FINAL TRAFFIC REPORT

MARICOPA ROAD (STATE ROUTE 347): RIGGS ROAD TRAFFIC INTERCHANGE
ADOT CENTRAL DISTRICT/MARICOPA COUNTY
CONSTRUCT TRAFFIC INTERCHANGE

ADOT CONTRACT NO. 2022-004
ADOT PROJECT NO. 347 MA 184 F0476 01L
FEDERAL AID NO. NFA

Prepared For:

ARIZONA DEPARTMENT OF TRANSPORTATION
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NOVEMBER 2024

Table of Contents

List of Figures

List of Tables

List of Appendices

1. INTRODUCTION

This Final Traffic Report has been developed to support the Design Concept Report (DCR) for a grade-separated traffic interchange (TI) at the currently at-grade signalized intersection of Arizona State Route 347 (SR 347) and Riggs Road. The project is located in the Arizona Department of Transportation (ADOT) Central District and the Gila River Indian Community in Maricopa County, Arizona. The project location and vicinity maps are shown in **Figure 1.1** and **Figure 1.2**, respectively.

The purposes of this report are to document the existing safety and operational characteristics of the intersection of SR 347/Riggs Road, analyze TI design scenarios, evaluate future freeway mainline and TI operations, and provide recommendations for improvements within the project limits. The recommended improvements are designed to reduce congestion, promote safety, improve traffic operations, and enhance regional mobility.

The traffic analysis includes the evaluation of the following TI types:

- Spread Diamond Interchange (SDI)
- Single-Point Urban Interchange (SPUI)
- Diverging Diamond Interchange (DDI)
- Double Roundabout Interchange (DRI)

Additionally, SR 347 at Riggs Road is programmed to be widened to provide one additional general-purpose lane (GPL) in each direction. These additional lanes were considered in the TI evaluation.

