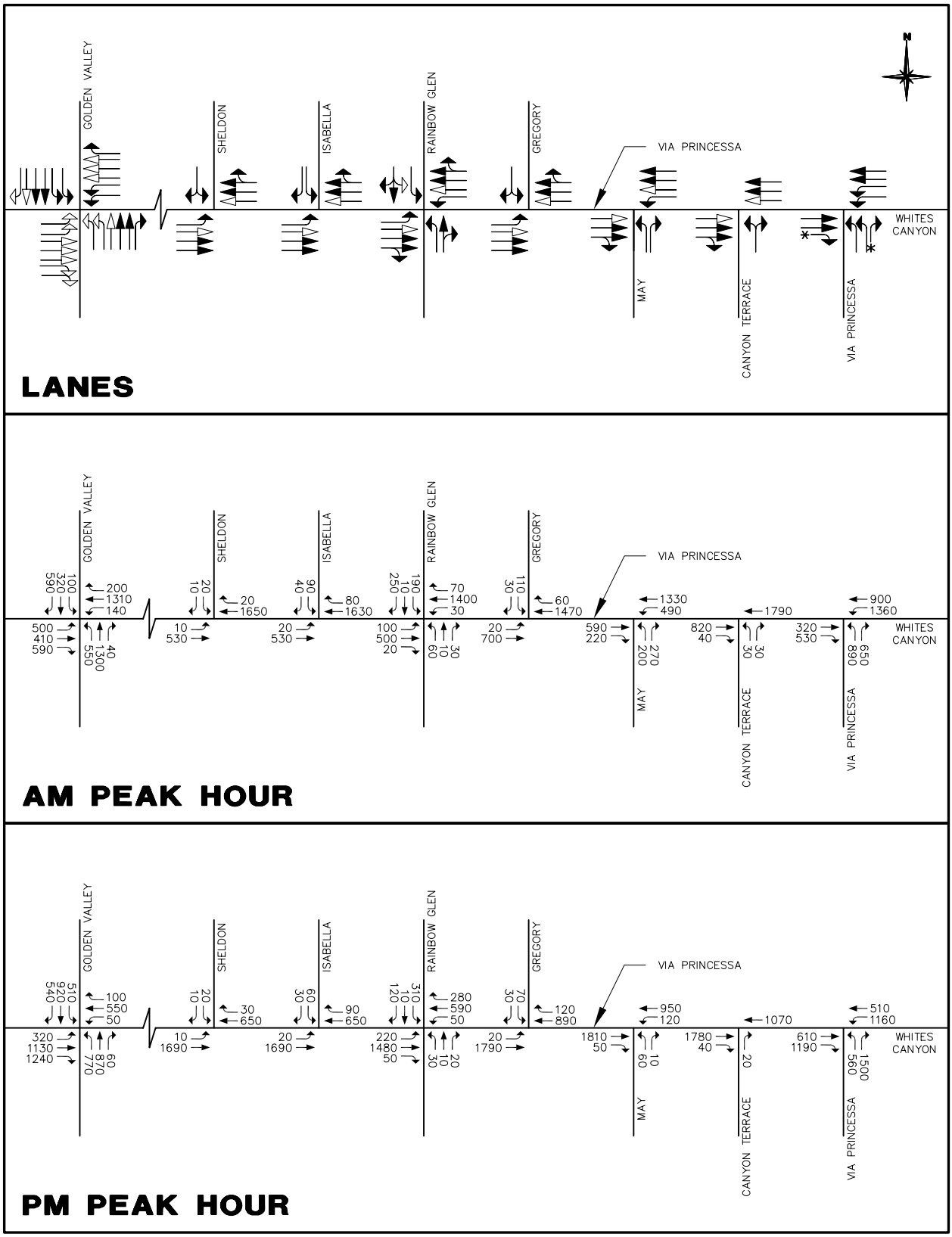
During the PM peak hour, southbound volumes on Rainbow Glen Drive (north of Via Princessa) decrease by approximately 27 vehicles per hour (vph), and northbound volumes (north of Via Princessa) increase by approximately 11 vph, for a total decrease of 16 vph. Westbound volumes on Via Princessa (east of Rainbow Glen Drive) decrease by 5 vph, while eastbound volumes (east of Rainbow Glen Drive) increase by 188 vph, for a net increase of 183 vph.

At the Via Princessa/Isabella Parkway intersection, the extension of Via Princessa reduces the southbound left-turn volume while increasing the southbound right-turn volume. In addition, the number of westbound right-turns decreases, while the eastbound left-turns increase. The net change to peak hour traffic volumes on Isabella Parkway is an increase of approximately 12 vph during the AM peak hour, and 3 vph during PM peak hour. For Isabella Parkway, the change to traffic volumes that are forecast during peak hour conditions do not translate to a discernable net change to ADT volumes (which are rounded to the nearest 1,000 by standard practice).

Figure 11 shows the Long-Range Buildout ADT volumes based on the proposed OVOV plan, and Figure 12 shows the corresponding peak hour volumes. The figure shows that the extension of Via Princessa is anticipated to carry approximately 27,000 ADT for buildout conditions.



Legend	Figure 11
XX Average Daily Traffic Counts	LONG-RANGE BUILDOUT ADT VOLUMES (000s) - WITH PROJECT



Legend

Existing & Interim Year Lanes
Long-Range Buildout Lanes (per General Plan)
Free Right Turn

Figure 12

LONG-RANGE BUILDOUT INTERSECTION LANES & PEAK HOUR VOLUMES - WITH PROJECT

INTERIM YEAR PERFORMANCE RESULTS

ADT V/C ratios have been calculated for Interim Year conditions, with and without the project. Table 7 summarizes the V/C and LOS for each roadway within the study area that is measurably affected by the extension (refer to the previously referenced Figure 9 for affected locations), along with non-affected segments in the immediate vicinity of the project. The summary shows that the project segment is forecast to operate at LOS A for Interim Year conditions, and that no segment becomes deficient due to the implementation of the project.

Golden Valley Road (between Centre Pointe Parkway and Sierra Highway) is shown in the previously referenced Table 7 to exceed the typical daily capacity of a four-lane roadway for Interim Year conditions, both with and without the proposed roadway extension, as is Sierra Highway between Golden Valley Road and Placerita Canyon Road. This indicates that these segments of Golden Valley Road and Sierra Highway should be improved to their planned ultimate six-lane configuration within the Interim Year horizon period. However, as noted above, this is shown to be needed either with or without the proposed extension of Via Princessa.

The peak hour intersection levels of service were calculated for the Interim Year No Build and With Project scenarios for the key intersections along Via Princessa (see the previously referenced Figure 6 for locations). The ICU values are shown in Table 8 and the corresponding ICU worksheets are provided in Appendix A. As can be seen, each of the intersections affected by the roadway extension show acceptable LOS. In addition, the intersection of Rainbow Glen Drive and Via Princessa and the new intersection of Golden Valley Road and Via Princessa are expected to meet the criteria for a signal warrant (see Appendix B for worksheets).

Table 9 summarizes the average vehicle delay and the corresponding LOS for existing intersections along Via Princessa in the vicinity of the project for Interim Year conditions with and without the proposed project (see Appendix C for worksheets). As shown, each intersection is forecast to operate at LOS C or better for conditions with and without the project, with the exception of Gregory Lane. At Gregory Lane, street delay is forecast to increase from LOS D conditions to LOS E conditions due to the proposed project. The indicated delay for the Sheldon/Via Princessa and the Isabella/Via Princessa intersections are based on full access to the side-street; however, see the Modified Side Street Access Scenario analysis (Page 33) for an evaluation of limited side-street access.

Table 7: ADT V/C and LOS – Interim Year with and without Project

Roadway Segment	Lanes	Capacity	Interim Year No Build			Interim Year With Project		
			Volume	V/C	LOS	Volume	V/C	LOS
144 Soledad Cyn w/o Whites Cyn	6	54,000	53,000	.98	E	52,000	.96	E
145 Soledad Cyn e/o Whites Cyn	6	54,000	53,000	.98	E	54,000	1.00	E
150 Whites Cyn s/o Soledad Cyn	6	54,000	40,000	.74	C	42,000	.78	C
151 Via Princessa e/o Golden Valley	6	54,000	n/a	n/a	n/a	5,000	.09	A
152 Via Princessa e/o Rainbow Glen	4	36,000	10,000	.28	A	12,000	.33	A
153 Via Princessa s/o Whites Cyn	6	54,000	48,000	.89	D	47,000	.87	D
156 Golden Valley s/o Via Princessa	4	36,000	46,000	1.28	**F**	47,000	1.31	**F**
160 Sierra Hwy s/o Golden Valley	4	36,000	41,000	1.14	**F**	42,000	1.17	**F**
161 Sierra Hwy n/o Golden Valley	4	36,000	34,000	.94	E	32,000	.89	D
162 Sierra Hwy s/o Soledad Cyn	6	54,000	34,000	.63	B	33,000	.61	B
199 Golden Valley s/o Centre Pointe	4	36,000	46,000	1.28	**F**	47,000	1.31	**F**
229 Rainbow Glen n/o Via Princessa	2	18,000	11,000	.61	B	10,000	.56	A
364 Rainbow Glen s/o Via Princessa	2	15,000	2,000	. 13	A	2,000	. 13	A
365 Isabella n/o Via Princessa	2	15,000	2,000	.13	A	2,000	.13	A

LOS in **Bold** exceeds performance criteria of LOS E.

Table includes roadways measurably affected by the project as well as roadway segments in the immediate vicinity of the project.

Level of service ranges: .00 - .60 A .61 - .70 B .71 - .80 C
.81 - .90 D .91 – 1.00 E Above 1.00 F

Table 8: Intersection ICU and LOS Summary – Interim Year Conditions

	NO-BUILD				WITH PROJECT			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**
163. Golden Valley & Via Princessa	n/a	n/a	n/a	n/a	.89	D	.78	C
167. Rainbow Glen & Via Princessa	.47	A	.40	A	.58	A	.46	A
171. Whites Cyn & Via Princessa	.61	B	.54	A	.63	B	.55	A
300. May Way & Via Princessa	.69	B	.36	A	.67	B	.41	A

n/a – Not Applicable for No-Build conditions.

Level of service ranges: .00 - .60 A .61 - .70 B .71 - .80 C
.81 - .90 D .91 – 1.00 E Above 1.00 F

As noted above (Page 24), a traffic signal is anticipated to be warranted at the Rainbow Glen/Via Princessa intersection based on the peak hour volumes for conditions with the project. The installation of a traffic signal at this location will also have the secondary effect of mitigating the project's impact at Gregory Lane, which is further discussed below.

Also as noted above, side street delay for Gregory Lane is forecast to increase from LOS D conditions to LOS E conditions during the AM peak hour, which results from additional through traffic on Via Princessa due to the proposed project. While the City does not have an established threshold of significance related to side street delay, LOS E levels of delay would generally be considered a significant impact.

The intersection delay analysis for Gregory Lane indicates that the LOS E conditions for side street delay results from vehicles attempting a left-turn from Gregory Lane to eastbound Via Princessa. When left-turning vehicles instead execute a right-turn movement onto Via Princessa, followed by a U-turn to eastbound Via Princessa, which will be facilitated by the new traffic signal at the Rainbow Glen/Via Princessa intersection (recommended to be constructed as part of the proposed project), side street delay at Gregory Way decreases to LOS B conditions. The cumulative delay of the right-turn movement and the subsequent U-turn movement is a total of 32.8 seconds of delay (12.3 seconds plus 20.5 seconds), which is effectively equivalent to a LOS of C (based on signal control). As such, the

Table 9: Intersection Delay and LOS Summary – Interim Year Conditions

Intersection	Control Type	NO-BUILD				WITH PROJECT			
		AM Pk Hour		PM Pk Hour		AM Pk Hour		PM Pk Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Sheldon & Via Princessa	Side Street Stop	0.0[1]	A	0.0[1]	A	14.2	B	11.7	B
Isabella & Via Princessa	Side Street Stop	9.6	A	9.3	A	16.4	C	12.2	B
Rainbow Glen & Via Princessa	All-Way Stop (no Proj) Signal (with Proj)[2]	33.4	D	27.7	D	22.4	C	18.2	B
Gregory & Via Princessa	Side Street Stop	28.0	D	23.4	C	**50.0**	**E**	27.5	D
May Way & Via Princessa	Signal	22.3	C	8.4	A	19.4	B	12.3	B
Canyon Terrace & Via Princessa	Side Street Stop	9.1	A	9.4	A	9.3	A	9.1	A
Whites Cyn & Via Princessa	Signal	16.7	B	19.1	B	18.1	B	21.6	C

Level of service ranges:

	Unsignalized		Signalized	
	0.0 – 10.0	A	0.0 – 10.0	A
	10.1 – 15.0	B	10.1 – 20.0	B
	15.1 – 25.0	C	20.1 – 35.0	C
	25.1 – 35.0	D	35.1 – 55.0	D
	35.1 – 50.0	E	55.1 – 80.0	E
	Above 50.0	F	Above 80.0	F

Notes:
Delay = Average Control Delay (sec/veh)
The indicated delay for Side Street Stop control represents the average vehicle delay for the worst-case movement. The indicated delay for 4-Way Stop control and Signal control represents the average vehicle delay for the intersection.

The indicated delay for the Sheldon/Via Princessa and the Isabella/Via Princessa intersections are based on full side-street access. See the **Modified Side Street Access Scenario** analysis (Page 33) for an evaluation of limited side-street access.

[1]No conflicting movements for the No-Build scenario.
[2]Traffic signal is warranted with project (see Signal Warrant analysis in Appendix B).

installation of a traffic signal at the Rainbow Glen/Via Princessa intersection will mitigate the side street delay impact for Gregory Lane. In addition, a second alternative to the Gregory Lane left-turn movement consists of utilizing Gilbert Drive to access Rainbow Glen Drive to Via Princessa, and is primarily convenient for the residents in the northerly portion of the neighborhood.

LONG-RANGE BUILDOUT PERFORMANCE RESULTS

ADT V/C ratios have been calculated for Long-Range Buildout conditions and Table 10 summarizes the V/C and LOS for each roadway within the study area that is measurably affected by the extension (refer to the previously referenced Figure 9 for affected locations).

For consistency with the City's General Plan and the proposed One Valley One Vision update to the General Plan, the section of Via Princessa between Golden Valley Road and May Way has been evaluated under Long-Range Buildout conditions as a six-lane major highway. The previously referenced Table 10 shows that the project segment is forecast to operate at LOS A for Long-Range Buildout conditions based on the roadway's General Plan designation as a six-lane major highway. However, the LOS summary also shows that the project segment would operate at LOS C under Long-Range Buildout conditions as a four-lane roadway.

The future segment of Via Princessa west of Golden Valley Road is shown to exceed the capacity of a six lane major highway due to forecast volumes of 66,000 ADT, as previously identified by the One Valley One Vision General Plan update, and is not due to the proposed project. As this is a future roadway, the deficiency can be eliminated by constructing that segment with additional capacity, such as with additional through lanes or augmented intersection capacity.

Peak hour intersection levels of service were calculated for Long-Range Buildout conditions for the key intersections along Via Princessa (see the previously referenced Figure 6 for locations). The ICU values are shown in Table 11 and the corresponding ICU worksheets are provided in Appendix A. As can be seen, each of the signalized intersections affected by the roadway extension shows acceptable LOS. ICUs for the Via Princessa intersections at Rainbow Glen and at May Way have been calculated based on intersection lanes that are consistent with a four-lane configuration of Via Princessa, demonstrating that Via Princessa can remain as a four-lane roadway at those locations while still providing LOS C.

Table 12 summarizes the average vehicle delay and the corresponding LOS for existing intersections along Via Princessa in the vicinity of the project (see Appendix C for worksheets) for Long-Range Buildout conditions. As shown, the signalized intersections and the Canyon Terrace/Via Princessa intersection are forecast to operate at LOS D or better for conditions with the project. However, each of the intersections west of Rainbow Glen Drive (i.e., Sheldon Avenue and Isabella Parkway), as well as the

Table 10: ADT V/C and LOS – Long-Range Buildout Conditions

Roadway Segment	Lanes	Capacity	Long-Range Buildout		
			Volume	V/C	LOS
144 Soledad Cyn w/o Whites Cyn	6	54,000	38,000	.70	B
145 Soledad Cyn e/o Whites Cyn	6	54,000	44,000	.81	D
150 Whites Cyn s/o Soledad Cyn	6	54,000	48,000	.89	D
151 Via Princess e/o Golden Valley	6 (4)	54,000 (36,000)	27,000	.50 (.75)	A (C)
152 Via Princessa e/o Rainbow Glen	6 (4)	54,000 (36,000)	29,000	.54 (.81)	A (D)
153 Via Princessa s/o Whites Cyn	6	54,000	52,000	.96	E
156 Golden Valley s/o Via Princessa	6	54,000	51,000	.94	E
160 Sierra Hwy s/o Golden Valley	6	54,000	25,000	.46	A
161 Sierra Hwy n/o Golden Valley	6	54,000	30,000	.56	A
162 Sierra Hwy s/o Soledad Cyn	6	54,000	36,000	.67	B
199 Golden Valley s/o Centre Pointe	6	54,000	39,000	.72	C
229 Rainbow Glen n/o Via Princessa	2	18,000	11,000	.61	B
364 Rainbow Glen s/o Via Princessa	2	15,000	2,000	.13	A
365 Isabella n/o Via Princessa	2	15,000	2,000	.13	A

LOS in **Bold** exceeds performance criteria of LOS E.

Lanes are per the City's General Plan Circulation Element Highway Plan.

Values in parentheses indicate conditions based on a 4-Lane Via Princessa.

Table includes roadways measurably affected by the project as well as roadway segments in the immediate vicinity of the project.

Level of service ranges:							
	.00 - .60	A	.61 - .70	B	.71 - .80	C	
	.81 - .90	D	.91 – 1.00	E	Above 1.00	F	

Table 11: Intersection ICU and LOS Summary – Long-Range Buildout Conditions

Intersection	Long-Range Buildout			
	AM Peak Hour		PM Peak Hour	
	ICU	LOS	ICU	LOS
163. Golden Valley & Via Princessa	.88	D	.76	C
167. Rainbow Glen & Via Princessa	.76	C	.72	C
171. Whites Cyn & Via Princessa	.83	D	.76	C
300. May Way & Via Princessa	.72	C	.73	C

Intersection analysis is based on a 4-lane configuration for Via Princessa.

Level of service ranges: .00 - .60 A .61 - .70 B .71 - .80 C
.81 - .90 D .91 – 1.00 E Above 1.00 F

Table 12: Intersection Delay and LOS Summary – Long-Range Buildout Conditions

Intersection	Control Type	Long-Range Buildout			
		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
Sheldon & Via Princessa	Side Street Stop	**134.2**	**F**	**47.4**	**E**
Isabella & Via Princessa	Side Street Stop	**476.4**	**F**	**73.7**	**F**
Rainbow Glen & Via Princessa	Signal[1]	30.2	C	36.0	D
Via Princessa & Gregory	Side Street Stop	**258.7**	**F**	23.2	C
May Way & Via Princessa	Signal	23.6	C	21.1	C
Canyon Terrace & Via Princessa	Side Street Stop	9.2	A	13.4	B
Whites Cyn & Via Princessa	Signal	33.1	C	27.3	C

Level of service ranges:

Unsignalized		Signalized	
0.0 – 10.0	A	0.0 – 10.0	A
10.1 – 15.0	B	10.1 – 20.0	B
15.1 – 25.0	C	20.1 – 35.0	C
25.1 – 35.0	D	35.1 – 55.0	D
35.1 – 50.0	E	55.1 – 80.0	E
Above 50.0	F	Above 80.0	F

Notes:
Delay = Average Control Delay (sec/veh)
The indicated delay for Side Street Stop control represents the average vehicle delay for the worst-case movement.
The indicated delay for 4-Way Stop control and Signal control represents the average vehicle delay for the intersection.

Intersection analysis is based on a 4-lane configuration for Via Princessa.

The indicated delay for the Sheldon/Via Princessa and the Isabella/Via Princessa intersections are based on full side-street access. See the **Modified Side Street Access Scenario** analysis (Page 33) for an evaluation of limited side-street access.

[1]Traffic signal is warranted with project (see Signal Warrant analysis in Appendix B).

Gregory Lane intersection east of Rainbow Glen Drive, are shown to experience significant side street delay due to the increase in through traffic on Via Princessa. Side street delays for those three intersections are shown to range from an average of 47.4 sec/veh (LOS E) to a high of 476.4 sec/veh (LOS F). While the City does not have an established threshold of significance related to side street delay, LOS E or F levels of delay would generally be considered a significant impact.

The indicated delay for the Sheldon/Via Princessa and the Isabella/Via Princessa intersections are based on full access to the side-street; however, see the Modified Side Street Access Scenario analysis (Page 33) for an evaluation of limited side-street access. As shown there, the Modified Side Street Access Scenario would effectively mitigate the impact to side street delay at the Sheldon/Via Princessa and the Isabella/Via Princessa intersections.

As noted in the previous section, a traffic signal is anticipated to be warranted at the Rainbow Glen/Via Princessa intersection based on the peak hour volumes for conditions with the project. The installation of a traffic signal at this location will also have the secondary effect of mitigating the project's impact at Gregory Lane.

The intersection delay analysis for Gregory Lane indicates that the LOS F conditions for side street delay under buildout conditions results from vehicles attempting a left-turn from Gregory Lane to eastbound Via Princessa. When left-turning vehicles instead execute a right-turn movement onto Via Princessa, followed by a U-turn to eastbound Via Princessa, which will be facilitated by the new traffic signal at the Rainbow Glen/Via Princessa intersection (recommended to be constructed as part of the proposed project), side street delay at Gregory Way decreases to LOS B conditions. The cumulative delay of the right-turn movement and the subsequent U-turn movement is a total of 26.2 seconds of delay (10.8 seconds plus 15.4 seconds) under buildout conditions, which is effectively equivalent to a LOS of C (based on signal control). As such, the installation of a traffic signal at the Rainbow Glen/Via Princessa intersection will mitigate the side street delay impact for Gregory Lane. In addition, a second alternative to the Gregory Lane left-turn movement consists of utilizing Gilbert Drive to access Rainbow Glen Drive to Via Princessa, and is primarily convenient for the residents in the northerly portion of the neighborhood.

MODIFIED SIDE-STREET ACCESS SCENARIO

The Via Princessa intersections with Sheldon Avenue and Isabella Parkway are being considered for access modification to prohibit side-street vehicles from making left-turns onto Via Princessa. To compensate for the elimination of the left-turn movement, mid-block U-turn locations would be placed just west of each of these intersections. As such, the standard left-turn movement from the side street would instead be accomplished by a right-turn from the side-street, followed by a mid-block U-turn at a median break just west of the intersection.

As shown in the previous section, Long-Range Performance Results (see Page 28) the Via Princessa intersections with Sheldon Avenue and Isabella Parkway are forecast to experience significant levels of delay for side-street vehicles when left-turns are allowed. Table 13 compares side street vehicle delay between scenarios based on full-access and limited access for Interim Year conditions, and Table 14 compares side street vehicle delay between scenarios based on full-access and limited access for Long-Range Buildout conditions.

Table 13: Intersection Delay and LOS Summary – Modified Access Scenario (Interim Year)

		WITH PROJECT (FULL ACCESS)				WITH PROJECT (LIMITED ACCESS)			
	Control	AM Pk Hour		PM Pk Hour		AM Pk Hour		PM Pk Hour	
Intersection	Type	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Westerly U-Turn Location	Yield	n/a	n/a	n/a	n/a	7.5	A	8.3	A
Sheldon & Via Princessa	Side Street Stop	14.2	B	11.7	B	10.4	B	9.0	A
Easterly U-Turn Location	Yield	n/a	n/a	n/a	n/a	7.7	A	8.5	A
Isabella & Via Princessa	Side Street Stop	16.4	C	12.2	B	11.8	B	9.6	A

Level of service ranges: Unsignalized

0.0 – 10.0	A
10.1 – 15.0	B
15.1 – 25.0	C
25.1 – 35.0	D
35.1 – 50.0	E
Above 50.0	F

Notes:
Delay = Average Control Delay (sec/veh)
The indicated delay for Side Street Stop control represents the average vehicle delay for the worst-case movement.
The indicated delay for U-Turn yield control represents the average vehicle delay for the U-Turn movement.

Modified access refers to left-turns prohibited from side street turn movements. The left-turn maneuver is achieved by a right-turn from the side street, followed by a mid-block U-turn at a median break just west of the intersection.

Table 14: Intersection Delay and LOS Summary – Modified Access Scenario (Long-Range Buildout)

Intersection	Control Type	WITH PROJECT (FULL ACCESS) AM Pk Hour Delay	AM Pk Hour LOS	PM Pk Hour Delay	PM Pk Hour LOS	WITH PROJECT (MODIFIED ACCESS) AM Pk Hour Delay	AM Pk Hour LOS	PM Pk Hour Delay	PM Pk Hour LOS
Westerly U-Turn Location	Yield	n/a	n/a	n/a	n/a	8.7	A	16.9	C
Sheldon & Via Princessa	Side Street Stop	**134.2**	**F**	**47.4**	**E**	19.6	C	11.1	B
Easterly U-Turn Location	Yield	n/a	n/a	n/a	n/a	9.1	A	19.0	C
Isabella & Via Princessa	Side Street Stop	**476.4**	**F**	**73.7**	**F**	12.9	B	9.4	A

Level of service ranges: Unsignalized

0.0 – 10.0	A
10.1 – 15.0	B
15.1 – 25.0	C
25.1 – 35.0	D
35.1 – 50.0	E
Above 50.0	F

Notes:
Delay = Average Control Delay (sec/veh)
The indicated delay for Side Street Stop control represents the average vehicle delay for the worst-case movement.
The indicated delay for U-Turn yield control represents the average vehicle delay for the U-Turn movement.

Modified access refers to left-turns prohibited from side street turn movements. The left-turn maneuver is achieved by a right-turn from the side street, followed by a mid-block U-turn at a median break just west of the intersection.

As shown above in Table 13, modified access under the Interim Year scenario reduces delay for the side street, but does add additional delay due to the U-turn movement. For Interim Year conditions, the modified access scenario adds approximately 3.1 seconds to 5.9 seconds of additional delay for vehicles making the right-turn/U-turn movement in comparison to the full access scenario, as shown in the following example:

PM Peak Hour Delay at Isabella with Full Access = 12.2 seconds/vehicle

PM Peak Hour Delay at Isabella with Modified Access = 9.6 sec/veh (right-turn) + 8.5 sec/veh (U-turn) = 18.1 sec/veh

Net increase in Delay with Modified Access = 18.1 sec/veh – 12.2 sec/veh = 5.9 sec/veh

However, for Long-Range Buildout conditions, the modified access scenario significantly reduces delay for the left-turn volume. As shown above in Table 14, with full access, left-turns from the side-

streets would experience delay that would be as much as 8 minutes (i.e., 476.4 seconds for Isabella Street) on average. By providing the modified access, right-turns would be delayed by a maximum of 19.6 seconds on average, and the combination of right-turns/U-turns would be delayed by a maximum of 28.4 seconds, on average, which is effectively equivalent to a LOS of C (based on signal control).

BICYCLES AND PEDESTRIANS

The project segment is depicted in the City of Santa Clarita Non-Motorized Transportation Plan (October 2007) as including a Class I bike path, which is planned to be located along the south side of the roadway. The Class I bike path will provide a link to the existing Class I bike path along the west side of Golden Valley Road as well as the planned future Class I bike path along the future extension of Via Princessa west of Golden Valley Road. The project's Class I bike path will improve access to the City's existing and planned bicycle network for the residents in the project vicinity and provides a new travel option for east-west bicycle trips.

The project provides sidewalks along both the north and south sides of the roadway and will connect to the existing sidewalks at the current terminus of Via Princessa. The project also closes an existing gap of sidewalk on the south side of Via Princessa between Sheldon Avenue and Rainbow Glen Drive, which results in a continuous section of sidewalk between Rainbow Glen Drive and Golden Valley Road. At the point where the project intersects with Golden Valley Road, there currently are no sidewalks on the east or west side of Golden Valley Road and, as such, pedestrian connectivity to the north and south will initially be limited. However, sidewalks are planned as part of a future widening of Golden Valley Road as well as the future extension of Via Princessa west of Golden Valley Road, resulting in complete pedestrian connectivity in all four directions.

TRAFFIC CALMING

The previous section on Future Traffic Volumes (see Page 13) includes a discussion on the effect of the project on the roadways serving the residential neighborhoods in the vicinity of the project site (e.g., Rainbow Glen Drive, Isabella Parkway, and Via Princessa). The analysis shows that changes in traffic patterns due to the project result in a net change in traffic volume to these three existing roadway segments. In some cases, increases to one direction of travel, or to one intersection turning movement, are somewhat offset by decreases in the opposing direction.

Traffic volumes on Rainbow Glen Drive (north of Via Princessa) are shown to decrease by approximately 1,000 ADT due to the proposed project. During the peak hour, volumes on Rainbow Glen Drive (north of Via Princessa) are shown to have a net increase of 20 vph during the AM peak hour, and a net decrease of 16 vph during the PM peak hour.

Traffic volumes on Via Princessa (east of Rainbow Glen Drive) are shown to increase by approximately 2,000 ADT due to the proposed project. During the peak hour, volumes on Via Princessa (east of Rainbow Glen Drive) are shown to have a net increase of 240 vph during the AM peak hour, and a net increase of 183 vph during the PM peak hour. Traffic volumes on Isabella Parkway (north of Via Princessa) have been estimated to vary from an increase of 12 vph during the AM peak hour to an increase of 3 vph during PM peak hour.

The effect of the Via Princessa extension on the roadways noted above was determined using the City's traffic demand model, which due to the level of detail provided by the zone structure and network coding, has certain limitations that affect the level of change that can be discerned on the roadway network. As such, a quantification of the change in traffic volumes at the local street level (including Isabella Parkway) is beyond the capabilities of the model. What the results of the model do indicate, is that the effect of the project on the existing roadway segments discussed above is not anticipated to be significant enough to cause the need for traffic calming measures for those streets. However, with the roadway extension in place and after the resulting new traffic patterns have been established, these existing roadway segments should be reevaluated and traffic calming measures investigated, if necessary.

CONCLUSIONS

The impact analysis for the proposed project has identified project impacts under both Interim Year and Long-Range Buildout Conditions. Mitigation has been identified for each impact that reduces the project impact to less than significant. Following is a summary of these impacts and the mitigations.

Roadway Segments

Under Interim Year (approximately 10 to 15 years from the present) conditions, the proposed project has a measurable impact on two roadways, Golden Valley Road and Sierra Highway, that are forecast to exceed their acceptable LOS for daily traffic volumes. The specific impacted segments are as follows:

- Golden Valley Road: between Centre Pointe Parkway and Via Princessa
- Golden Valley Road: between Via Princessa and Sierra highway
- Sierra Highway: between Golden Valley Road and Placerita Canyon Road

Each of the above roadways are forecast to operate at LOS F based on total daily traffic volumes given the roadway's existing four-lane configuration. In each case, LOS F conditions are forecast with or without the proposed project; however the proposed project is forecast to worsen conditions by increasing daily traffic volumes by approximately 1,000 ADT. Roadway modifications to address the forecast deficiency consist of upgrading each roadway to its planned six-lane configuration, as identified in the City's General Plan Circulation Element. Table 15 summarizes the traffic volumes and LOS for each segment, with and without the project, and with the future roadway modifications.

Table 15: ADT V/C and LOS – Interim Year with Future Roadway Configuration

	Interim Year with Existing Roadway Lanes							Interim Year with Project with Future Lanes		
	Exist.	Without Project			With Project					
Segment	Lanes	Volume	V/C	LOS	Volume	V/C	LOS	Lanes	V/C	LOS
Golden Valley s/o Centre Pointe	4	46,000	1.28	F	47,000	1.31	F	6	.87	D
Golden Valley s/o Via Princessa	4	46,000	1.28	F	47,000	1.31	F	6	.87	D
Sierra Hwy s/o Golden Valley	4	41,000	1.14	F	42,000	1.17	F	6	.78	C

4-Lane Roadway Capacity = 36,000 ADT
6-Lane Roadway Capacity = 54,000 ADT

See Table 1 for capacity and LOS criteria.

As shown in the above table, upgrading each impacted roadway segment to its planned six-lane configuration, as identified in the City's General Plan Circulation Element, effectively mitigates the impacts of the proposed project.