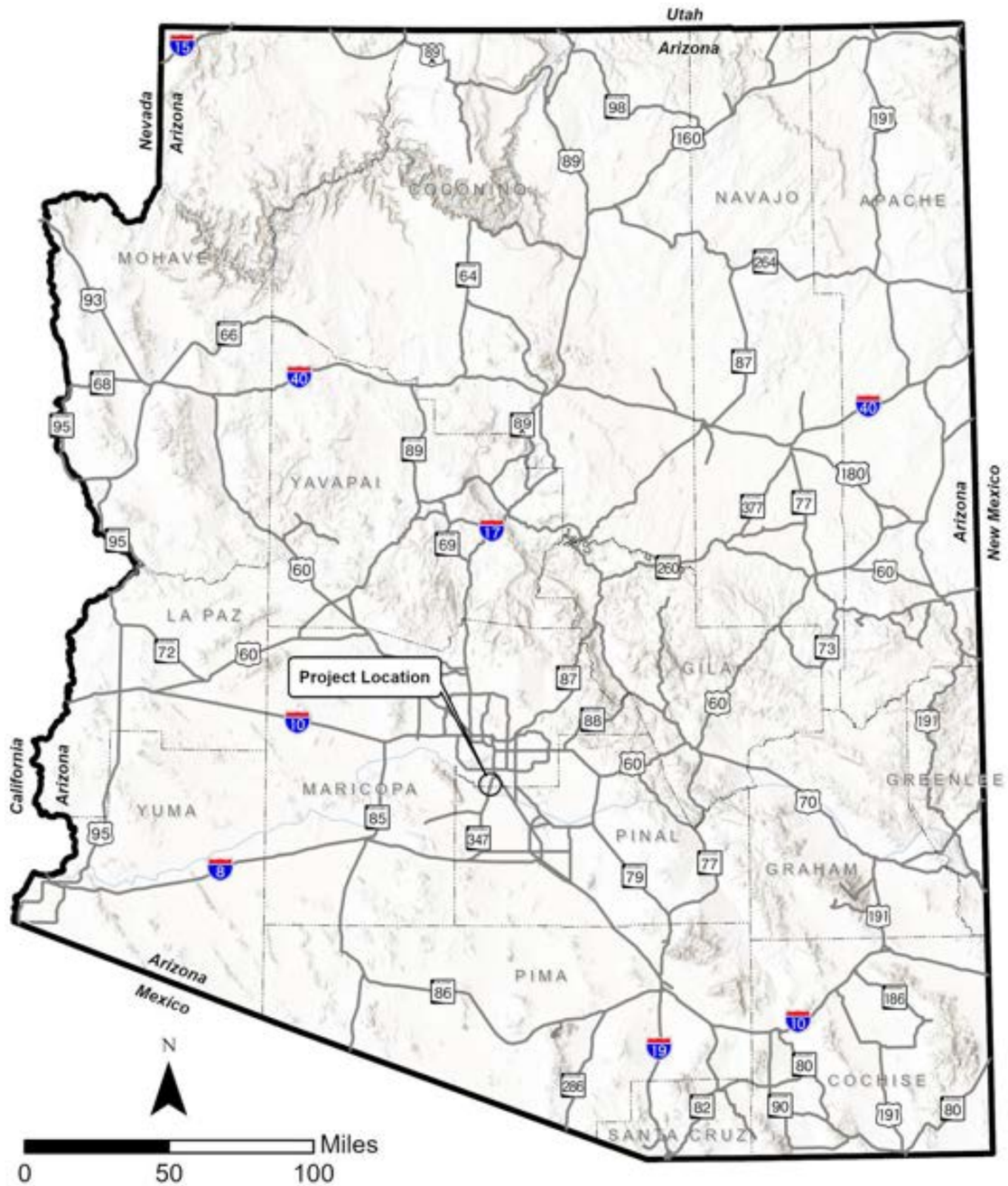


Figure 1.1 – Project Location Map

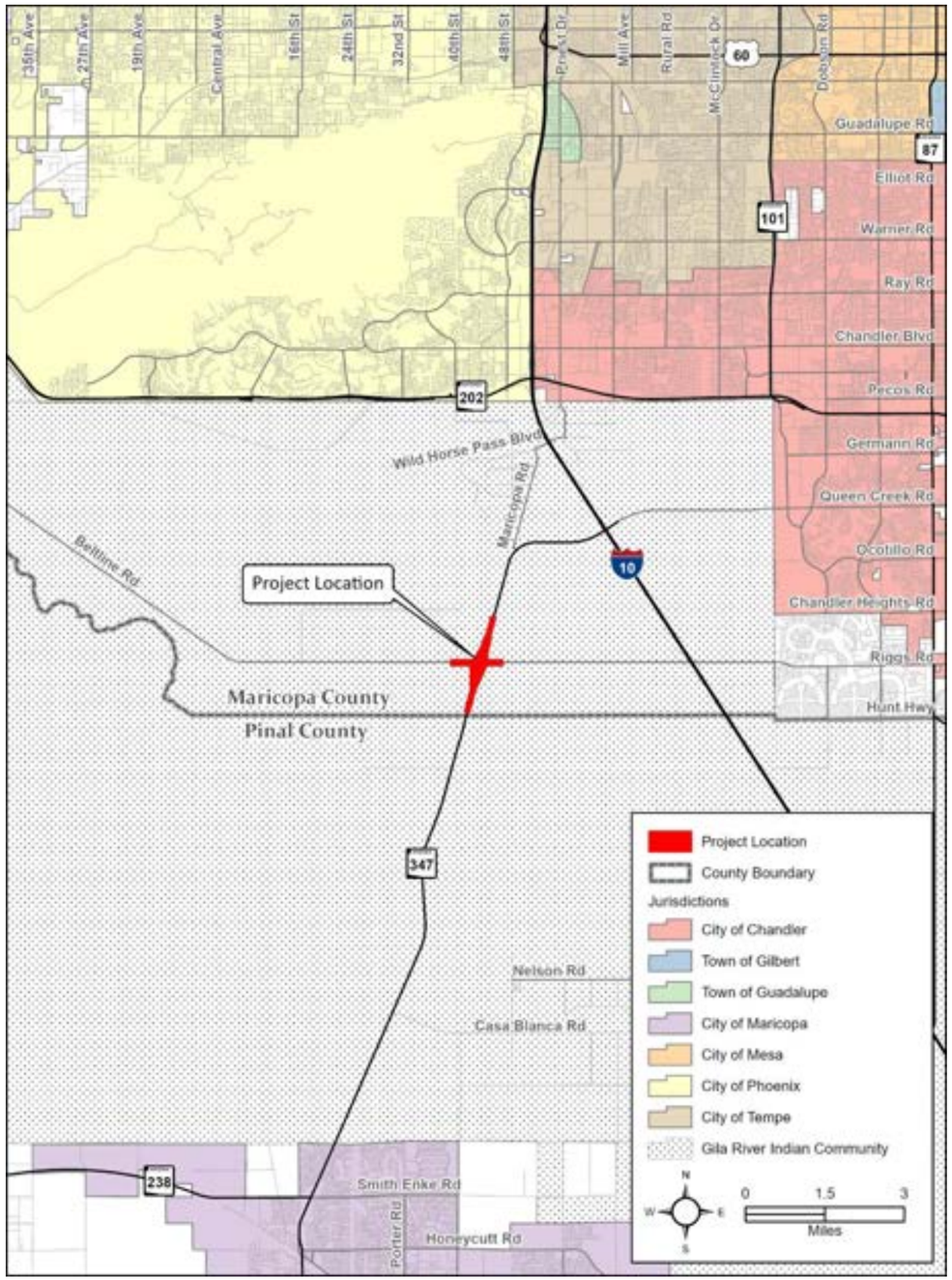


Figure 1.2 – Project Vicinity Map

2. EXISTING CONDITIONS

2.1 Existing Geometry

2.1.1 Road Segment Geometry

SR 347 (also referred to as ***Maricopa Road***, ***John Wayne Parkway***, and ***American Indian Memorial Highway*** in the vicinity of the project) runs generally north-south between SR 84 and Interstate 10 (I-10) and is approximately 29 miles long. SR 347 terminates at SR 84 to the south and I-10 to the north. SR 347 is owned, operated, and maintained by ADOT. ADOT classifies SR 347 as a "principal other arterial" roadway per the 2020 ADOT Map Book. The posted speed limit on SR 347 is 55 miles per hour (mph) within the project limits.

The existing SR 347 northbound (NB) and southbound (SB) roadway sections include two GPLs in each direction that are each 12 feet wide. An approximately 36-foot-wide unpaved median separates the NB and SB travel lanes. Inside paved shoulders are approximately 5 feet wide or less and outside paved shoulders are approximately 10 feet wide.

Riggs Road runs generally east-west in the vicinity of the site. Riggs Road connects to I-10 approximately four miles east of SR 347 and becomes Beltline Road west of SR 347. Riggs Road is owned, operated, and maintained by the Maricopa County Department of Transportation (MCDOT). MCDOT classifies Riggs Road as a "principal arterial" roadway per the MCDOT Major Streets and Routes Plan. The posted speed limit on Riggs Road is 55 mph within the project limits.

2.1.2 Intersection Geometry and Signal Phasing

The signalized intersection of SR 347/Riggs Road is approximately located at milepost (MP) 185.3 along SR 347. The NB and SB approaches to the intersection each have two through lanes, a right-turn lane, and a left-turn lane. The EB and WB approaches each have a shared through/right-turn lane and a left-turn lane. All left turns at the intersection operate with protected/permitted signal phasing. Existing signal timing sheets are included in **Appendix 1**.

The area surrounding the SR 347/Riggs Road intersection is largely undeveloped. An electrical substation is located on the northwest corner of the intersection. Revolution Industrial is located on the north side of Riggs Road approximately 1,660 feet west of SR 347 and is the only other developed area within the vicinity of the intersection.

The existing SR 347/Riggs Road intersection lane geometry is shown in **Figure 2.1**.

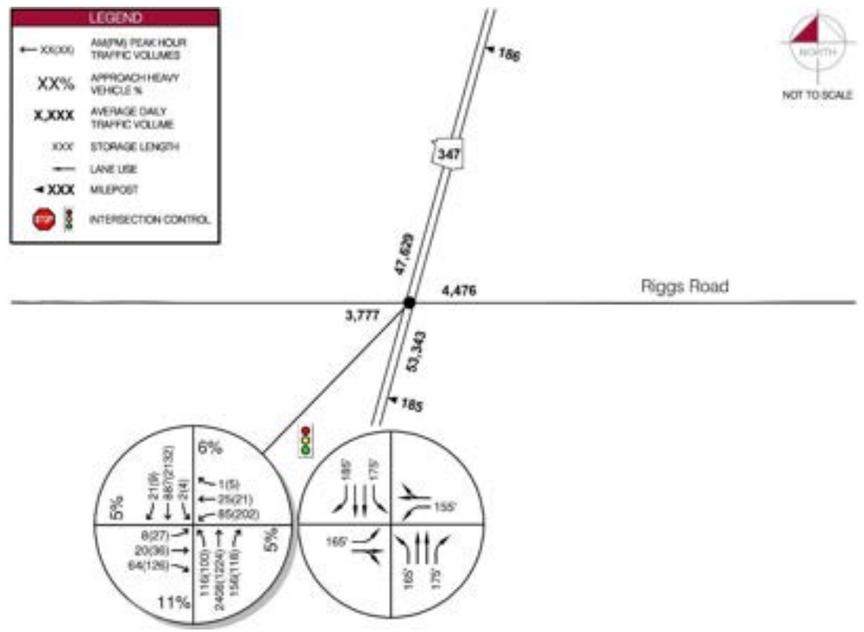


Figure 2.1 – Existing Conditions

2.2 Existing Traffic Volumes

AM and PM peak period turning movement counts (TMCs) were collected at the SR 347/Riggs Road intersection on Thursday, May 19, 2022 between 6:00 AM and 9:00 AM and between 3:00 PM and 6:00 PM. Because SR 347 is a significant truck route, separate TMCs were collected for passenger cars and heavy vehicles. Bi-directional daily vehicle classification counts were also collected on all four legs of the intersection to determine the distribution of vehicle types on each leg. The existing TMCs and bi-directional average daily traffic (ADT) volumes for the intersection legs are shown in the previously referenced **Figure 2.1**.

The EB and WB approach volumes on Riggs Road are similar during both the AM and PM peak hours, with WB traffic volumes being slightly higher on average. On SR 347, however, volumes are heavily directional. The NB approach volumes are nearly three times greater than the SB approach volumes in the AM peak hour, and the SB approach volumes are nearly 1.5 times greater than the NB approach volumes in the PM peak hour.

Many heavy vehicles pass through the SR 347/Riggs Road intersection daily. Heavy vehicle percentages were calculated for each intersection leg using the collected daily vehicle classification counts. The existing SR 347/Riggs Road heavy vehicle percentages are shown in the previously referenced **Figure 2.1**.