Under Long-Range Buildout conditions, the following roadway segment has been identified as exceeding the capacity of the roadway based on the roadway's General Plan Circulation Element designation:

- Via Princessa (Future): between Magic Mountain Parkway (Future) and Golden Valley Road

As with the roadway segments identified under Interim Year conditions, this roadway segment is forecast to exceed capacity for conditions both with and without the proposed project. As such, the deficiency is not caused by the proposed project, and as this is a future roadway, the deficiency can be eliminated by constructing that segment with additional capacity, such as with additional through lanes or augmented intersection capacity.

For consistency with the City's General Plan and the proposed One Valley One Vision update to the General Plan, the section of Via Princessa between Golden Valley Road and May Way has been evaluated under Long-Range Buildout conditions as a six-lane major highway. The analysis shows that the project segment is forecast to operate at LOS A for Long-Range Buildout conditions based on the roadway's General Plan designation as a six-lane major highway. However, the LOS summary also shows that the project segment would operate at LOS C under Long-Range Buildout conditions as a four-lane roadway.

Intersections

Under Interim Year (approximately 10 to 15 years from the present) conditions, the proposed project has a measurable impact at two project area intersections. The specific impacted intersections are as follows:

- Rainbow Glen Drive at Via Princessa
- Gregory Lane at Via Princessa

At the Rainbow Glen Drive/Via Princessa intersection, a traffic signal becomes warranted given the additional traffic added to the intersection due to the proposed project. Installation of a traffic signal mitigates the impact of the additional traffic at this location. In addition, a traffic signal is warranted at the new intersection of Via Princessa and Golden Valley Road.

At the Gregory Lane/Via Princessa intersection, side street delay increases to LOS E conditions given the additional through traffic added to the intersection due to the proposed project. While the City does not have an established threshold of significance related to side street delay, LOS E or F levels of delay would generally be considered a significant impact. As discussed in the impact analysis section above, the Gregory Lane delay is significant for vehicles attempting a left-turn from Gregory Lane to eastbound Via Princessa. This delay can be avoided by substituting a right-turn onto Via Princessa, followed by a U-turn at the traffic signal recommended to be installed at the Rainbow Glen/Via Princessa

intersection. The cumulative delay of the right-turn movement and the subsequent U-turn movement is a total of 32.8 seconds of delay (12.3 seconds plus 20.5 seconds) under Interim Year conditions, and a total of 26.2 seconds of delay (10.8 seconds plus 15.4 seconds) under Long-range Buildout conditions, each of which is effectively equivalent to a LOS of C (based on signal control). As such, the installation of a traffic signal at the Rainbow Glen/Via Princessa intersection will mitigate the side street delay impact for Gregory Lane. In addition, a second alternative to the Gregory Lane left-turn movement consists of utilizing Gilbert Drive to access Rainbow Glen Drive to Via Princessa, and is primarily convenient for the residents in the northerly portion of the neighborhood.

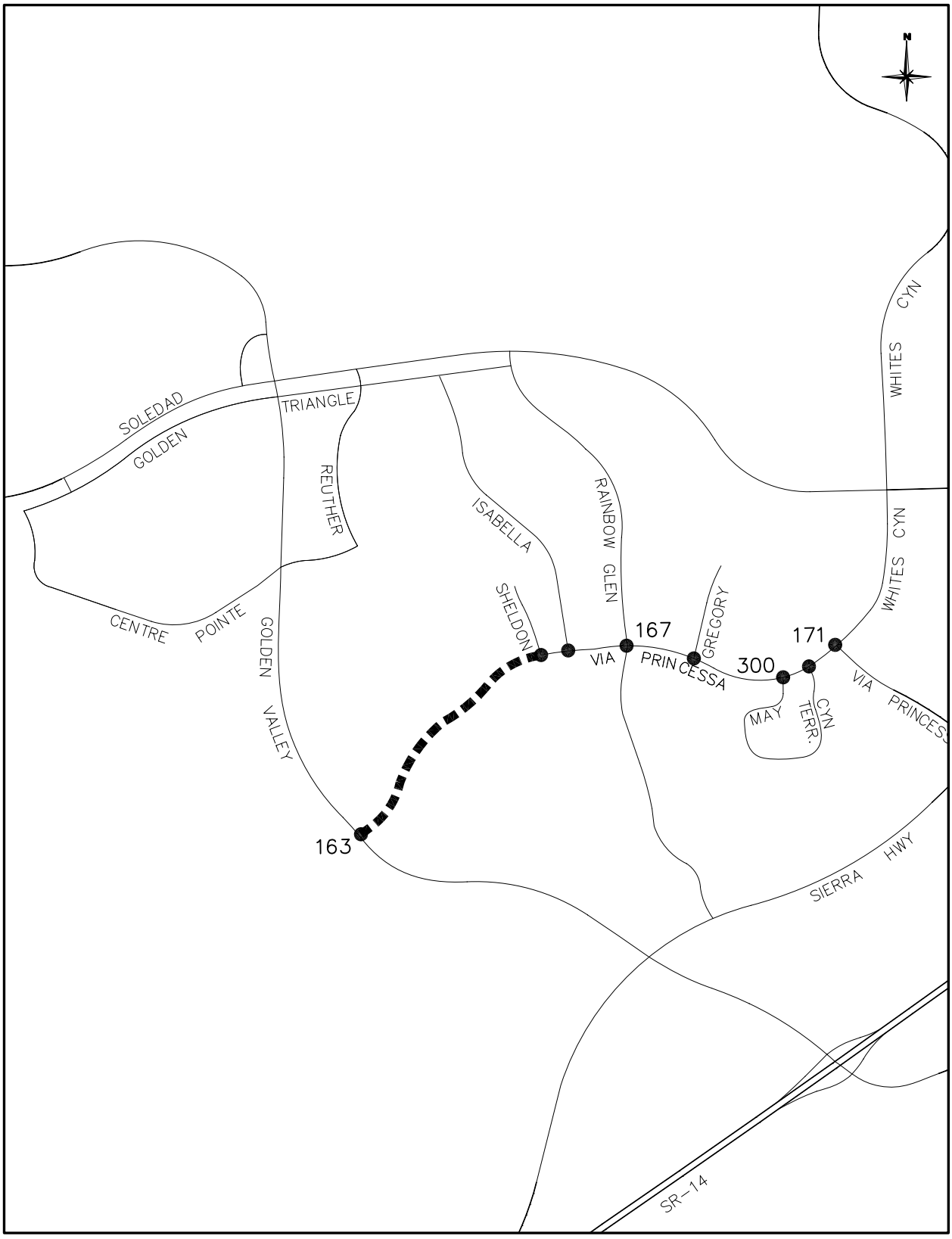
At the intersections of Sheldon Avenue/Via Princessa and Isabella Parkway/Via Princessa, side street delay increases to LOS F conditions given the additional through traffic added to the intersections due to the proposed project under Long-range Buildout conditions. A modified access scenario has been evaluated for these two intersections that is based on prohibiting left-turns from the side street to eastbound Via Princessa. In conjunction with the left-turn prohibition, mid-block U-turn pockets would be provided just west of the intersections to allow access to eastbound Via Princessa. By providing the modified access, right-turns would be delayed by a maximum of 19.6 seconds on average, and the combination of right-turns/U-turns would be delayed by a maximum of 28.4 seconds, on average, which is effectively equivalent to a LOS of C (based on signal control), which effectively mitigates the impacts to side street delay at these two intersections.

Neighborhood Traffic Calming

The traffic volume forecasts produced by the City's traffic demand model indicate that traffic volumes on the existing local roadways are not anticipated to increase due to the proposed project by an amount that would result in the need for traffic calming measures to be implemented. However, with the roadway extension in place and after the resulting new traffic patterns have been established, Rainbow Glen Drive and Isabella Parkway should be reevaluated for the purpose of determining if traffic calming measures are needed.

APPENDIX A

ICU WORKSHEETS



Legend

- Intersection Location
- xxx Signal (Exist and Future)
- Project Location

Figure A-1

INTERSECTION LOCATION MAP

163. Golden Valley & Via Princessa

INTERIM YEAR WITH PROJECT

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3500	2320	.66*	1500	.43
NBR	1	1750	70	.04	110	.06
SBL	2	3500	80	.02*	220	.06
SBT	2	3500	900	.26	2280	.65*
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3500	190	.05*	90	.03*
WBT	0	0	0		0	
WBR	1	1750	230	.13	100	.06
Right Turn Adjustment			WBR	.06*		
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.89**		**.78**

LONG RANGE BUILDOUT

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3500	550	.16	770	.22*
NBT	3	5250	1300	.25*	870	.17
NBR	1	1750	40	.02	60	.03
SBL	2	3500	100	.03*	510	.15
SBT	3	5250	320	.06	920	.18*
SBR	1	1750	590	.34	540	.31
EBL	2	3500	500	.14*	320	.09
EBT	3	5250	410	.08	1130	.22*
EBR	2	3500	590	.17	1240	.35
WBL	2	3500	140	.04	50	.01*
WBT	3	5250	1310	.25*	550	.10
WBR	1	1750	200	.11	100	.06
Right Turn Adjustment			SBR	.11*	SBR	.03*
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.88**		**.76**

167. Rainbow Glen & Via Princessa

EXISTING CONDITIONS (2010)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1750	1	.00	1	.00
NBT	1	1750	44	.05*	17	.02*
NBR	0	0	42		24	
SBL	1	1750	249	.14*	287	.16*
SBT	1	1750	16	.01	23	.02
SBR	0	0	10		10	
EBL	1	1750	12	.01*	6	.00
EBT	2	3500	114	.03	82	.02
EBR	0	0	3		4	
WBL	1	1750	23	.01	46	.03
WBT	1	1750	92	.05*	111	.06*
WBR	1	1750	286	.16	242	.14
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.35**		**.34**

INTERIM YEAR NO BUILD

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1750	1	.00	1	.00
NBT	1	1750	44	.05*	17	.02*
NBR	0	0	42		24	
SBL	1	1750	450	.26*	380	.22*
SBT	1	1750	16	.01	23	.02
SBR	0	0	10		10	
EBL	1	1750	12	.01*	6	.00
EBT	2	3500	114	.03	82	.02
EBR	0	0	3		4	
WBL	1	1750	23	.01	46	.03
WBT	1	1750	92	.05*	111	.06*
WBR	1	1750	376	.21	403	.23
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.47**		**.40**

INTERIM YEAR WITH PROJECT

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1750	30	.02	12	.01
NBT	1	1750	32	.03*	14	.02*
NBR	0	0	25		16	
SBL	1	1750	361	.21*	312	.18*
SBT	1	1750	15	.09	14	.04
SBR	0	0	144		60	
EBL	1	1750	32	.02*	91	.05*
EBT	2	3500	171	.05	346	.11
EBR	0	0	12		27	
WBL	1	1750	15	.01	32	.02
WBT	2	3500	421	.22*	191	.11*
WBR	0	0	344		332	.19
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.58**		**.46**

LONG RANGE BUILDOUT

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1750	60	.03*	30	.02*
NBT	1	1750	10	.02	10	.02
NBR	0	0	30		20	
SBL	1.5		190	.11	310	
SBT	0.5	3500	10	.15*	10	.13*
SBR	0		250		120	
EBL	1	1750	100	.06*	220	.13
EBT	2	3500	500	.15	1480	.44*
EBR	0	0	20		50	
WBL	1	1750	30	.02	50	.03*
WBT	2	3500	1400	.42*	590	.25
WBR	0	0	70		280	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.76**		**.72**

171. Whites Cyn & Via Princessa

EXISTING CONDITIONS (2010)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3500	123	.04*	84	.02*
NBR	f		456		438	
SBL	2	3500	1018	.29*	785	.22*
SBT	2	3500	231	.07	151	.04
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3500	549	.16*	433	.12*
WBT	0	0	0		0	
WBR	f		667		1404	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.59**		**.46**

INTERIM YEAR NO BUILD

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3500	130	.04*	100	.03*
NBR	f		650		515	
SBL	2	3500	1030	.29*	860	.25*
SBT	2	3500	240	.07	170	.05
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3500	630	.18*	575	.16*
WBT	0	0	0		0	
WBR	f		680		1480	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.61**		**.54**

INTERIM YEAR WITH PROJECT

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3500	150	.04*	210	.06*
NBR	f		580		580	
SBL	2	3500	970	.28*	850	.24*
SBT	2	3500	420	.12	210	.06
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3500	730	.21*	520	.15*
WBT	0	0	0		0	
WBR	f		640		1470	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.63**		**.55**

LONG RANGE BUILDOUT

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3500	320	.09*	610	.17*
NBR	f		530		1190	
SBL	2	3500	1360	.39*	1160	.33*
SBT	2	3500	900	.26	510	.15
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3500	890	.25*	560	.16*
WBT	0	0	0		0	
WBR	f		650		1500	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.83**		**.76**

300. May Way & Via Princessa

EXISTING CONDITIONS (2010)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1750	171	.10*	54	.03*
NBT	0	0	0		0	
NBR	1	1750	288	.16	111	.06
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3500	300	.15*	427	.13*
EBR	0	0	220		38	
WBL	1	1750	489	.28*	125	.07*
WBT	2	3500	291	.08	459	.13
WBR	0	0	0		0	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.63**		**.33**

INTERIM YEAR NO BUILD

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1750	171	.10*	54	.03*
NBT	0	0	0		0	
NBR	1	1750	288	.16	111	.06
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3500	501	.21*	520	.16*
EBR	0	0	220		38	
WBL	1	1750	489	.28*	125	.07*
WBT	2	3500	381	.11	620	.18
WBR	0	0	0		0	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.69**		**.36**

INTERIM YEAR WITH PROJECT

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1750	177	.10*	57	.03*
NBT	0	0	0		0	
NBR	1	1750	288	.16	110	.06
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3500	452	.19*	698	.21*
EBR	0	0	220		41	
WBL	1	1750	489	.28*	124	.07*
WBT	2	3500	661	.19	606	.17
WBR	0	0	0		0	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.67**		**.41**

LONG RANGE BUILDOUT

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1750	200	.11*	60	.03*
NBT	0	0	0		0	
NBR	1	1750	270	.15	10	.01
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3500	590	.23*	1810	.53*
EBR	0	0	220		50	
WBL	1	1750	490	.28*	120	.07*
WBT	2	3500	1330	.38	950	.27
WBR	0	0	0		0	
Clearance Interval				.10*		.10*
TOTAL CAPACITY UTILIZATION				**.72**		**.73**

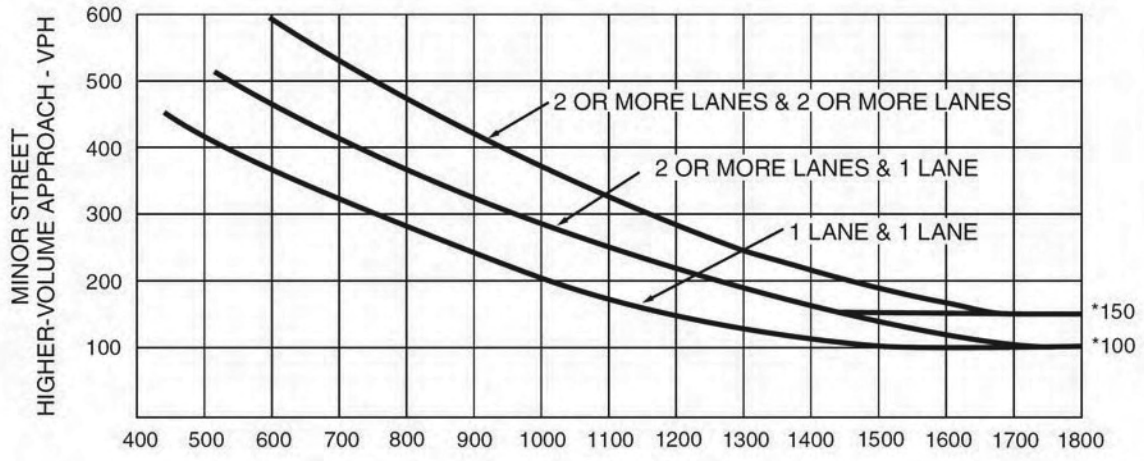
APPENDIX B

SIGNAL WARRANTS

Via Princessa Extension
Signal Warrant Verification
Interim Year Conditions - With Project