Table 2.1 summarizes the existing ADT, K-factors (design peak hour percentage of daily volume), D-factors (directional split), and T-factors (heavy vehicle/truck percentage) for each leg of the intersection. For the purposes of this analysis, heavy vehicles were defined as vehicles in the Federal Highway Administration (FHWA) Classes 6-13.

Table 2.1 – SR 347/Riggs Road Intersection Existing Traffic Summary

Input	Intersection Leg			
	North Leg	South Leg	East Leg	West Leg
ADT	47,629	53,343	4,476	3,777
K-Factor	7%	7%	10%	10%
D-Factor	73%	63%	64%	61%
T-Factor	5%	5%	6%	11%

More information on existing traffic counts can be found in **Appendix 1**.

3. FUTURE TRAFFIC VOLUMES ANALYSIS AND SCENARIOS

3.1 2050 MAG Model

The future traffic volumes used for the analysis are based on the 2050 travel demand model developed by the Maricopa Association of Governments (MAG) to evaluate the Phoenix area's transportation system. The MAG regional travel demand model is based on projected socioeconomic, population, employment, origin-destination, and other regionally-based data.

The following network model outputs were provided by MAG as part of this analysis:

- *2020 Existing* – Existing roadway network with estimated 2020 model volumes
- *2050 No-Build* – Existing roadway network with projected 2050 model volumes
- *2050 Build* – Existing roadway network plus programmed improvements with projected 2050 model volumes

The 2050 Build MAG model assumes SR 347 is widened to three lanes in each direction in the project limits. It also assumes that a grade-separated TI is constructed at SR 347/Riggs Road. The MAG model volumes are shown in **Appendix 2**.

3.2 2050 TI Build Analysis Scenarios

The following TI configurations were analyzed at the study intersection under the 2050 Build conditions (see illustrations of the interchange configurations shown in **Figure 3.1**):

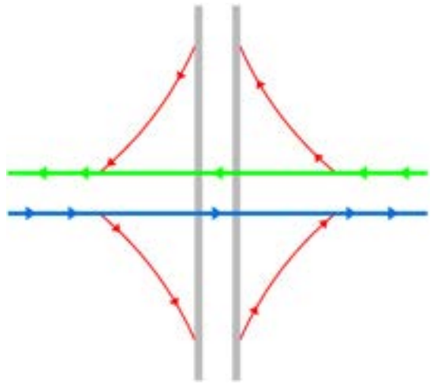
- Tight Diamond Interchange/Shifted Diamond Interchange/Spread Diamond Interchange (SDI)
- Single-Point Urban Interchange (SPUI)
- Diverging Diamond Interchange /Spread Diverging Diamond Interchange (DDI)
- Double Roundabout Interchange (DRI)

The SDI configuration utilizes two signalized intersections. Each signalized intersection controls off-ramp and on-ramp traffic in one of the directions of SR 347 traffic (NB or SB traffic). A Tight Diamond Interchange (TDI) functions similarly to an SDI but spaces the ramp intersections more closely. If an SDI or TDI along with the mainline lanes is shifted away from the current alignment, that is known as a shifted diamond interchange. For purposes of this traffic analysis and to simplify the display of traffic analysis results, the SDI configuration represents the SDI, TDI, and shifted diamond scenarios as all three have similar traffic analysis results.

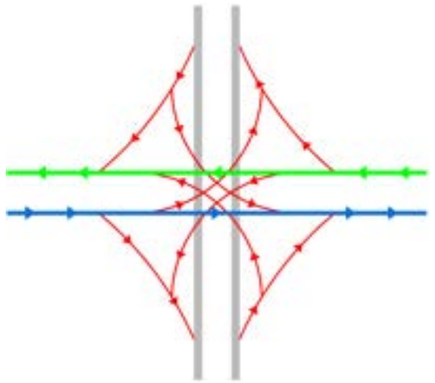
The SPUI configuration utilizes one signalized intersection. All through and left-turning traffic is controlled by the traffic signal, while right turns are channelized with yield or signal control.

In the DDI configuration, EB and WB traffic on Riggs Road cross each other onto opposite sides of the roadway. This configuration eliminates all left-turn crossing conflicts, with left-turning traffic driving on the left side of the crossroad. This eliminates the need for left-turn signal phasing on the crossroad. The two crossover points are signalized. The points where SR 347 ramp traffic merges with Riggs Road traffic would typically have signal or yield control.

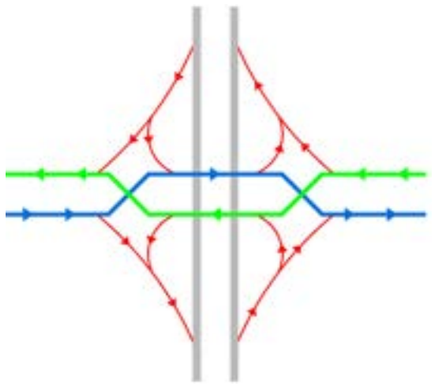
The DRI configuration is similar to the SDI but replaces the signalized intersections with roundabouts. The DRI evaluated for this project is a configuration known as a "teardrop" or "dog bone" style.



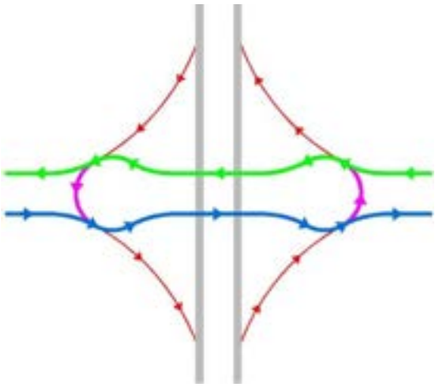
Tight/Shifted/Spread Diamond Interchange Configuration



Single Point Urban Interchange Configuration



Diverging Diamond Interchange Configuration



Double Roundabout Interchange Configuration

Figure 3.1 – TI Configurations Analyzed

3.3 2050 Freeway Mainline Analysis

For the 2050 Build condition, SR 347 is assumed to be widened to three GPLs in each direction with grade separation at Riggs Road. This grade separation with TI ramps effectively results in SR 347 functioning like a freeway in the vicinity of Riggs Road. As such, a freeway mainline and ramp analysis was conducted for SR 347 in the 2050 Build condition.

3.4 2050 Traffic Volumes

The daily traffic volumes from the MAG 2020 Existing model were compared to the 2050 No-Build and Build model volumes to calculate average annual growth rates for SR 347 and Riggs Road separately in both the 2050 No-Build and 2050 Build conditions. These growth rates were then applied to the 2022 turning movement counts to determine the 2050 No-Build and 2050 Build peak hour traffic volumes. The annual growth rates that were used in the analyses are shown in **Table 3.1**. The 2050 traffic volumes account for known planned development in the area per information provided by GRIC and in the GRIC *Wild Horse Pass Master Plan* prepared in 2019.

Table 3.1 – Assumed 2022-2050 Average Annual Growth Rates

Roadway	No-Build Growth Rate	Build Growth Rate
SR 347	1.2%	1.6%
Riggs Road	3.5%	3.0%

A 2050 Baseline Build scenario was also developed that uses the 2050 Build volumes and existing geometry, with the exception that a third through lane is added in each direction on SR 347. The 2050 “Baseline” Build scenario allows for the determination of if widening SR 347 alone is sufficient or if additional improvements such as grade-separating Riggs Road are also needed.