Major Street > 40 MPH				
163. Golden Valley & Via Princessa				
	Major Streets	**Minor Street A**	**Minor Street B**	**Meets Signal Warrant?**
AM Peak Hour	420	980	2,390	Yes
PM Peak Hour	190	2,500	1,610	Yes
167. Rainbow Glen & Via Princessa				
	Major Streets	**Minor Street A**	**Minor Street B**	**Meets Signal Warrant?**
AM Peak Hour	995	520	87	Yes
PM Peak Hour	1,019	386	42	Yes

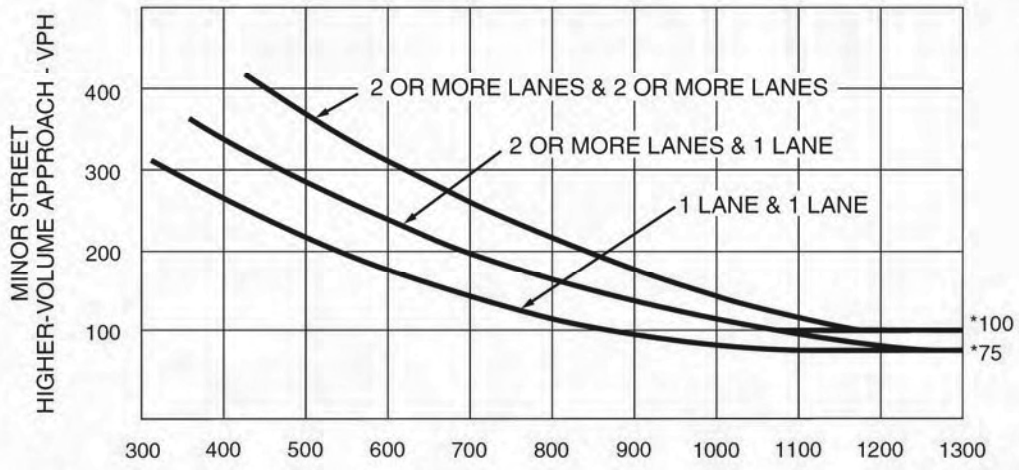
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE ~~70~~ 64 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

APPENDIX C

INTERSECTION DELAY WORKSHEETS

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	7	19	14	89	110	6
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	8	21	15	98	121	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						4
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	113				101	64
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	113				101	64
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				86	99
cM capacity (veh/h)	1476				893	1000

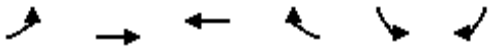
Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	8	21	113	127
Volume Left	8	0	0	121
Volume Right	0	0	98	7
cSH	1476	1700	1700	942
Volume to Capacity	0.01	0.01	0.07	0.14
Queue Length 95th (ft)	0	0	0	12
Control Delay (s)	7.5	0.0	0.0	9.6
Lane LOS	A			A
Approach Delay (s)	2.0		0.0	9.6
Approach LOS				A

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	19.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	12	114	3	23	92	286	1	44	42	249	16	10
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	13	125	3	25	101	314	1	48	46	274	18	11

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	76	66	126	314	1	95	274	29
Volume Left (vph)	13	0	25	0	1	0	274	0
Volume Right (vph)	0	3	0	314	0	46	0	11
Hadj (s)	0.12	0.00	0.13	-0.67	0.53	-0.31	0.53	-0.24
Departure Headway (s)	6.4	6.3	6.1	5.3	7.0	6.2	6.6	5.9
Degree Utilization, x	0.14	0.12	0.21	0.46	0.00	0.16	0.51	0.05
Capacity (veh/h)	522	533	565	656	476	539	519	577
Control Delay (s)	9.2	8.9	9.5	11.5	8.8	9.1	15.0	8.0
Approach Delay (s)	9.1		10.9		9.1		14.4	
Approach LOS	A		B		A		B	

Intersection Summary				
Delay	11.5			
HCM Level of Service	B			
Intersection Capacity Utilization	39.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	6	399	390	72	121	11
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	6	429	419	77	130	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1011			
pX, platoon unblocked						
vC, conflicting volume	497				685	248
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	497				685	248
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				66	98
cM capacity (veh/h)	1063				379	752

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	6	215	215	280	217	142
Volume Left	6	0	0	0	0	130
Volume Right	0	0	0	0	77	12
cSH	1063	1700	1700	1700	1700	396
Volume to Capacity	0.01	0.13	0.13	0.16	0.13	0.36
Queue Length 95th (ft)	0	0	0	0	0	40
Control Delay (s)	8.4	0.0	0.0	0.0	0.0	19.1
Lane LOS	A					C
Approach Delay (s)	0.1			0.0		19.1
Approach LOS						C

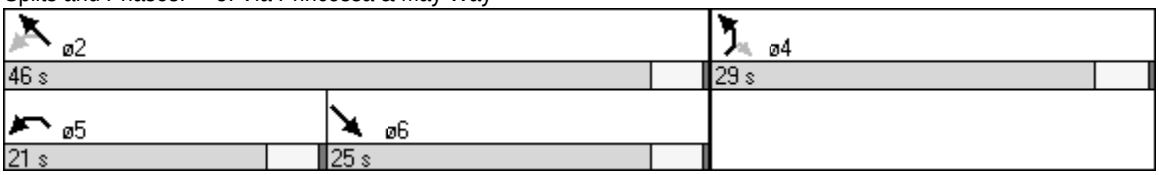
Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	27.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SET	NWL	NWT	NEL	NER
Lane Configurations					
Volume (vph)	300	489	291	171	288
Turn Type		pm+pt			Perm
Protected Phases	6	5	2	4	
Permitted Phases		2			4
Detector Phase	6	5	2	4	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	25.0	8.0	20.0	29.0	29.0
Total Split (s)	25.0	21.0	46.0	29.0	29.0
Total Split (%)	33.3%	28.0%	61.3%	38.7%	38.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	None	None	None	None	None
Act Effct Green (s)	15.0	37.4	37.4	17.1	17.1
Actuated g/C Ratio	0.24	0.59	0.59	0.27	0.27
v/c Ratio	0.59	0.84	0.15	0.39	0.48
Control Delay	14.8	30.1	7.2	21.3	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	14.8	30.1	7.2	21.3	5.2
LOS	B	C	A	C	A
Approach Delay	14.8		21.5	11.2	
Approach LOS	B		C	B	

Intersection Summary

Cycle Length: 75
Actuated Cycle Length: 63
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 16.8
Intersection LOS: B
Intersection Capacity Utilization 61.9%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 5: Via Princessa & May Way



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	545	43	0	780	0	34
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	592	47	0	848	0	37
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	505			622		
pX, platoon unblocked						
vC, conflicting volume			639		1040	320
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			639		1040	320
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	95
cM capacity (veh/h)			941		226	676

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	395	244	424	424	37
Volume Left	0	0	0	0	0
Volume Right	0	47	0	0	37
cSH	1700	1700	1700	1700	676
Volume to Capacity	0.23	0.14	0.25	0.25	0.05
Queue Length 95th (ft)	0	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	10.6
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.6
Approach LOS					B

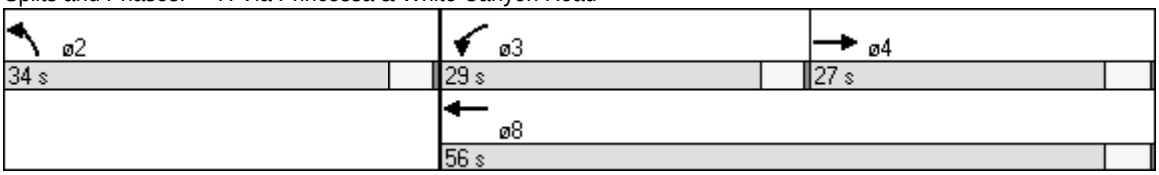
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	123	456	1018	231	549	667
Turn Type		Free	Prot			Free
Protected Phases	4		3	8	2	
Permitted Phases		Free				Free
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	27.0		8.0	20.0	34.0	
Total Split (s)	27.0	0.0	29.0	56.0	34.0	0.0
Total Split (%)	30.0%	0.0%	32.2%	62.2%	37.8%	0.0%
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	
Act Effct Green (s)	12.3	68.4	26.9	40.4	19.4	68.4
Actuated g/C Ratio	0.17	1.00	0.39	0.59	0.28	1.00
v/c Ratio	0.21	0.31	0.81	0.12	0.61	0.45
Control Delay	26.0	0.5	30.5	7.2	24.8	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	0.5	30.5	7.2	24.8	0.9
LOS	C	A	C	A	C	A
Approach Delay	5.9			26.2	11.7	
Approach LOS	A			C	B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 68.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 16.6
Intersection LOS: B
Intersection Capacity Utilization 58.1%
ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 7: Via Princessa & White Canyon Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2	20	20	102	72	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	2	22	22	115	81	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						4
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	137				107	80
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	137				107	80
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				91	99
cM capacity (veh/h)	1447				889	980

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	2	22	137	96
Volume Left	2	0	0	81
Volume Right	0	0	115	15
cSH	1447	1700	1700	1050
Volume to Capacity	0.00	0.01	0.08	0.09
Queue Length 95th (ft)	0	0	0	7
Control Delay (s)	7.5	0.0	0.0	9.3
Lane LOS	A			A
Approach Delay (s)	0.7		0.0	9.3
Approach LOS				A

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	18.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	6	82	4	46	111	242	1	17	24	287	23	10
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	7	98	5	55	132	288	1	20	29	342	27	12

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	56	54	187	288	1	49	342	39
Volume Left (vph)	7	0	55	0	1	0	342	0
Volume Right (vph)	0	5	0	288	0	29	0	12
Hadj (s)	0.10	-0.03	0.18	-0.67	0.53	-0.38	0.53	-0.18
Departure Headway (s)	6.6	6.4	6.2	5.4	7.1	6.2	6.6	5.9
Degree Utilization, x	0.10	0.10	0.32	0.43	0.00	0.08	0.63	0.06
Capacity (veh/h)	510	521	556	647	468	533	529	582
Control Delay (s)	9.1	8.9	10.9	11.1	8.9	8.6	18.8	8.1
Approach Delay (s)	9.0		11.0		8.6		17.7	
Approach LOS	A		B		A		C	

Intersection Summary				
Delay	13.2			
HCM Level of Service	B			
Intersection Capacity Utilization	44.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	6	387	383	130	78	16
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	7	445	440	149	90	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1008			
pX, platoon unblocked						
vC, conflicting volume	590				751	295
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	590				751	295
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				74	97
cM capacity (veh/h)	982				344	702

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SW 1
Volume Total	7	222	222	293	296	108
Volume Left	7	0	0	0	0	90
Volume Right	0	0	0	0	149	18
cSH	982	1700	1700	1700	1700	377
Volume to Capacity	0.01	0.13	0.13	0.17	0.17	0.29
Queue Length 95th (ft)	1	0	0	0	0	29
Control Delay (s)	8.7	0.0	0.0	0.0	0.0	18.4
Lane LOS	A					C
Approach Delay (s)	0.1			0.0		18.4
Approach LOS						C

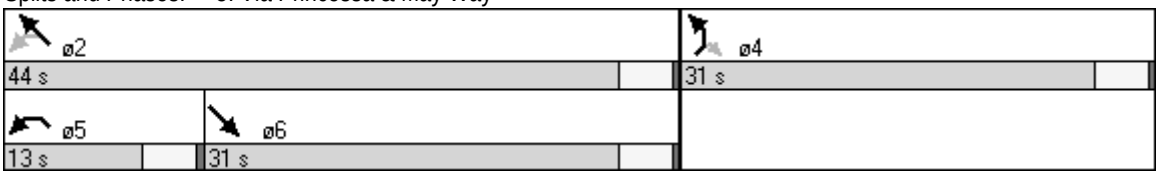
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	26.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SET	NWL	NWT	NEL	NER
Lane Configurations					
Volume (vph)	427	125	459	54	111
Turn Type		pm+pt			Perm
Protected Phases	6	5	2	4	
Permitted Phases		2			4
Detector Phase	6	5	2	4	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	25.0	8.0	20.0	29.0	29.0
Total Split (s)	31.0	13.0	44.0	31.0	31.0
Total Split (%)	41.3%	17.3%	58.7%	41.3%	41.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	None	None	None	None	None
Act Effct Green (s)	13.4	22.6	22.9	12.5	12.5
Actuated g/C Ratio	0.30	0.50	0.51	0.28	0.28
v/c Ratio	0.49	0.27	0.29	0.12	0.23
Control Delay	15.9	8.5	7.2	14.2	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	8.5	7.2	14.2	4.6
LOS	B	A	A	B	A
Approach Delay	15.9		7.4	7.7	
Approach LOS	B		A	A	

Intersection Summary

Cycle Length: 75
Actuated Cycle Length: 43.2
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 10.7
Intersection LOS: B
Intersection Capacity Utilization 33.3%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Via Princessa & May Way



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	501	37	0	584	0	21
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	539	40	0	628	0	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	505			622		
pX, platoon unblocked			0.94		0.94	0.94
vC, conflicting volume			578		873	289
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			411		725	102
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			1070		337	873

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	359	219	314	314	23
Volume Left	0	0	0	0	0
Volume Right	0	40	0	0	23
cSH	1700	1700	1700	1700	873
Volume to Capacity	0.21	0.13	0.18	0.18	0.03
Queue Length 95th (ft)	0	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	0.0	9.2
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.2
Approach LOS					A

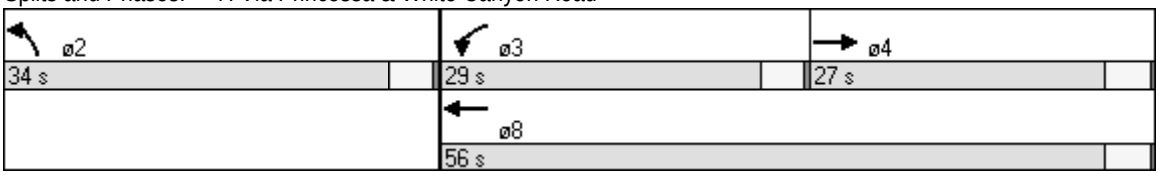
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	84	438	785	151	433	1404
Turn Type		Free	Prot			Free
Protected Phases	4		3	8	2	
Permitted Phases		Free				Free
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	27.0		8.0	20.0	34.0	
Total Split (s)	27.0	0.0	29.0	56.0	34.0	0.0
Total Split (%)	30.0%	0.0%	32.2%	62.2%	37.8%	0.0%
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	
Act Effct Green (s)	11.7	60.3	20.1	32.7	17.7	60.3
Actuated g/C Ratio	0.19	1.00	0.33	0.54	0.29	1.00
v/c Ratio	0.13	0.29	0.71	0.08	0.45	0.92
Control Delay	24.0	0.5	26.0	7.1	20.6	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.0	0.5	26.0	7.1	20.6	12.2
LOS	C	A	C	A	C	B
Approach Delay	4.3			23.0	14.2	
Approach LOS	A			C	B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 60.3
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 15.1
Intersection LOS: B
Intersection Capacity Utilization 48.1%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Via Princessa & White Canyon Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	7	19	14	89	110	6
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	8	21	15	98	121	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						4
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	113				101	64
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	113				101	64
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				86	99
cM capacity (veh/h)	1476				893	1000

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	8	21	113	127
Volume Left	8	0	0	121
Volume Right	0	0	98	7
cSH	1476	1700	1700	942
Volume to Capacity	0.01	0.01	0.07	0.14
Queue Length 95th (ft)	0	0	0	12
Control Delay (s)	7.5	0.0	0.0	9.6
Lane LOS	A			A
Approach Delay (s)	2.0		0.0	9.6
Approach LOS				A

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	19.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	12	114	3	23	92	376	1	44	42	450	16	10
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	13	125	3	25	101	413	1	48	46	495	18	11

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	76	66	126	413	1	95	495	29
Volume Left (vph)	13	0	25	0	1	0	495	0
Volume Right (vph)	0	3	0	413	0	46	0	11
Hadj (s)	0.12	0.00	0.13	-0.67	0.53	-0.31	0.53	-0.24
Departure Headway (s)	7.6	7.5	7.0	6.2	8.0	7.2	7.1	6.4
Degree Utilization, x	0.16	0.14	0.25	0.71	0.00	0.19	0.98	0.05
Capacity (veh/h)	454	462	501	564	427	475	493	544
Control Delay (s)	10.9	10.5	11.1	22.0	9.8	10.6	61.1	8.5
Approach Delay (s)	10.7		19.4		10.6		58.2	
Approach LOS	B		C		B		F	