The resultant 2050 traffic volumes and lane configurations for the No-Build, Baseline Build, and the different TI configurations are presented in the following figures:

- 2050 No-Build – **Figure 3.2**
- 2050 Baseline Build – **Figure 3.3** and as defined in **Section 5.4**
- 2050 SDI – **Figure 3.4**
- 2050 SPUI – **Figure 3.5**
- 2050 DDI – Lane configuration in Figure 3.6, traffic volumes in **Figure 3.7**
- 2050 DRI – **Figure 3.8**

Table 3.2 summarizes the 2050 Build and No-Build ADT, K-factors (design peak hour percentage of daily volume), D-factors (directional split), and T-factors (heavy vehicle/truck percentage) for each leg of the intersection.

Table 3.2 – SR 347/Riggs Road Intersection 2050 Traffic Summary

Input	Intersection Leg			
	North Leg	South Leg	East Leg	West Leg
Build ADT	74,285	83,196	10,241	8,642
No-Build ADT	66,516	74,496	11,728	9,897
K-Factor	7%	7%	10%	10%
D-Factor	73%	63%	64%	61%
T-Factor	5%	5%	6%	11%

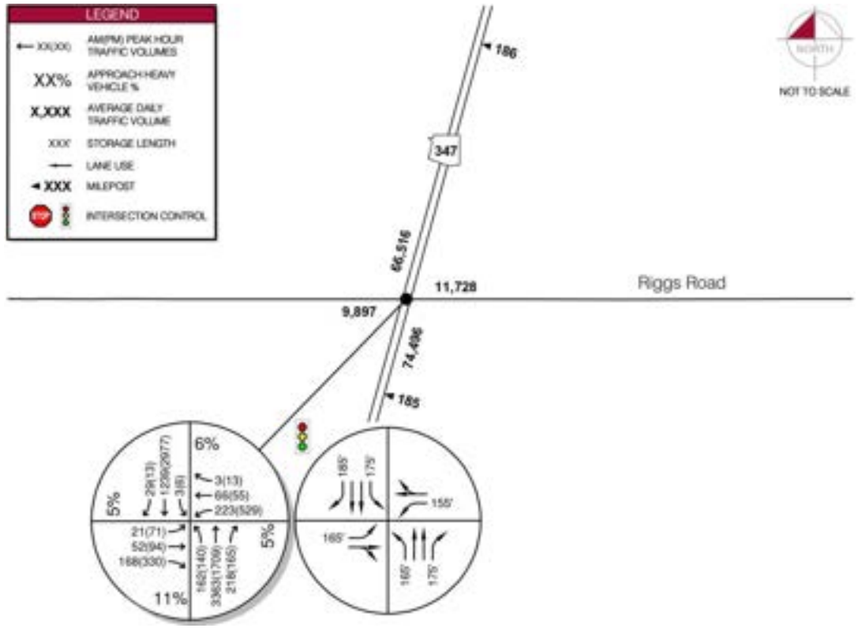


Figure 3.2 – 2050 No-Build Traffic Volumes and Lane Configuration

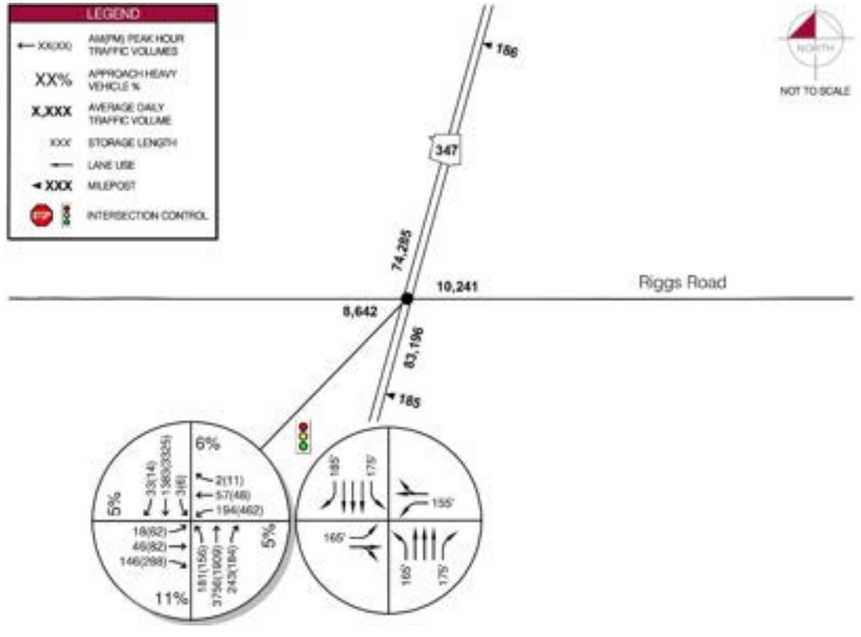