Intersection Summary			
Delay	33.4		
HCM Level of Service	D		
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	6	600	480	72	121	11
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	6	645	516	77	130	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1014			
pX, platoon unblocked						
vC, conflicting volume	594				890	297
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	594				890	297
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				54	98
cM capacity (veh/h)	979				280	699

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	6	323	323	344	249	142
Volume Left	6	0	0	0	0	130
Volume Right	0	0	0	0	77	12
cSH	979	1700	1700	1700	1700	295
Volume to Capacity	0.01	0.19	0.19	0.20	0.15	0.48
Queue Length 95th (ft)	0	0	0	0	0	62
Control Delay (s)	8.7	0.0	0.0	0.0	0.0	28.0
Lane LOS	A					D
Approach Delay (s)	0.1			0.0		28.0
Approach LOS						D

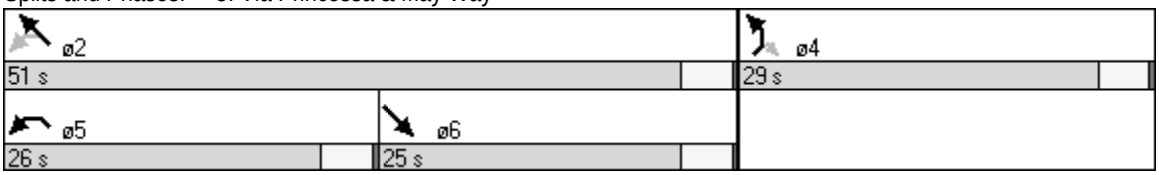
Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	30.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SET	NWL	NWT	NEL	NER
Lane Configurations					
Volume (vph)	501	489	381	171	288
Turn Type		pm+pt			Perm
Protected Phases	6	5	2	4	
Permitted Phases		2			4
Detector Phase	6	5	2	4	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	25.0	8.0	20.0	29.0	29.0
Total Split (s)	25.0	26.0	51.0	29.0	29.0
Total Split (%)	31.3%	32.5%	63.8%	36.3%	36.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	None	None	None	None	None
Act Effct Green (s)	18.7	44.5	44.5	17.6	17.6
Actuated g/C Ratio	0.27	0.63	0.63	0.25	0.25
v/c Ratio	0.83	0.83	0.19	0.42	0.50
Control Delay	31.8	29.2	6.8	25.0	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	29.2	6.8	25.0	5.8
LOS	C	C	A	C	A
Approach Delay	31.8		19.4	13.0	
Approach LOS	C		B	B	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 70.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 22.3
Intersection LOS: C
Intersection Capacity Utilization 67.5%
ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Via Princessa & May Way



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	746	43	0	870	0	34
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	811	47	0	946	0	37
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	505			622		
pX, platoon unblocked			0.85		0.85	0.85
vC, conflicting volume			858		1307	429
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			488		1015	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	96
cM capacity (veh/h)			914		200	925

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	541	317	473	473	37
Volume Left	0	0	0	0	0
Volume Right	0	47	0	0	37
cSH	1700	1700	1700	1700	925
Volume to Capacity	0.32	0.19	0.28	0.28	0.04
Queue Length 95th (ft)	0	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	0.0	9.1
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.1
Approach LOS					A

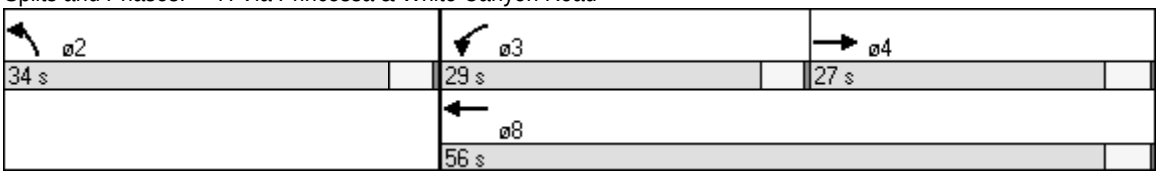
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	32.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	130	650	1030	240	630	680
Turn Type		Free	Prot			Free
Protected Phases	4		3	8	2	
Permitted Phases		Free				Free
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	27.0		8.0	20.0	34.0	
Total Split (s)	27.0	0.0	29.0	56.0	34.0	0.0
Total Split (%)	30.0%	0.0%	32.2%	62.2%	37.8%	0.0%
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	
Act Effct Green (s)	12.4	69.4	26.8	40.4	20.5	69.4
Actuated g/C Ratio	0.17	1.00	0.39	0.58	0.30	1.00
v/c Ratio	0.23	0.44	0.84	0.13	0.67	0.46
Control Delay	26.4	0.9	32.2	7.4	25.9	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	0.9	32.2	7.4	25.9	1.0
LOS	C	A	C	A	C	A
Approach Delay	5.2			27.5	13.0	
Approach LOS	A			C	B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 69.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 16.7 Intersection LOS: B
Intersection Capacity Utilization 61.0% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 7: Via Princessa & White Canyon Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2	20	20	102	72	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	2	22	22	115	81	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						4
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	137				107	80
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	137				107	80
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				91	99
cM capacity (veh/h)	1447				889	980

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	2	22	137	96
Volume Left	2	0	0	81
Volume Right	0	0	115	15
cSH	1447	1700	1700	1050
Volume to Capacity	0.00	0.01	0.08	0.09
Queue Length 95th (ft)	0	0	0	7
Control Delay (s)	7.5	0.0	0.0	9.3
Lane LOS	A			A
Approach Delay (s)	0.7		0.0	9.3
Approach LOS				A

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	18.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	6	82	4	46	111	403	1	17	24	380	23	10
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	7	98	5	55	132	480	1	20	29	452	27	12

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	56	54	187	480	1	49	452	39
Volume Left (vph)	7	0	55	0	1	0	452	0
Volume Right (vph)	0	5	0	480	0	29	0	12
Hadj (s)	0.10	-0.03	0.18	-0.67	0.53	-0.38	0.53	-0.18
Departure Headway (s)	7.4	7.3	6.7	5.9	8.0	7.1	7.1	6.4
Degree Utilization, x	0.12	0.11	0.35	0.78	0.00	0.10	0.90	0.07
Capacity (veh/h)	456	465	516	595	420	470	488	536
Control Delay (s)	10.2	10.0	12.1	25.6	9.8	9.6	44.3	8.7
Approach Delay (s)	10.1		21.8		9.6		41.4	
Approach LOS	B		C		A		E	

Intersection Summary				
Delay	27.7			
HCM Level of Service	D			
Intersection Capacity Utilization	49.4%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	6	480	544	130	78	16
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	6	516	585	140	84	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1014			
pX, platoon unblocked						
vC, conflicting volume	725				926	362
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	725				926	362
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				68	97
cM capacity (veh/h)	874				266	634

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	6	258	258	390	335	101
Volume Left	6	0	0	0	0	84
Volume Right	0	0	0	0	140	17
cSH	874	1700	1700	1700	1700	295
Volume to Capacity	0.01	0.15	0.15	0.23	0.20	0.34
Queue Length 95th (ft)	1	0	0	0	0	37
Control Delay (s)	9.2	0.0	0.0	0.0	0.0	23.4
Lane LOS	A					C
Approach Delay (s)	0.1			0.0		23.4
Approach LOS						C

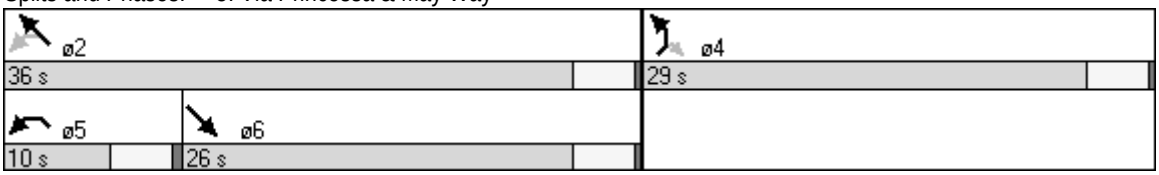
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	31.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SET	NWL	NWT	NEL	NER
Lane Configurations					
Volume (vph)	520	125	620	54	111
Turn Type		pm+pt			Perm
Protected Phases	6	5	2	4	
Permitted Phases		2			4
Detector Phase	6	5	2	4	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	25.0	8.0	20.0	29.0	29.0
Total Split (s)	26.0	10.0	36.0	29.0	29.0
Total Split (%)	40.0%	15.4%	55.4%	44.6%	44.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	None	None	None	None	None
Act Effct Green (s)	18.1	21.1	25.3	9.5	9.5
Actuated g/C Ratio	0.48	0.53	0.67	0.24	0.24
v/c Ratio	0.37	0.28	0.29	0.14	0.26
Control Delay	11.7	7.0	5.7	14.5	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.7	7.0	5.7	14.5	5.1
LOS	B	A	A	B	A
Approach Delay	11.7		5.9	8.2	
Approach LOS	B		A	A	

Intersection Summary

Cycle Length: 65
Actuated Cycle Length: 38
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.37
Intersection Signal Delay: 8.4
Intersection LOS: A
Intersection Capacity Utilization 35.8%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Via Princessa & May Way



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	594	37	0	745	0	21
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	639	40	0	801	0	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	505			622		
pX, platoon unblocked			0.92		0.92	0.92
vC, conflicting volume			678		1059	339
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			485		897	118
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			991		258	842

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	426	253	401	401	23
Volume Left	0	0	0	0	0
Volume Right	0	40	0	0	23
cSH	1700	1700	1700	1700	842
Volume to Capacity	0.25	0.15	0.24	0.24	0.03
Queue Length 95th (ft)	0	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	0.0	9.4
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.4
Approach LOS					A

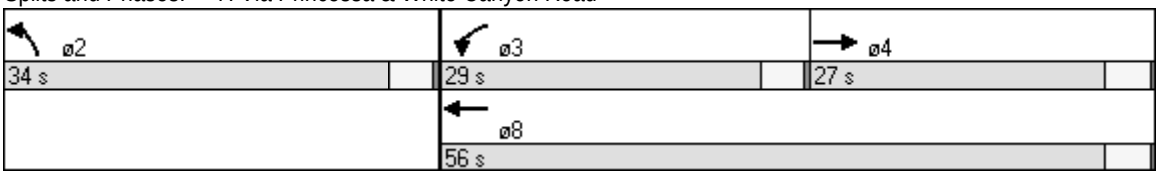
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	100	515	860	170	575	1480
Turn Type		Free	Prot			Free
Protected Phases	4		3	8	2	
Permitted Phases		Free				Free
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	27.0		8.0	20.0	34.0	
Total Split (s)	27.0	0.0	29.0	56.0	34.0	0.0
Total Split (%)	30.0%	0.0%	32.2%	62.2%	37.8%	0.0%
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	
Act Effct Green (s)	11.9	64.6	23.1	35.9	19.4	64.6
Actuated g/C Ratio	0.18	1.00	0.36	0.56	0.30	1.00
v/c Ratio	0.16	0.34	0.73	0.09	0.58	0.97
Control Delay	25.4	0.6	27.2	7.3	23.3	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	0.6	27.2	7.3	23.3	20.2
LOS	C	A	C	A	C	C
Approach Delay	4.6			23.9	21.0	
Approach LOS	A			C	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 64.6
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 19.1
Intersection LOS: B
Intersection Capacity Utilization 54.3%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Via Princessa & White Canyon Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	4	129	546	16	19	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	140	593	17	21	8
Pedestrians			19			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			2			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	611				700	305
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	611				700	305
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				94	99
cM capacity (veh/h)	964				366	691

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	4	70	70	396	215	28
Volume Left	4	0	0	0	0	21
Volume Right	0	0	0	0	17	8
cSH	964	1700	1700	1700	1700	419
Volume to Capacity	0.00	0.04	0.04	0.23	0.13	0.07
Queue Length 95th (ft)	0	0	0	0	0	5
Control Delay (s)	8.8	0.0	0.0	0.0	0.0	14.2
Lane LOS	A					B
Approach Delay (s)	0.3			0.0		14.2
Approach LOS						B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	25.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	128	520	75	87	42
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	22	141	571	82	96	46
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						4
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			676			
pX, platoon unblocked						
vC, conflicting volume	654				727	327
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	654				727	327
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				73	93
cM capacity (veh/h)	929				351	669

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	22	70	70	381	273	142
Volume Left	22	0	0	0	0	96
Volume Right	0	0	0	0	82	46
cSH	929	1700	1700	1700	1700	520
Volume to Capacity	0.02	0.04	0.04	0.22	0.16	0.27
Queue Length 95th (ft)	2	0	0	0	0	27
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	16.4
Lane LOS	A					C
Approach Delay (s)	1.2			0.0		16.4
Approach LOS						C

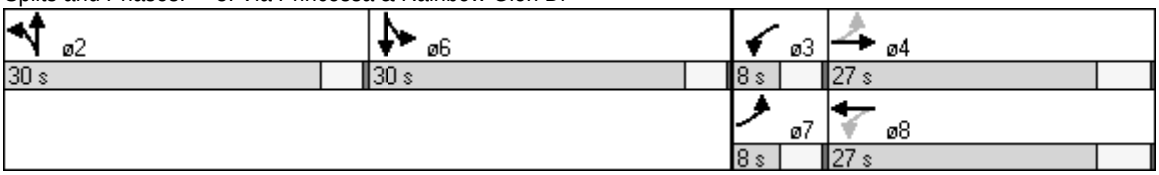
Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	28.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	32	171	15	421	30	32	361	15
Turn Type	pm+pt		pm+pt		Split		Split	
Protected Phases	7	4	3	8	2	2	6	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	25.0	8.0	25.0	30.0	30.0	30.0	30.0
Total Split (s)	8.0	27.0	8.0	27.0	30.0	30.0	30.0	30.0
Total Split (%)	8.4%	28.4%	8.4%	28.4%	31.6%	31.6%	31.6%	31.6%
Yellow Time (s)	3.5	4.5	3.5	4.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	22.6	21.4	21.9	20.0	9.5	9.5	17.1	17.1
Actuated g/C Ratio	0.33	0.34	0.31	0.32	0.15	0.15	0.27	0.27
v/c Ratio	0.17	0.17	0.04	0.71	0.12	0.22	0.65	0.58
Control Delay	19.2	18.1	18.9	21.1	27.2	19.2	30.3	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.2	18.1	18.9	21.1	27.2	19.2	30.3	22.2
LOS	B	B	B	C	C	B	C	C
Approach Delay		18.2		21.0		22.0		26.4
Approach LOS		B		C		C		C

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 63.2
Natural Cycle: 95
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 22.4 Intersection LOS: C
Intersection Capacity Utilization 55.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Via Princessa & Rainbow Glen Dr



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	6	551	765	73	121	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	6	592	823	78	130	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1143	1007			
pX, platoon unblocked	0.95				0.95	0.95
vC, conflicting volume	901				1171	451
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	796				1079	323
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				35	97
cM capacity (veh/h)	782				201	641

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	6	296	296	548	353	146
Volume Left	6	0	0	0	0	130
Volume Right	0	0	0	0	78	16
cSH	782	1700	1700	1700	1700	218
Volume to Capacity	0.01	0.17	0.17	0.32	0.21	0.67
Queue Length 95th (ft)	1	0	0	0	0	105
Control Delay (s)	9.6	0.0	0.0	0.0	0.0	50.0
Lane LOS	A					E
Approach Delay (s)	0.1			0.0		50.0
Approach LOS						E

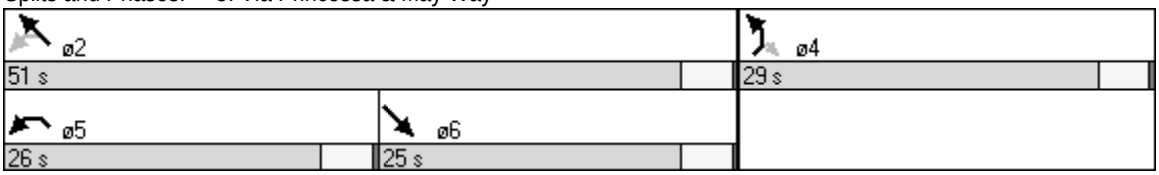
Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SET	NWL	NWT	NEL	NER
Lane Configurations					
Volume (vph)	452	489	661	177	288
Turn Type		pm+pt			Perm
Protected Phases	6	5	2	4	
Permitted Phases		2			4
Detector Phase	6	5	2	4	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	25.0	8.0	20.0	29.0	29.0
Total Split (s)	25.0	26.0	51.0	29.0	29.0
Total Split (%)	31.3%	32.5%	63.8%	36.3%	36.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	None	None	None	None	None
Act Effct Green (s)	17.9	43.7	43.7	17.6	17.6
Actuated g/C Ratio	0.26	0.63	0.63	0.25	0.25
v/c Ratio	0.79	0.82	0.33	0.44	0.50
Control Delay	28.7	28.3	7.6	25.1	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	28.3	7.6	25.1	5.7
LOS	C	C	A	C	A
Approach Delay	28.7		16.4	13.1	
Approach LOS	C		B	B	

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 69.7
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 19.4
Intersection LOS: B
Intersection Capacity Utilization 66.4%
ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Via Princessa & May Way



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	697	43	0	1150	0	33
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	758	47	0	1250	0	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	505			622		
pX, platoon unblocked			0.88		0.90	0.88
vC, conflicting volume			804		1406	402
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			516		1065	61
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	96
cM capacity (veh/h)			925		196	876

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	505	299	625	625	36
Volume Left	0	0	0	0	0
Volume Right	0	47	0	0	36
cSH	1700	1700	1700	1700	876
Volume to Capacity	0.30	0.18	0.37	0.37	0.04
Queue Length 95th (ft)	0	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	0.0	9.3
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.3
Approach LOS					A

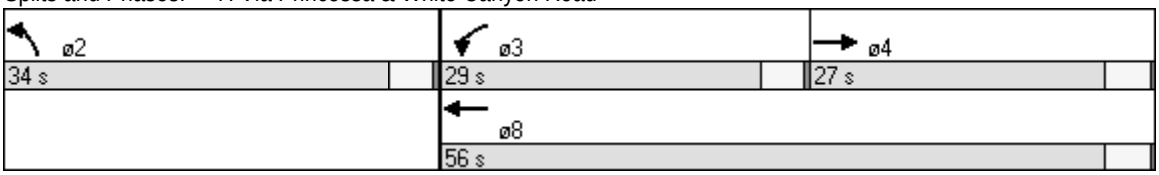
Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	150	580	970	420	730	640
Turn Type		Free	Prot			Free
Protected Phases	4		3	8	2	
Permitted Phases		Free				Free
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	27.0		8.0	20.0	34.0	
Total Split (s)	27.0	0.0	29.0	56.0	34.0	0.0
Total Split (%)	30.0%	0.0%	32.2%	62.2%	37.8%	0.0%
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	
Act Effct Green (s)	12.8	73.2	25.9	42.8	22.1	73.2
Actuated g/C Ratio	0.17	1.00	0.35	0.58	0.30	1.00
v/c Ratio	0.26	0.39	0.86	0.22	0.76	0.43
Control Delay	27.2	0.7	34.6	8.2	28.8	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	0.7	34.6	8.2	28.8	0.9
LOS	C	A	C	A	C	A
Approach Delay	6.2			26.6	15.8	
Approach LOS	A			C	B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 73.2
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 18.1 Intersection LOS: B
Intersection Capacity Utilization 62.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 7: Via Princessa & White Canyon Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	4	398	169	29	19	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	433	184	32	21	3
Pedestrians			19			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			2			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	215				443	108
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	215				443	108
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				96	100
cM capacity (veh/h)	1352				532	926

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	4	216	216	122	93	24
Volume Left	4	0	0	0	0	21
Volume Right	0	0	0	0	32	3
cSH	1352	1700	1700	1700	1700	565
Volume to Capacity	0.00	0.13	0.13	0.07	0.05	0.04
Queue Length 95th (ft)	0	0	0	0	0	3
Control Delay (s)	7.7	0.0	0.0	0.0	0.0	11.7
Lane LOS	A					B
Approach Delay (s)	0.1			0.0		11.7
Approach LOS						B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	15	402	173	90	62	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	16	442	190	99	68	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						4
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			676			
pX, platoon unblocked						
vC, conflicting volume	289				493	145
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	289				493	145
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				86	97
cM capacity (veh/h)	1270				498	877

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	16	221	221	127	162	96
Volume Left	16	0	0	0	0	68
Volume Right	0	0	0	0	99	27
cSH	1270	1700	1700	1700	1700	699
Volume to Capacity	0.01	0.13	0.13	0.07	0.10	0.14
Queue Length 95th (ft)	1	0	0	0	0	12
Control Delay (s)	7.9	0.0	0.0	0.0	0.0	12.2
Lane LOS	A					B
Approach Delay (s)	0.3			0.0		12.2
Approach LOS						B

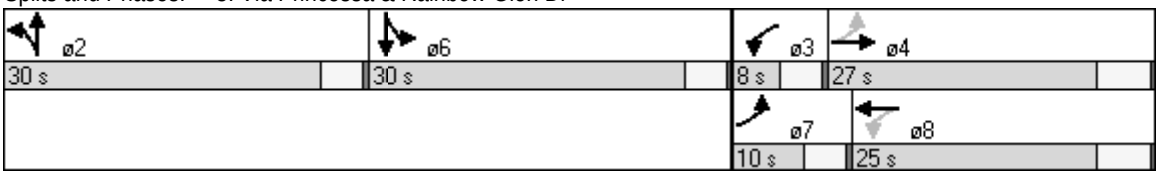
Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		

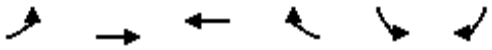
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	91	346	32	191	12	14	312	14
Turn Type	pm+pt		pm+pt		Split		Split	
Protected Phases	7	4	3	8	2	2	6	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	25.0	8.0	25.0	30.0	30.0	30.0	30.0
Total Split (s)	10.0	27.0	8.0	25.0	30.0	30.0	30.0	30.0
Total Split (%)	10.5%	28.4%	8.4%	26.3%	31.6%	31.6%	31.6%	31.6%
Yellow Time (s)	3.5	4.5	3.5	4.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	19.9	16.9	15.6	11.6	8.9	8.9	13.8	13.8
Actuated g/C Ratio	0.34	0.30	0.25	0.20	0.16	0.16	0.24	0.24
v/c Ratio	0.33	0.39	0.12	0.61	0.05	0.12	0.53	0.50
Control Delay	18.5	19.9	17.3	12.1	24.1	16.6	26.4	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	19.9	17.3	12.1	24.1	16.6	26.4	23.4
LOS	B	B	B	B	C	B	C	C
Approach Delay		19.6		12.4		18.7		24.9
Approach LOS		B		B		B		C

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 56.7
Natural Cycle: 95
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 18.2 Intersection LOS: B
Intersection Capacity Utilization 49.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Via Princessa & Rainbow Glen Dr





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	12	662	535	128	77	20
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	13	712	575	138	83	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1143	1007			
pX, platoon unblocked	1.00				1.00	1.00
vC, conflicting volume	713				1026	356
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	712				1025	356
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				64	97
cM capacity (veh/h)	883				227	640

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	13	356	356	384	329	104
Volume Left	13	0	0	0	0	83
Volume Right	0	0	0	0	138	22
cSH	883	1700	1700	1700	1700	262
Volume to Capacity	0.01	0.21	0.21	0.23	0.19	0.40
Queue Length 95th (ft)	1	0	0	0	0	45
Control Delay (s)	9.1	0.0	0.0	0.0	0.0	27.5
Lane LOS	A					D
Approach Delay (s)	0.2			0.0		27.5
Approach LOS						D

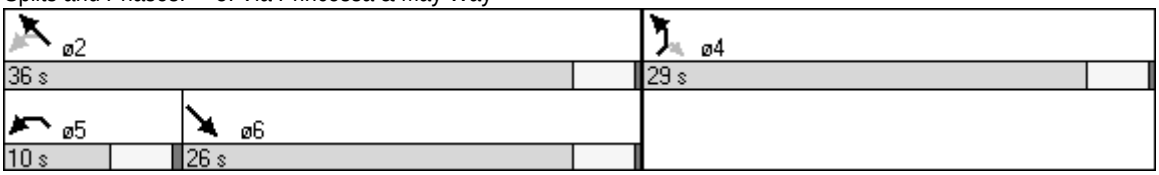
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SET	NWL	NWT	NEL	NER
Lane Configurations					
Volume (vph)	698	124	606	57	110
Turn Type		pm+pt			Perm
Protected Phases	6	5	2	4	
Permitted Phases		2			4
Detector Phase	6	5	2	4	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	25.0	8.0	20.0	29.0	29.0
Total Split (s)	26.0	10.0	36.0	29.0	29.0
Total Split (%)	40.0%	15.4%	55.4%	44.6%	44.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	None	None	None	None	None
Act Effct Green (s)	22.8	24.4	29.9	16.1	16.1
Actuated g/C Ratio	0.47	0.49	0.62	0.32	0.32
v/c Ratio	0.49	0.35	0.30	0.11	0.21
Control Delay	16.5	11.2	8.8	13.4	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.5	11.2	8.8	13.4	4.1
LOS	B	B	A	B	A
Approach Delay	16.5		9.2	7.3	
Approach LOS	B		A	A	

Intersection Summary

Cycle Length: 65
Actuated Cycle Length: 48.4
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 12.3
Intersection LOS: B
Intersection Capacity Utilization 40.8%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: Via Princessa & May Way



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	770	38	0	730	0	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	837	41	0	793	0	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	505			622		
pX, platoon unblocked			0.84		0.84	0.84
vC, conflicting volume			878		1254	439
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			469		917	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	98
cM capacity (veh/h)			913		227	909

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	558	320	397	397	22
Volume Left	0	0	0	0	0
Volume Right	0	41	0	0	22
cSH	1700	1700	1700	1700	909
Volume to Capacity	0.33	0.19	0.23	0.23	0.02
Queue Length 95th (ft)	0	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	0.0	9.1
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.1
Approach LOS					A

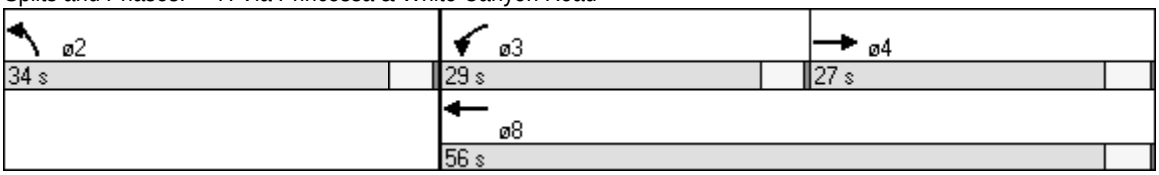
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	32.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	210	580	850	210	520	1470
Turn Type		Free	Prot			Free
Protected Phases	4		3	8	2	
Permitted Phases		Free				Free
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	27.0		8.0	20.0	34.0	
Total Split (s)	27.0	0.0	29.0	56.0	34.0	0.0
Total Split (%)	30.0%	0.0%	32.2%	62.2%	37.8%	0.0%
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	
Act Effct Green (s)	13.2	69.0	23.9	41.4	19.1	69.0
Actuated g/C Ratio	0.19	1.00	0.35	0.60	0.28	1.00
v/c Ratio	0.33	0.39	0.77	0.11	0.59	1.00
Control Delay	26.4	0.7	29.1	7.1	24.8	25.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.4	0.7	29.1	7.1	24.8	25.8
LOS	C	A	C	A	C	C
Approach Delay	7.6			24.7	25.5	
Approach LOS	A			C	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 69
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 21.6 Intersection LOS: C
Intersection Capacity Utilization 54.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: Via Princessa & White Canyon Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	4	148	546	16	0	26
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	161	593	17	0	28
Pedestrians			19			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			2			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	611				710	305
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	611				710	305
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	96
cM capacity (veh/h)	964				360	691

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	4	80	80	396	215	28
Volume Left	4	0	0	0	0	0
Volume Right	0	0	0	0	17	28
cSH	964	1700	1700	1700	1700	691
Volume to Capacity	0.00	0.05	0.05	0.23	0.13	0.04
Queue Length 95th (ft)	0	0	0	0	0	3
Control Delay (s)	8.8	0.0	0.0	0.0	0.0	10.4
Lane LOS	A					B
Approach Delay (s)	0.2			0.0		10.4
Approach LOS						B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	25.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	215	520	75	0	129
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	22	236	571	82	0	142
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			676			
pX, platoon unblocked						
vC, conflicting volume	654				775	327
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	654				775	327
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	79
cM capacity (veh/h)	929				327	669

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	22	118	118	381	273	142
Volume Left	22	0	0	0	0	0
Volume Right	0	0	0	0	82	142
cSH	929	1700	1700	1700	1700	669
Volume to Capacity	0.02	0.07	0.07	0.22	0.16	0.21
Queue Length 95th (ft)	2	0	0	0	0	20
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	11.8
Lane LOS	A					B
Approach Delay (s)	0.8			0.0		11.8
Approach LOS						B

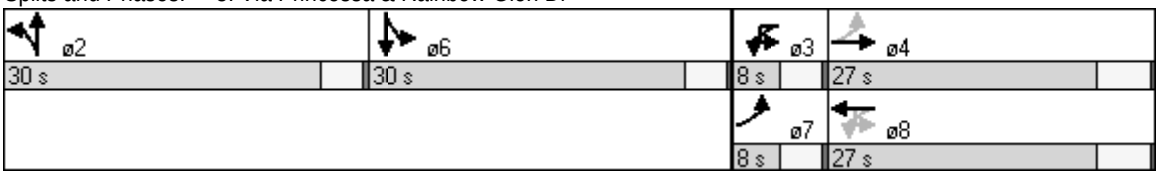
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBU	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	32	171	121	15	421	30	32	361	15
Turn Type	pm+pt		pm+pt	pm+pt		Split		Split	
Protected Phases	7	4	3	3	8	2	2	6	6
Permitted Phases	4		8	8					
Detector Phase	7	4	3	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	25.0	8.0	8.0	25.0	30.0	30.0	30.0	30.0
Total Split (s)	8.0	27.0	8.0	8.0	27.0	30.0	30.0	30.0	30.0
Total Split (%)	8.4%	28.4%	8.4%	8.4%	28.4%	31.6%	31.6%	31.6%	31.6%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	20.1	16.2		22.1	20.0	9.5	9.5	17.1	17.1
Actuated g/C Ratio	0.30	0.26		0.34	0.32	0.15	0.15	0.27	0.27
v/c Ratio	0.17	0.22		0.36	0.71	0.12	0.22	0.65	0.58
Control Delay	19.2	21.9		20.5	21.1	27.2	19.2	30.3	22.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.2	21.9		20.5	21.1	27.2	19.2	30.3	22.2
LOS	B	C		C	C	C	B	C	C
Approach Delay		21.5			21.0		22.0		26.4
Approach LOS		C			C		C		C

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 63.2
Natural Cycle: 95
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 22.7 Intersection LOS: C
Intersection Capacity Utilization 58.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Via Princessa & Rainbow Glen Dr



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	6	672	765	73	0	136
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	6	723	823	78	0	146
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1143	1017			
pX, platoon unblocked	0.95				0.95	0.95
vC, conflicting volume	901				1236	451
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	797				1149	325
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	77
cM capacity (veh/h)	782				181	640

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	6	361	361	548	353	146
Volume Left	6	0	0	0	0	0
Volume Right	0	0	0	0	78	146
cSH	782	1700	1700	1700	1700	640
Volume to Capacity	0.01	0.21	0.21	0.32	0.21	0.23
Queue Length 95th (ft)	1	0	0	0	0	22
Control Delay (s)	9.6	0.0	0.0	0.0	0.0	12.3
Lane LOS	A					B
Approach Delay (s)	0.1			0.0		12.3
Approach LOS						B

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	38.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	148	0	87	562	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	161	0	95	611	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				1072		
pX, platoon unblocked						
vC, conflicting volume			161		655	80
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			161		655	80
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	100
cM capacity (veh/h)			1416		372	963

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	80	80	95	305	305
Volume Left	0	0	95	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1416	1700	1700
Volume to Capacity	0.05	0.05	0.07	0.18	0.18
Queue Length 95th (ft)	0	0	5	0	0
Control Delay (s)	0.0	0.0	7.7	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		1.0		
Approach LOS					

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	18.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	133	0	19	553	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	145	0	21	601	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			145		486	72
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			145		486	72
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		100	100
cM capacity (veh/h)			1435		503	975