Figure 3.3 – 2050 Baseline Build Traffic Volumes and Lane Configuration

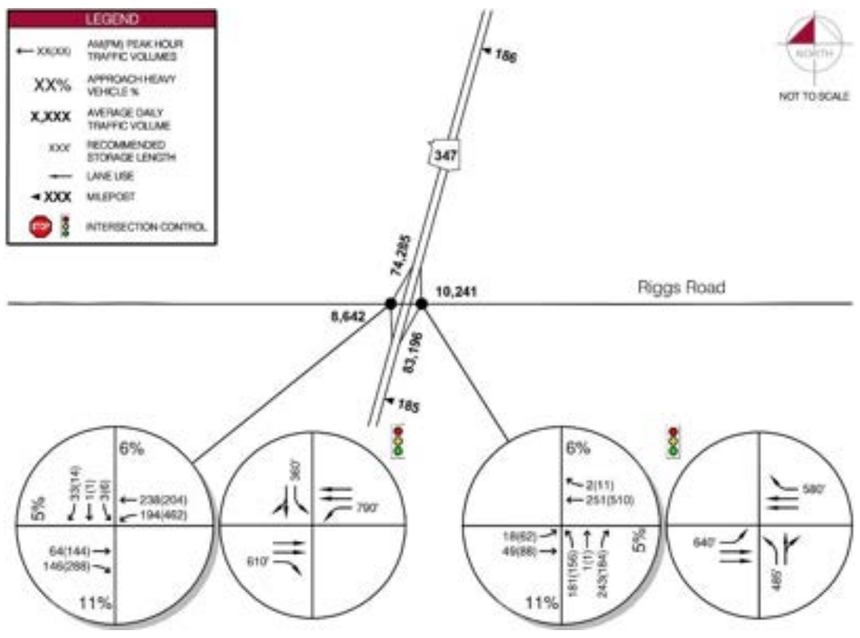


Figure 3.4 – 2050 Build SDI Traffic Volumes and Lane Configuration

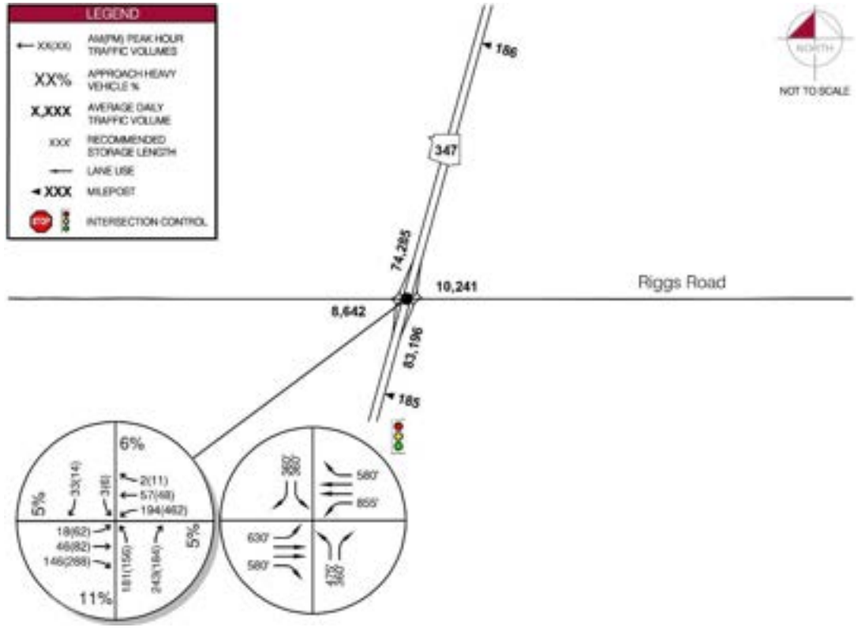


Figure 3.5 – 2050 Build SPUI Traffic Volumes and Lane Configuration

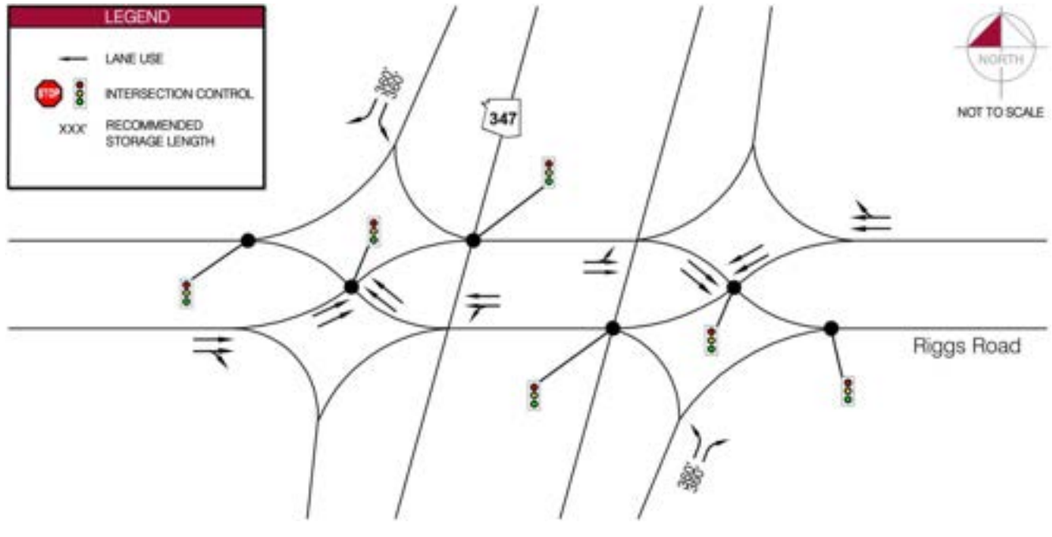


Figure 3.6 – 2050 Build DDI Lane Configuration

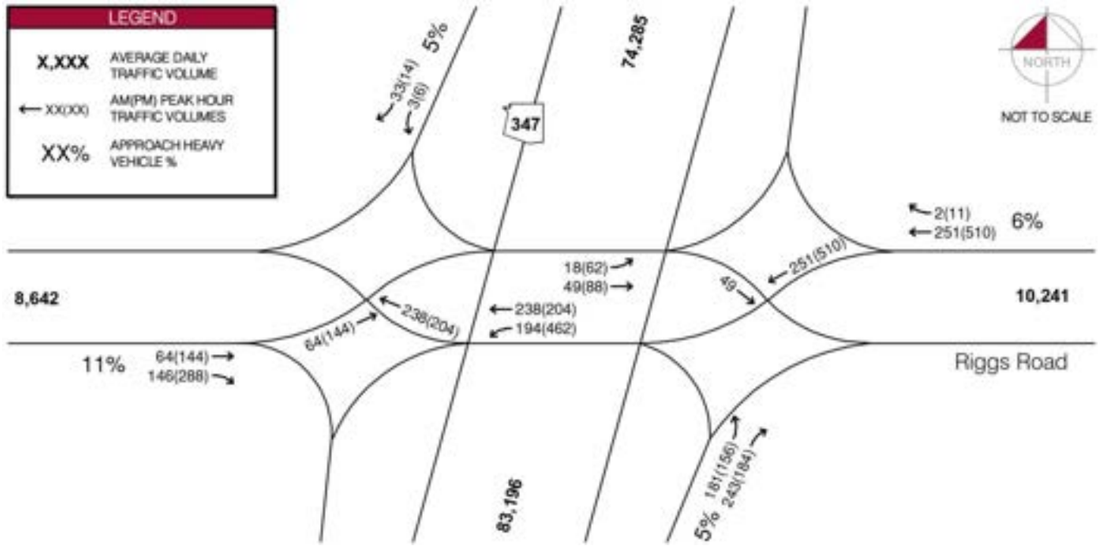


Figure 3.7 – 2050 Build DDI Traffic Volumes

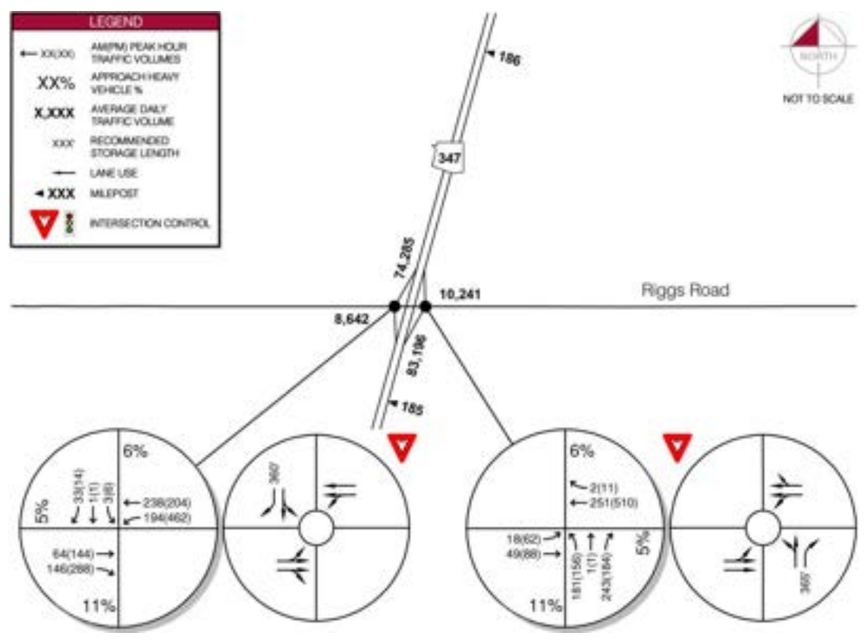


Figure 3.8 – 2050 Build DRI Traffic Volumes and Lane Configuration

The recommended storage lengths shown in **Figures Figure** 3.4, **Figure** 3.5, **Figure** 3.6, and **Figure** 3.8 were determined using the methodology outlined in ADOT Traffic Guidelines and Processes (TGP) Section 430. Tables 430-1 and 430-2 from the TGP were used to select the appropriate gap and desirable braking distance, respectively. The 95th percentile queues from the different operational analyses presented in **Section 5.5** of this report were used as the queue portion of the storage described in TGP 430.

An exclusive westbound (WB) right turn lane is not warranted based on projected 2050 typical peak hour turning movement volumes. However, when there is a closure or restriction on I-10 through the Gila River Indian Community (GRIC), SR 347 often serves as an alternate route for diverting traffic from I-10 via Riggs Road as there is no developed arterial network nearby. In the event of a WB I-10 closure/restriction for the SDI and SPUI configurations, it is anticipated that an exclusive WB right turn lane will help alleviate the additional right turn delay at the new interchanged that might be caused by the closure.

An exclusive eastbound (EB) right-turn lane is warranted based on projected 2050 typical peak hour turning movement volumes. Additionally, as in the case of the WB right-turn lane, the EB right-turn lane will help alleviate any additional delay at the new interchange that might be caused by a closure or restriction on SR 202L (Loop 202).

In the DRI configuration, an EB and WB right-turn bypass lane may also be incorporated into the design for the same reasons. However, the lane configuration shown in **Figure 3.8** and the operational results presented in **Section 5.5.4** for the DRI do not incorporate right-turn bypass lanes.

The 2050 build geometries for the different TI configurations shown in **Figures Figure** 3.4, **Figure** 3.5, **Figure** 3.6, and **Figure** 3.8 show only two-lane off-ramp approaches. With these configurations, the ramps for all the different TI configurations operate at acceptable LOS. However, interchange geometry and traffic control at SR 347/Riggs Road should recognize the need for flexibility to accommodate significant diversions of traffic periodically due to incident and construction closures or restrictions, including routing mainline SR 347 traffic to use interchange ramps to bypass the closures or restrictions. Recognizing this, ADOT has recently implemented the practice of providing a two-lane off-ramp and a four-lane ramp approach at TI ramp/crossroad intersections, where feasible, to provide flexibility in how traffic can be redirected. This practice includes providing the ability for traffic to cross straight through ramp/crossroad intersections and use the on-ramp to reenter the mainline. As traffic analysis doesn't require these additional lanes to provide acceptable LOS, the corresponding increase in budget will need to be reviewed and the additional lanes added to the project during final design if desired.

The SDI and DRI configurations can allow mainline traffic to use ramps to bypass closures. However, the SPUI and DDI do not typically allow for exiting mainline traffic to cross straight through the ramp/crossroad intersection and immediately return to the mainline.

More detailed information regarding each TI configuration and its ability to accommodate diversions and different modes of travel are provided in **Section 7**.

4. CRASH SUMMARY

A crash summary was conducted for crashes occurring along SR 347 approximately one-half mile north and south of Riggs Road and along Riggs Road approximately 0.125 miles east and west of SR 347 to identify any crash patterns or trends that may be present within the project limits.

Crash data was obtained from ADOT for the dates between January 1, 2017 and December 31, 2021, the five most current full years available.

A total of 306 crashes was reported in the vicinity of SR 347/Riggs Road. Of the 306 total crashes, 183 crashes resulted in no injuries (60 percent) and five crashes resulted in one or more fatalities (two percent). The three most common crash types were rear-end crashes (212 crashes/69 percent), left-turn crashes (30 crashes/10 percent), and same-direction sideswipe crashes (24 crashes/8 percent). Summaries of the total crashes by year, crash severity, and crash type as a percentage of crash severity can be found in **Figures Figure 4.1**, **Figure 4.2**, and **Figure 4.3**, respectively. Note that the "Other" category in these figures includes single-vehicle crashes, head-on crashes, opposite-direction sideswipe crashes, rear-to-side crashes, and crashes classified as "other." **Figure 4.4** shows the locations of all crashes within the study period. **Figure 4.5** shows the locations of all suspected severe injury and fatal crashes within the study period.