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	72	72	21	301	301
Volume Left	0	0	21	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1435	1700	1700
Volume to Capacity	0.04	0.04	0.01	0.18	0.18
Queue Length 95th (ft)	0	0	1	0	0
Control Delay (s)	0.0	0.0	7.5	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		0.3		
Approach LOS					

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	18.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	4	417	169	29	0	22
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	453	184	32	0	24
Pedestrians			19			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			2			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	215				454	108
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	215				454	108
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	97
cM capacity (veh/h)	1352				525	926

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	4	227	227	122	93	24
Volume Left	4	0	0	0	0	0
Volume Right	0	0	0	0	32	24
cSH	1352	1700	1700	1700	1700	926
Volume to Capacity	0.00	0.13	0.13	0.07	0.05	0.03
Queue Length 95th (ft)	0	0	0	0	0	2
Control Delay (s)	7.7	0.0	0.0	0.0	0.0	9.0
Lane LOS	A					A
Approach Delay (s)	0.1			0.0		9.0
Approach LOS						A

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	15.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	15	464	173	90	0	87
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	16	510	190	99	0	96
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			676			
pX, platoon unblocked						
vC, conflicting volume	289				527	145
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	289				527	145
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	89
cM capacity (veh/h)	1270				474	877

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	16	255	255	127	162	96
Volume Left	16	0	0	0	0	0
Volume Right	0	0	0	0	99	96
cSH	1270	1700	1700	1700	1700	877
Volume to Capacity	0.01	0.15	0.15	0.07	0.10	0.11
Queue Length 95th (ft)	1	0	0	0	0	9
Control Delay (s)	7.9	0.0	0.0	0.0	0.0	9.6
Lane LOS	A					A
Approach Delay (s)	0.2			0.0		9.6
Approach LOS						A

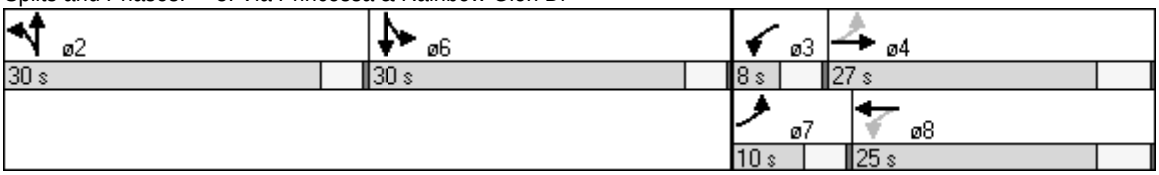
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	19.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	91	346	32	191	12	14	312	14
Turn Type	pm+pt		pm+pt		Split		Split	
Protected Phases	7	4	3	8	2	2	6	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	25.0	8.0	25.0	30.0	30.0	30.0	30.0
Total Split (s)	10.0	27.0	8.0	25.0	30.0	30.0	30.0	30.0
Total Split (%)	10.5%	28.4%	8.4%	26.3%	31.6%	31.6%	31.6%	31.6%
Yellow Time (s)	3.5	4.5	3.5	4.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	19.9	16.9	15.6	11.6	8.9	8.9	13.8	13.8
Actuated g/C Ratio	0.34	0.30	0.25	0.20	0.16	0.16	0.24	0.24
v/c Ratio	0.33	0.39	0.12	0.61	0.05	0.12	0.53	0.50
Control Delay	18.5	19.9	17.3	12.1	24.1	16.6	26.4	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	19.9	17.3	12.1	24.1	16.6	26.4	23.4
LOS	B	B	B	B	C	B	C	C
Approach Delay		19.6		12.4		18.7		24.9
Approach LOS		B		B		B		C

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 56.7
Natural Cycle: 95
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 18.2 Intersection LOS: B
Intersection Capacity Utilization 49.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Via Princessa & Rainbow Glen Dr



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	12	662	535	128	77	20
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	13	712	575	138	83	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1143	1025			
pX, platoon unblocked						
vC, conflicting volume	713				1026	356
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	713				1026	356
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				64	97
cM capacity (veh/h)	883				227	640

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SW 1
Volume Total	13	356	356	384	329	104
Volume Left	13	0	0	0	0	83
Volume Right	0	0	0	0	138	22
cSH	883	1700	1700	1700	1700	262
Volume to Capacity	0.01	0.21	0.21	0.23	0.19	0.40
Queue Length 95th (ft)	1	0	0	0	0	45
Control Delay (s)	9.1	0.0	0.0	0.0	0.0	27.5
Lane LOS	A					D
Approach Delay (s)	0.2			0.0		27.5
Approach LOS						D

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	417	0	62	198	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	453	0	67	215	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				1072		
pX, platoon unblocked						
vC, conflicting volume			453		696	227
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			453		696	227
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		100	100
cM capacity (veh/h)			1104		353	776

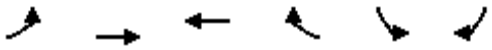
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	227	227	67	108	108
Volume Left	0	0	67	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1104	1700	1700
Volume to Capacity	0.13	0.13	0.06	0.06	0.06
Queue Length 95th (ft)	0	0	5	0	0
Control Delay (s)	0.0	0.0	8.5	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		2.0		
Approach LOS					

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	21.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	402	0	19	172	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	437	0	21	187	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			437		572	218
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			437		572	218
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		100	100
cM capacity (veh/h)			1119		442	786

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	218	218	21	93	93
Volume Left	0	0	21	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	1119	1700	1700
Volume to Capacity	0.13	0.13	0.02	0.05	0.05
Queue Length 95th (ft)	0	0	1	0	0
Control Delay (s)	0.0	0.0	8.3	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		0.8		
Approach LOS					

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	10	530	1650	20	20	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	576	1793	22	22	11
Pedestrians			19			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			2			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1815				2133	908
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1815				2133	908
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				46	96
cM capacity (veh/h)	334				40	278

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	11	288	288	1196	620	33
Volume Left	11	0	0	0	0	22
Volume Right	0	0	0	0	22	11
cSH	334	1700	1700	1700	1700	56
Volume to Capacity	0.03	0.17	0.17	0.70	0.36	0.58
Queue Length 95th (ft)	3	0	0	0	0	58
Control Delay (s)	16.1	0.0	0.0	0.0	0.0	134.2
Lane LOS	C					F
Approach Delay (s)	0.3			0.0		134.2
Approach LOS						F

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	530	1630	80	90	40
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	22	582	1791	88	99	44
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						4
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			676			
pX, platoon unblocked	0.56				0.56	0.56
vC, conflicting volume	1879				2170	940
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1003				1521	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				0	93
cM capacity (veh/h)	385				58	608

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	22	291	291	1194	685	143
Volume Left	22	0	0	0	0	99
Volume Right	0	0	0	0	88	44
cSH	385	1700	1700	1700	1700	81
Volume to Capacity	0.06	0.17	0.17	0.70	0.40	1.76
Queue Length 95th (ft)	5	0	0	0	0	304
Control Delay (s)	14.9	0.0	0.0	0.0	0.0	476.4
Lane LOS	B					F
Approach Delay (s)	0.5			0.0		476.4
Approach LOS						F

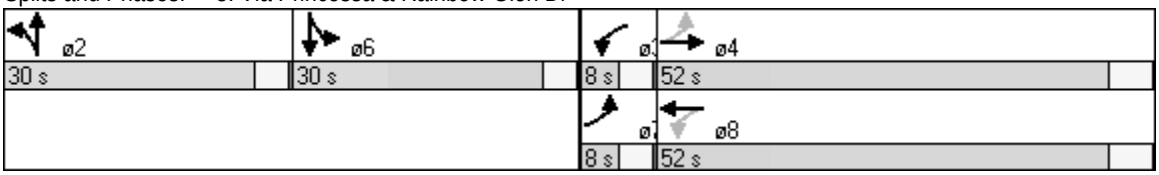
Intersection Summary			
Average Delay	26.0		
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	100	500	30	1400	60	10	190	10
Turn Type	pm+pt		pm+pt		Split		Split	
Protected Phases	7	4	3	8	2	2	6	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	25.0	8.0	25.0	30.0	30.0	30.0	30.0
Total Split (s)	8.0	52.0	8.0	52.0	30.0	30.0	30.0	30.0
Total Split (%)	6.7%	43.3%	6.7%	43.3%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.5	3.5	4.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	54.6	51.3	52.5	47.7	11.1	11.1	16.3	16.3
Actuated g/C Ratio	0.57	0.53	0.53	0.49	0.12	0.12	0.17	0.17
v/c Ratio	0.73	0.30	0.07	0.93	0.32	0.20	0.66	0.63
Control Delay	45.0	16.1	12.8	35.2	43.9	19.6	49.9	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	16.1	12.8	35.2	43.9	19.6	49.9	13.1
LOS	D	B	B	D	D	B	D	B
Approach Delay		20.7		34.7		34.2		27.0
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 96.5
Natural Cycle: 135
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 30.2 Intersection LOS: C
Intersection Capacity Utilization 77.2% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Via Princessa & Rainbow Glen Dr



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	20	700	1470	60	110	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	22	753	1581	65	118	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1143	1032			
pX, platoon unblocked	0.71				0.73	0.71
vC, conflicting volume	1645				2032	823
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1094				1390	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				0	96
cM capacity (veh/h)	450				93	771

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SW 1
Volume Total	22	376	376	1054	591	151
Volume Left	22	0	0	0	0	118
Volume Right	0	0	0	0	65	32
cSH	450	1700	1700	1700	1700	115
Volume to Capacity	0.05	0.22	0.22	0.62	0.35	1.31
Queue Length 95th (ft)	4	0	0	0	0	252
Control Delay (s)	13.4	0.0	0.0	0.0	0.0	258.7
Lane LOS	B					F
Approach Delay (s)	0.4			0.0		258.7
Approach LOS						F

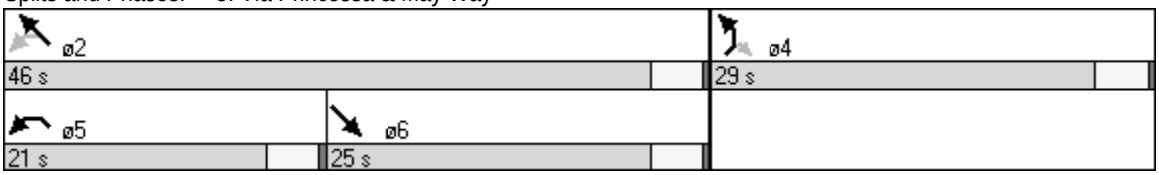
Intersection Summary			
Average Delay	15.3		
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	SET	NWL	NWT	NEL	NER
Lane Configurations					
Volume (vph)	590	490	1300	230	270
Turn Type		pm+pt			Perm
Protected Phases	6	5	2	4	
Permitted Phases		2			4
Detector Phase	6	5	2	4	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	25.0	8.0	20.0	29.0	29.0
Total Split (s)	25.0	21.0	46.0	29.0	29.0
Total Split (%)	33.3%	28.0%	61.3%	38.7%	38.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	None	None	None	None	None
Act Effct Green (s)	20.0	41.4	41.4	18.5	18.5
Actuated g/C Ratio	0.29	0.61	0.61	0.27	0.27
v/c Ratio	0.85	0.96	0.66	0.53	0.46
Control Delay	31.4	50.8	12.0	24.8	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	50.8	12.0	24.8	5.1
LOS	C	D	B	C	A
Approach Delay	31.4		22.6	14.2	
Approach LOS	C		C	B	

Intersection Summary

Cycle Length: 75
Actuated Cycle Length: 68.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 23.6
Intersection LOS: C
Intersection Capacity Utilization 73.2%
ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 5: Via Princessa & May Way



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	820	40	0	1790	0	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	891	43	0	1946	0	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	505			622		
pX, platoon unblocked			0.81		0.88	0.81
vC, conflicting volume			935		1886	467
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			463		1037	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	96
cM capacity (veh/h)			891		200	883

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	594	341	973	973	33
Volume Left	0	0	0	0	0
Volume Right	0	43	0	0	33
cSH	1700	1700	1700	1700	883
Volume to Capacity	0.35	0.20	0.57	0.57	0.04
Queue Length 95th (ft)	0	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	0.0	9.2
Lane LOS					A
Approach Delay (s)	0.0		0.0		9.2
Approach LOS					A

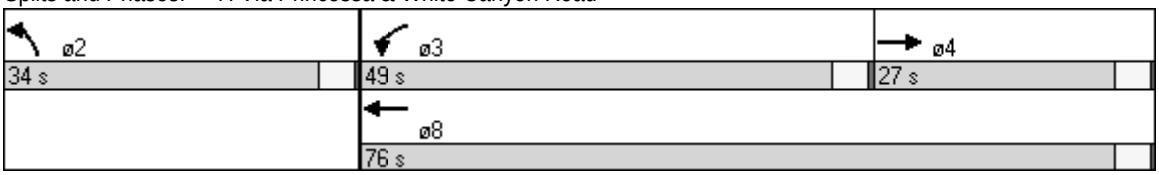
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	320	530	1360	900	890	650
Turn Type		Free	Prot			Free
Protected Phases	4		3	8	2	
Permitted Phases		Free				Free
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	27.0		8.0	20.0	34.0	
Total Split (s)	27.0	0.0	49.0	76.0	34.0	0.0
Total Split (%)	24.5%	0.0%	44.5%	69.1%	30.9%	0.0%
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	
Act Effct Green (s)	18.5	105.7	45.1	67.6	30.1	105.7
Actuated g/C Ratio	0.18	1.00	0.43	0.64	0.28	1.00
v/c Ratio	0.56	0.36	1.00	0.43	0.98	0.44
Control Delay	43.1	0.6	54.5	10.0	63.0	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.1	0.6	54.5	10.0	63.0	0.9
LOS	D	A	D	B	E	A
Approach Delay	16.6			36.8	36.8	
Approach LOS	B			D	D	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 105.7
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 33.1 Intersection LOS: C
Intersection Capacity Utilization 83.0% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 7: Via Princessa & White Canyon Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	10	1690	650	30	20	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	1837	707	33	22	11
Pedestrians			19			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			2			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	739				1682	370
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	739				1682	370
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				74	98
cM capacity (veh/h)	863				83	628

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	11	918	918	471	268	33
Volume Left	11	0	0	0	0	22
Volume Right	0	0	0	0	33	11
cSH	863	1700	1700	1700	1700	117
Volume to Capacity	0.01	0.54	0.54	0.28	0.16	0.28
Queue Length 95th (ft)	1	0	0	0	0	26
Control Delay (s)	9.2	0.0	0.0	0.0	0.0	47.4
Lane LOS	A					E
Approach Delay (s)	0.1			0.0		47.4
Approach LOS						E

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	1690	650	90	60	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	22	1857	714	99	66	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						4
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			676			
pX, platoon unblocked	0.84				0.84	0.84
vC, conflicting volume	813				1736	407
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	391				1492	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				29	96
cM capacity (veh/h)	976				94	909

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	22	929	929	476	337	99
Volume Left	22	0	0	0	0	66
Volume Right	0	0	0	0	99	33
cSH	976	1700	1700	1700	1700	140
Volume to Capacity	0.02	0.55	0.55	0.28	0.20	0.71
Queue Length 95th (ft)	2	0	0	0	0	101
Control Delay (s)	8.8	0.0	0.0	0.0	0.0	73.7
Lane LOS	A					F
Approach Delay (s)	0.1			0.0		73.7
Approach LOS						F

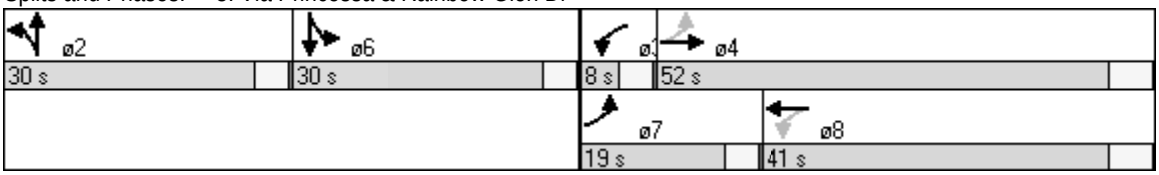
Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	220	1480	50	590	30	10	310	10
Turn Type	pm+pt		pm+pt		Split		Split	
Protected Phases	7	4	3	8	2	2	6	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	25.0	8.0	25.0	30.0	30.0	30.0	30.0
Total Split (s)	19.0	52.0	8.0	41.0	30.0	30.0	30.0	30.0
Total Split (%)	15.8%	43.3%	6.7%	34.2%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.5	3.5	4.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	55.2	48.0	42.6	37.7	10.0	10.0	18.8	18.8
Actuated g/C Ratio	0.57	0.50	0.44	0.39	0.10	0.10	0.20	0.20
v/c Ratio	0.69	0.96	0.37	0.70	0.18	0.17	0.76	0.67
Control Delay	25.9	39.4	21.3	28.5	42.5	23.0	53.1	39.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	39.4	21.3	28.5	42.5	23.0	53.1	39.3
LOS	C	D	C	C	D	C	D	D
Approach Delay		37.7		28.2		32.8		46.4
Approach LOS		D		C		C		D