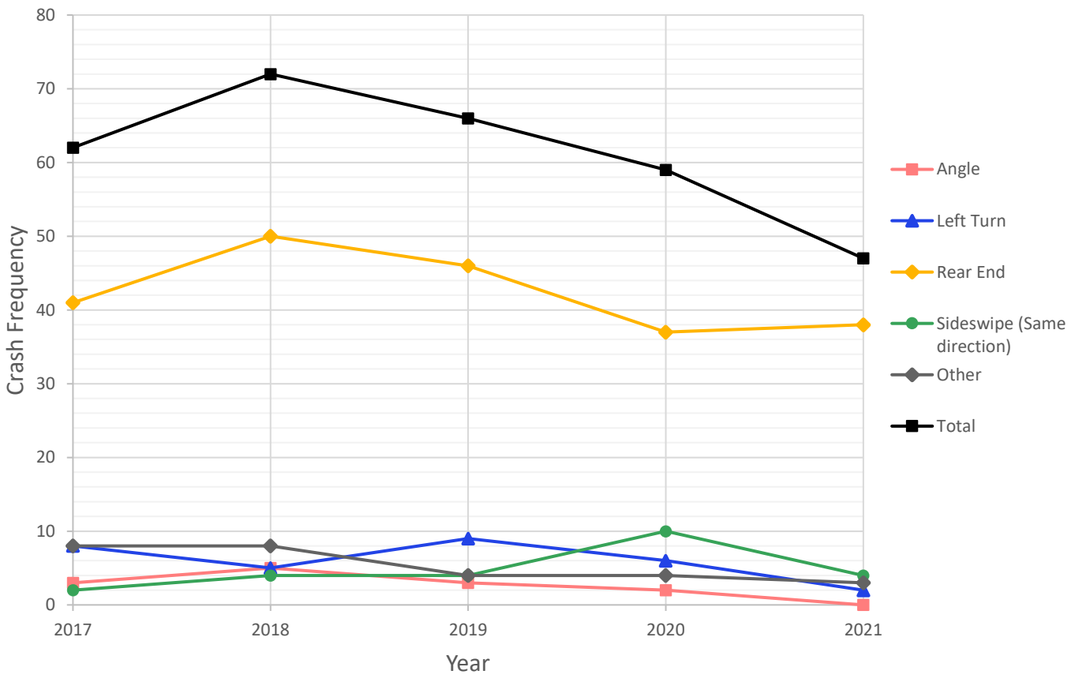


Figure 4.1 – Crash Type by Year

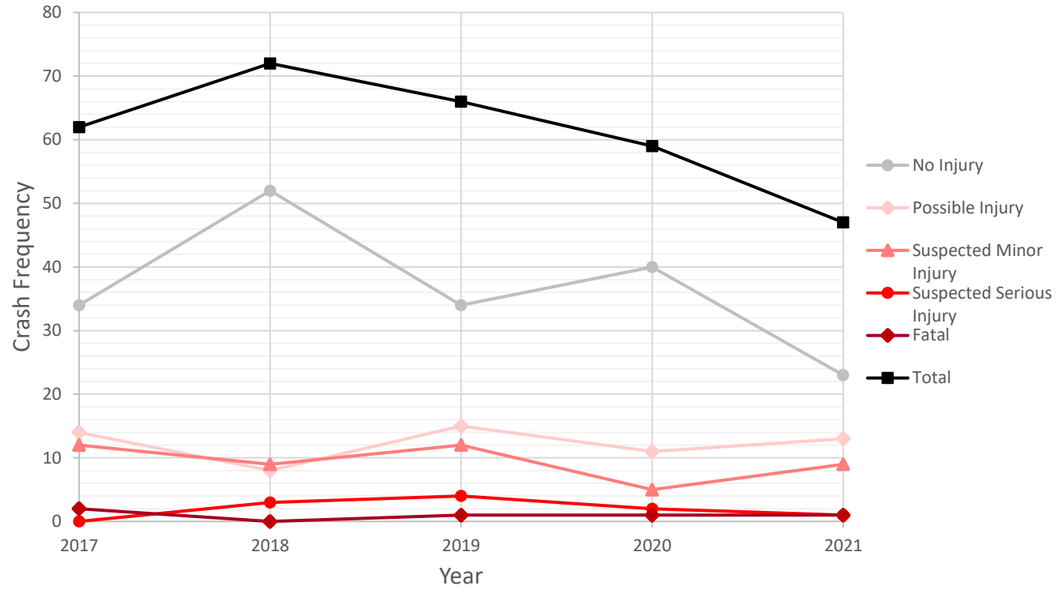


Figure 4.2 – Crash Severity by Year

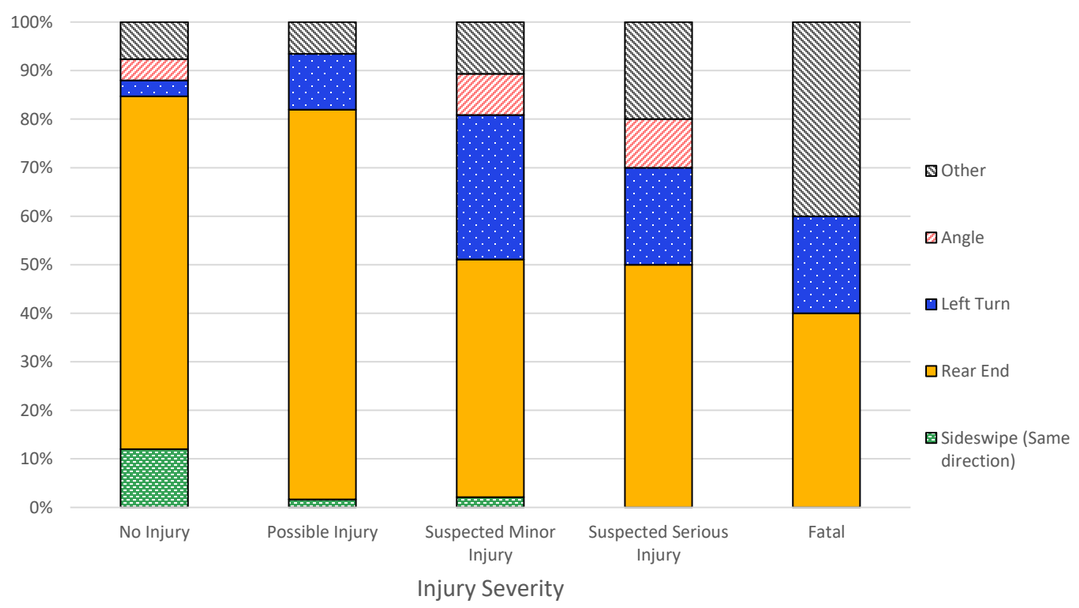


Figure 4.3 – Crash Type as a Percent of Crash Severity

Figure 4.4 – Crash Map - All Crashes

Figure 4.5 – Crash Map - Suspected Severe Injury and Fatal Crashes

The crash data shows that nearly 70 percent of crashes were rear-end crashes, most of which occurred on the SR 347 mainline. The high frequency of rear-end crashes on SR 347 at Riggs Road is anticipated to decrease greatly with the addition of a TI as SR 347 mainline through traffic will no longer need to stop. The moderate frequency of left-turn crashes (about 10 percent) may also be mitigated by the signal timing and/or geometric changes associated with the addition of a TI. The moderate frequency of sideswipe crashes (about 8 percent) would likely not be mitigated by the installation of a TI as sideswipe crashes are typically caused by driver inattention.

Most crashes occurred on the SR 347 mainline approaching the intersection. All suspected serious injury and fatal crashes occurred either at the intersection or on the SR 347 mainline approaching the intersection. Crash data provided in the ADOT SR 347/SR 84 Corridor Profile Study (2018) and MAG SR 347 Corridor Improvement Plan (2021) show that this section of SR 347 has below-average safety performance compared to applicable state averages. This suggests there are existing safety issues on SR 347 at Riggs Road.

5. INTERSECTION OPERATIONAL ANALYSIS

5.1 Analysis Methodology

An intersection operational analysis was performed at SR 347/Riggs Road for the Existing, 2050 No-Build, and 2050 Build conditions (including the previously mentioned potential TI configuration scenarios). The analysis of the scenarios with signalized intersections was completed using Synchro 11 analysis software. For signalized intersections, intersection level of service (LOS) and queue length are typically analyzed using the Highway Capacity Manual, 6th Edition (HCM 6) methodology; however, HCM 6 methodology does not support the analysis of clustered intersections, which are present in the SDI and DDI configuration scenarios. Instead, the Synchro methodology was used to calculate the LOS and queue length for all signalized interchange scenarios, which is a satisfactory substitute for the HCM 6 method.

The analysis of the DRI was completed using Rodel 1.96 analysis software. Rodel uses the HCM 6 methodology for roundabouts to calculate the LOS and queue lengths.

Each intersection, approach, or movement is given a letter designation from LOS A to LOS F. LOS A represents operational conditions with minimal delay and traffic volumes significantly less than available capacity (volume-to-capacity ratio (v/c) < 1). LOS F represents poor operational conditions with a high degree of delay and/or traffic volumes greater than the available capacity (v/c >1). Each LOS grade represents a range of operational conditions.

Table 5.1 shows the average vehicle delay ranges for signalized intersections and unsignalized intersections (including roundabouts) that correspond with each LOS letter grade.

Table 5.1 – Level of Service Thresholds for Signalized and Unsignalized Intersections

Level of Service	Control Delay (s/veh)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80 or v/c > 1.0*	> 50 or v/c > 1.0*

*v/c = volume-to-capacity ratio
Source: HCM 6th Edition

The existing peak hour factors (PHF) were adjusted in all future analysis scenarios based on the projected traffic demand and proposed lane geometry per the following guidelines from the ADOT TGP Section 240 for future PHF assumptions:

- PHF = 0.80 for < 75 vehicles per hour (vph) per lane
- PHF = 0.85 for 75 - 300 vph per lane
- PHF = 0.90 for > 300 vph per lane

5.2 2022 Existing Intersection Conditions

The existing LOS, delay, and 95th percentile queues at SR 347/Riggs Road were evaluated using the existing traffic volumes and lane geometry described previously in Section 2.0 of this report. The intersection was analyzed using current signal timings provided by ADOT. Existing signal timing inputs are provided in **Appendix 1**. The results of the 2022 Existing AM and 2022 Existing PM intersection capacity analyses are shown in **Table 5.2** and **Table 5.3**, respectively. Synchro output reports for the 2022 Existing analysis scenarios are provided in **Appendix 3**.