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 96.2
Natural Cycle: 135
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 36.0 Intersection LOS: D
Intersection Capacity Utilization 75.8% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Via Princessa & Rainbow Glen Dr



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	20	1790	890	120	70	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	22	1925	957	129	75	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1143	1003			
pX, platoon unblocked	0.90				0.60	0.90
vC, conflicting volume	1086				2027	543
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	869				611	264
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				70	95
cM capacity (veh/h)	693				247	660

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SW 1
Volume Total	22	962	962	638	448	108
Volume Left	22	0	0	0	0	75
Volume Right	0	0	0	0	129	32
cSH	693	1700	1700	1700	1700	304
Volume to Capacity	0.03	0.57	0.57	0.38	0.26	0.35
Queue Length 95th (ft)	2	0	0	0	0	39
Control Delay (s)	10.4	0.0	0.0	0.0	0.0	23.2
Lane LOS	B					C
Approach Delay (s)	0.1			0.0		23.2
Approach LOS						C

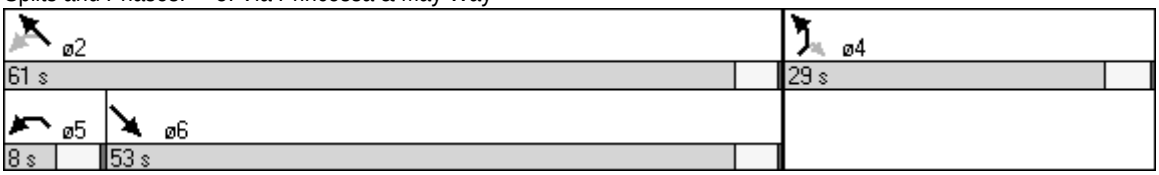
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	SET	NWL	NWT	NEL	NER
Lane Configurations					
Volume (vph)	1810	120	950	60	10
Turn Type		pm+pt			Perm
Protected Phases	6	5	2	4	
Permitted Phases		2			4
Detector Phase	6	5	2	4	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	25.0	8.0	20.0	29.0	29.0
Total Split (s)	53.0	8.0	61.0	29.0	29.0
Total Split (%)	58.9%	8.9%	67.8%	32.2%	32.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	None	None	None	None	None
Act Effct Green (s)	50.2	58.5	59.5	16.6	16.6
Actuated g/C Ratio	0.62	0.73	0.74	0.20	0.20
v/c Ratio	0.93	0.72	0.40	0.18	0.03
Control Delay	27.2	36.2	7.0	26.6	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	36.2	7.0	26.6	12.9
LOS	C	D	A	C	B
Approach Delay	27.2		10.3	24.7	
Approach LOS	C		B	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 80.6
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 21.1
Intersection LOS: C
Intersection Capacity Utilization 71.6%
ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 5: Via Princessa & May Way



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1780	40	0	1070	0	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1935	43	0	1163	0	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	505			622		
pX, platoon unblocked			0.41		0.44	0.41
vC, conflicting volume			1978		2538	989
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			527		1470	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	95
cM capacity (veh/h)			428		51	448

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	1290	688	582	582	22
Volume Left	0	0	0	0	0
Volume Right	0	43	0	0	22
cSH	1700	1700	1700	1700	448
Volume to Capacity	0.76	0.40	0.34	0.34	0.05
Queue Length 95th (ft)	0	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	13.4
Lane LOS					B
Approach Delay (s)	0.0		0.0		13.4
Approach LOS					B

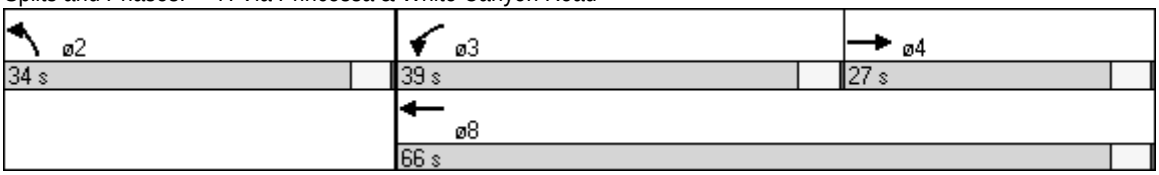
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	610	1190	1160	510	560	1500
Turn Type		Free	Prot			Free
Protected Phases	4		3	8	2	
Permitted Phases		Free				Free
Detector Phase	4		3	8	2	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	27.0		8.0	20.0	34.0	
Total Split (s)	27.0	0.0	39.0	66.0	34.0	0.0
Total Split (%)	27.0%	0.0%	39.0%	66.0%	34.0%	0.0%
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None		None	None	None	
Act Effct Green (s)	20.8	90.6	35.3	60.1	22.4	90.6
Actuated g/C Ratio	0.23	1.00	0.39	0.66	0.25	1.00
v/c Ratio	0.81	0.81	0.93	0.23	0.71	1.02
Control Delay	42.7	4.6	41.9	7.1	36.1	31.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	4.6	41.9	7.1	36.1	31.4
LOS	D	A	D	A	D	C
Approach Delay	17.5			31.3	32.6	
Approach LOS	B			C	C	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 90.6
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 27.3
Intersection LOS: C
Intersection Capacity Utilization 75.9%
ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 7: Via Princessa & White Canyon Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	10	550	1650	20	0	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	598	1793	22	0	33
Pedestrians			19			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			2			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1815				2144	908
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1815				2144	908
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				100	88
cM capacity (veh/h)	334				40	278

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	11	299	299	1196	620	33
Volume Left	11	0	0	0	0	0
Volume Right	0	0	0	0	22	33
cSH	334	1700	1700	1700	1700	278
Volume to Capacity	0.03	0.18	0.18	0.70	0.36	0.12
Queue Length 95th (ft)	3	0	0	0	0	10
Control Delay (s)	16.1	0.0	0.0	0.0	0.0	19.6
Lane LOS	C					C
Approach Delay (s)	0.3			0.0		19.6
Approach LOS						C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	620	1630	80	0	130
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	22	681	1791	88	0	143
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			676			
pX, platoon unblocked	0.55				0.55	0.55
vC, conflicting volume	1879				2220	940
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	973				1589	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				100	76
cM capacity (veh/h)	390				51	600

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	22	341	341	1194	685	143
Volume Left	22	0	0	0	0	0
Volume Right	0	0	0	0	88	143
cSH	390	1700	1700	1700	1700	600
Volume to Capacity	0.06	0.20	0.20	0.70	0.40	0.24
Queue Length 95th (ft)	4	0	0	0	0	23
Control Delay (s)	14.8	0.0	0.0	0.0	0.0	12.9
Lane LOS	B					B
Approach Delay (s)	0.5			0.0		12.9
Approach LOS						B

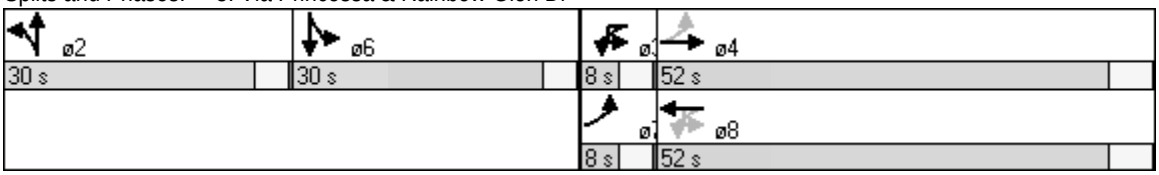
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBU	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	100	500	110	30	1400	60	10	190	10
Turn Type	pm+pt		pm+pt	pm+pt		Split		Split	
Protected Phases	7	4	3	3	8	2	2	6	6
Permitted Phases	4		8	8					
Detector Phase	7	4	3	3	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	25.0	8.0	8.0	25.0	30.0	30.0	30.0	30.0
Total Split (s)	8.0	52.0	8.0	8.0	52.0	30.0	30.0	30.0	30.0
Total Split (%)	6.7%	43.3%	6.7%	6.7%	43.3%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.5	3.5	3.5	4.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	4.0	5.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	52.8	47.7		52.8	47.7	11.1	11.1	16.3	16.3
Actuated g/C Ratio	0.55	0.49		0.55	0.49	0.12	0.12	0.17	0.17
v/c Ratio	0.72	0.33		0.34	0.93	0.32	0.20	0.66	0.63
Control Delay	42.4	17.3		15.4	35.2	43.9	19.6	49.9	13.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	17.3		15.4	35.2	43.9	19.6	49.9	13.1
LOS	D	B		B	D	D	B	D	B
Approach Delay		21.3			33.5		34.2		27.0
Approach LOS		C			C		C		C

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 96.5
Natural Cycle: 135
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 29.7 Intersection LOS: C
Intersection Capacity Utilization 77.2% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Via Princessa & Rainbow Glen Dr



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	810	1470	60	0	140
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	22	871	1581	65	0	151
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1143	1027			
pX, platoon unblocked	0.71				0.74	0.71
vC, conflicting volume	1645				2091	823
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1094				1437	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				100	80
cM capacity (veh/h)	450				87	771

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	22	435	435	1054	591	151
Volume Left	22	0	0	0	0	0
Volume Right	0	0	0	0	65	151
cSH	450	1700	1700	1700	1700	771
Volume to Capacity	0.05	0.26	0.26	0.62	0.35	0.20
Queue Length 95th (ft)	4	0	0	0	0	18
Control Delay (s)	13.4	0.0	0.0	0.0	0.0	10.8
Lane LOS	B					B
Approach Delay (s)	0.3			0.0		10.8
Approach LOS						B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	550	0	90	1670	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	598	0	98	1815	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				1072		
pX, platoon unblocked					0.58	
vC, conflicting volume			598		1701	299
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			598		771	299
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		100	100
cM capacity (veh/h)			975		176	697

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	299	299	98	908	908
Volume Left	0	0	98	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	975	1700	1700
Volume to Capacity	0.18	0.18	0.10	0.53	0.53
Queue Length 95th (ft)	0	0	8	0	0
Control Delay (s)	0.0	0.0	9.1	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		0.5		
Approach LOS					

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	540	0	20	1660	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	587	0	22	1804	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			587		1533	293
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			587		1533	293
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		100	100
cM capacity (veh/h)			984		105	703

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	293	293	22	902	902
Volume Left	0	0	22	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	984	1700	1700
Volume to Capacity	0.17	0.17	0.02	0.53	0.53
Queue Length 95th (ft)	0	0	2	0	0
Control Delay (s)	0.0	0.0	8.7	0.0	0.0
Lane LOS			A		
Approach Delay (s)	0.0		0.1		
Approach LOS					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	10	1710	650	30	0	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	1859	707	33	0	33
Pedestrians			19			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			2			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	739				1693	370
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	739				1693	370
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	95
cM capacity (veh/h)	863				82	628

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	11	929	929	471	268	33
Volume Left	11	0	0	0	0	0
Volume Right	0	0	0	0	33	33
cSH	863	1700	1700	1700	1700	628
Volume to Capacity	0.01	0.55	0.55	0.28	0.16	0.05
Queue Length 95th (ft)	1	0	0	0	0	4
Control Delay (s)	9.2	0.0	0.0	0.0	0.0	11.1
Lane LOS	A					B
Approach Delay (s)	0.1			0.0		11.1
Approach LOS						B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	1750	650	90	0	90
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	22	1923	714	99	0	99
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			676			
pX, platoon unblocked	0.84				0.84	0.84
vC, conflicting volume	813				1769	407
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	391				1531	0
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	89
cM capacity (veh/h)	976				88	909

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	22	962	962	476	337	99
Volume Left	22	0	0	0	0	0
Volume Right	0	0	0	0	99	99
cSH	976	1700	1700	1700	1700	909
Volume to Capacity	0.02	0.57	0.57	0.28	0.20	0.11
Queue Length 95th (ft)	2	0	0	0	0	9
Control Delay (s)	8.8	0.0	0.0	0.0	0.0	9.4
Lane LOS	A					A
Approach Delay (s)	0.1			0.0		9.4
Approach LOS						A

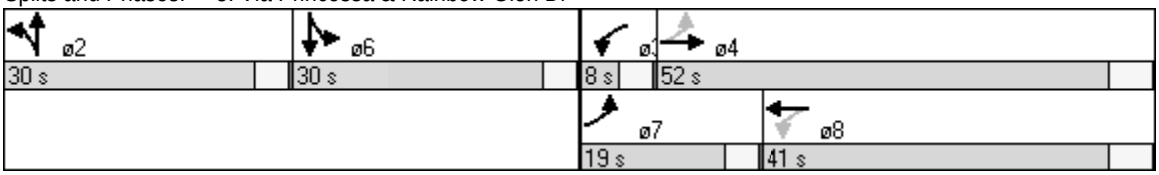
Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	220	1480	50	590	30	10	310	10
Turn Type	pm+pt		pm+pt		Split		Split	
Protected Phases	7	4	3	8	2	2	6	6
Permitted Phases	4		8					
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	25.0	8.0	25.0	30.0	30.0	30.0	30.0
Total Split (s)	19.0	52.0	8.0	41.0	30.0	30.0	30.0	30.0
Total Split (%)	15.8%	43.3%	6.7%	34.2%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.5	4.5	3.5	4.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0	4.0	5.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	55.2	48.0	42.6	37.7	10.0	10.0	18.8	18.8
Actuated g/C Ratio	0.57	0.50	0.44	0.39	0.10	0.10	0.20	0.20
v/c Ratio	0.69	0.96	0.37	0.70	0.18	0.17	0.76	0.67
Control Delay	25.9	39.4	21.3	28.5	42.5	23.0	53.1	39.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	39.4	21.3	28.5	42.5	23.0	53.1	39.3
LOS	C	D	C	C	D	C	D	D
Approach Delay		37.7		28.2		32.8		46.4
Approach LOS		D		C		C		D

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 96.2
Natural Cycle: 135
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 36.0 Intersection LOS: D
Intersection Capacity Utilization 75.8% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Via Princessa & Rainbow Glen Dr



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	20	1790	890	120	70	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	22	1925	957	129	75	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1143	1013			
pX, platoon unblocked	0.90				0.60	0.90
vC, conflicting volume	1086				2027	543
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	869				613	265
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				69	95
cM capacity (veh/h)	692				246	659

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SW 1
Volume Total	22	962	962	638	448	108
Volume Left	22	0	0	0	0	75
Volume Right	0	0	0	0	129	32
cSH	692	1700	1700	1700	1700	303
Volume to Capacity	0.03	0.57	0.57	0.38	0.26	0.35
Queue Length 95th (ft)	2	0	0	0	0	39
Control Delay (s)	10.4	0.0	0.0	0.0	0.0	23.2
Lane LOS	B					C
Approach Delay (s)	0.1			0.0		23.2
Approach LOS						C

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1710	0	60	680	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1859	0	65	739	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				1072		
pX, platoon unblocked						
vC, conflicting volume			1859		2359	929
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1859		2359	929
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			80		100	100
cM capacity (veh/h)			321		24	269

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	929	929	65	370	370
Volume Left	0	0	65	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	321	1700	1700
Volume to Capacity	0.55	0.55	0.20	0.22	0.22
Queue Length 95th (ft)	0	0	19	0	0
Control Delay (s)	0.0	0.0	19.0	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		1.5		
Approach LOS					

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1700	0	20	660	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1848	0	22	717	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1848		2250	924
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1848		2250	924
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	100
cM capacity (veh/h)			325		33	271

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	924	924	22	359	359
Volume Left	0	0	22	0	0
Volume Right	0	0	0	0	0
cSH	1700	1700	325	1700	1700
Volume to Capacity	0.54	0.54	0.07	0.21	0.21
Queue Length 95th (ft)	0	0	5	0	0
Control Delay (s)	0.0	0.0	16.9	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		0.5		
Approach LOS					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		