Table 5.2 – 2022 Existing Intersection Capacity Analysis Results: AM Peak Hour

Intersection	NB Approach			SB Approach			EB Approach			WB Approach			Overall
	L	T	R	L	T	R	L	T	R	L	T	R	
SR 347/Riggs Road													
LOS	E	F	A	E	C	A	E	D		E	D		E
Average Delay (s)	62	97	6	60	25	0	62	37		62	39		71
95th Percentile Queue (ft)	170	*1,714*	70	12	427	0	26	82		130	47		-

Italics = Queue may be longer; queue shown is maximum after two cycles.

SR 347/Riggs Road currently operates at an overall LOS E in the AM peak hour, with all left-turn movements operating at LOS E and the NB through movement operating at LOS F. The NB through movement experiences a 95th percentile queue length of at least 1,714 feet. The NB left-turn movement experiences a 95th percentile queue length of 170 feet, which slightly exceeds the existing storage length.

Table 5.3 – 2022 Existing Intersection Capacity Analysis Results: PM Peak Hour

Intersection	NB Approach			SB Approach			EB Approach			WB Approach			Overall
	L	T	R	L	T	R	L	T	R	L	T	R	
SR 347/Riggs Road													
LOS	F	C	A	F	F	A	E	E		F	D		F
Average Delay (s)	91	26	7	83	198	0	78	65		82	44		123
95th Percentile Queue (ft)	195	774	64	20	*2,115*	0	73	207		350	49		-

Italics = Queue may be longer; queue shown is maximum after two cycles.

SR 347/Riggs Road currently operates at an overall LOS F in the PM peak hour, with the EB left-turn and through/right-turn movements operating at LOS E and the NB left-turn, SB left-turn and through, and WB left-turn movements operating at LOS F. The SB through movement experiences a 95th percentile queue length of at least 2,115 feet. The NB and WB left-turn movements experience 95th percentile queue lengths of 195 feet and 350 feet, respectively, which exceed the existing storage lengths.

5.3 2050 No-Build Intersection Analysis

The 2050 No-Build LOS, delay, and 95th percentile queues at SR 347/Riggs Road were evaluated using the 2050 No-Build volumes and existing geometry. The results of the 2050 No-Build AM and 2050 No-Build PM intersection capacity analyses are shown in **Table 5.4** and **Table 5.5**, respectively. Synchro output reports for the 2050 No-Build analysis scenarios are provided in **Appendix 4**.

Table 5.4 – 2050 No-Build Capacity Analysis Results: AM Peak Hour

Intersection	NB Approach			SB Approach			EB Approach			WB Approach			Overall
	L	T	R	L	T	R	L	T	R	L	T	R	
SR 347/Riggs Road													
LOS	F	F	B	F	D	A	F	F		F	E		F
Average Delay (s)	124	330	11	107	45	0	123	93		377	67		234
95th Percentile Queue (ft)	*448*	*4,490*	168	20	1,015	0	75	369		*757*	146		-

Italics = Queue may be longer; queue shown is maximum after two cycles.

SR 347/Riggs Road is anticipated to operate at an overall LOS F in the AM peak hour in 2050 No-Build traffic conditions. The WB through/right-turn movement is anticipated to operate at LOS E, and all left-turn movements and the NB and EB through movements are anticipated to operate at LOS F. The NB and SB through movements experience 95th percentile queue lengths of at least 4,490 feet and 1,015 feet, respectively. The NB and WB left-turn movements experience 95th percentile queue lengths of at least 448 feet and 757 feet, respectively, which exceed the existing storage lengths.

Table 5.5 – 2050 No-Build Capacity Analysis Results: PM Peak Hour

Intersection	NB Approach			SB Approach			EB Approach			WB Approach			Overall
	L	T	R	L	T	R	L	T	R	L	T	R	
SR 347/Riggs Road													
LOS	F	F	B	F	F	A	F	F		F	D		F
Average Delay (s)	431	98	17	116	525	0	140	196		650	54		367
95th Percentile Queue (ft)	*531*	*1,888*	141	34	*4,191*	0	188	*1,041*		*1,682*	129		-

Italics = Queue may be longer; queue shown is maximum after two cycles.

SR 347/Riggs Road is anticipated to operate at an overall LOS F in the PM peak hour in 2050 No-Build traffic conditions, with all left-turn movements, the NB and SB through movements, and the EB through/right-turn movement operating at LOS F. The NB and SB through movements experience 95th percentile queue lengths of at least 1,888 feet and at least 4,191 feet, respectively. The EB through/right-turn movement experiences a 95th percentile queue length of at least 1,041 feet. The NB and WB left-turn movements experience 95th percentile queue lengths of at least 531 feet and at least 1,682 feet, respectively, which exceed the existing storage lengths.

5.4 2050 Baseline Build Intersection Analysis

The 2050 "Baseline" Build LOS, delay, and 95th percentile queues at SR 347/Riggs Road were evaluated using the 2050 Build volumes and existing geometry, with the exception that a third through lane is added in each direction on SR 347. The 2050 "Baseline" Build scenario was analyzed to determine if widening SR 347 alone is sufficient to provide acceptable LOS or if additional improvements such as grade-separating Riggs Road are also needed. The results of the 2050 Baseline Build AM and 2050 Baseline Build PM intersection capacity analyses are shown in **Table 5.6** and **Table 5.7**, respectively. Synchro output reports for the 2050 Baseline Build analysis scenarios are provided in **Appendix 3**.

Table 5.6 – 2050 Baseline Build Capacity Analysis Results: AM Peak Hour

Intersection	NB Approach			SB Approach			EB Approach			WB Approach			Overall
	L	T	R	L	T	R	L	T	R	L	T	R	
SR 347/Riggs Road													
LOS	F	F	B	F	D	A	F	F		F	E		F
Average Delay (s)	115	181	12	103	43	0	114	91		159	61		133
95th Percentile Queue (ft)	393	*3,038*	197	21	723	0	64	315		*555*	122		-

Italics = Queue may be longer; queue shown is maximum after two cycles.

SR 347/Riggs Road is anticipated to operate at an overall LOS F in the AM peak hour in 2050 Baseline Build traffic conditions. The EB through/right-turn movement is anticipated to operate at LOS E, and all left-turn movements and the NB through movement are anticipated to operate at LOS F. The NB through movement experiences a 95th percentile queue length of at least 3,038 feet. The NB left-turn, NB right-turn, and WB left-turn movements experience 95th percentile queue lengths of 393 feet, 197 feet, and at least 555 feet, respectively, which exceed the existing storage lengths.

Table 5.7 – 2050 Baseline Build Capacity Analysis Results: PM Peak Hour

Intersection	NB Approach			SB Approach			EB Approach			WB Approach			Overall
	L	T	R	L	T	R	L	T	R	L	T	R	
SR 347/Riggs Road													
LOS	F	E	C	F	F	A	F	F		F	D		F
Average Delay (s)	447	64	22	116	406	0	137	127		352	46		270
95th Percentile Queue (ft)	*579*	*1,247*	180	34	*3,077*	0	166	*799*		*1,341*	106		-

Italics = Queue may be longer; queue shown is maximum after two cycles.

SR 347/Riggs Road is anticipated to operate at an overall LOS F in the PM peak hour in 2050 Baseline Build traffic conditions. The NB through movement is anticipated to operate at LOS E, and all left-turn movements, the SB through movement, and the EB through/right-turn movement are anticipated to operate at LOS F. The NB and SB through movements experience 95th percentile queue lengths of at least 1,247 feet and at least 3,077 feet, respectively. The EB through/right-turn movement experiences a 95th percentile queue length of at least 799 feet.

The NB left-turn, NB right-turn, and WB left-turn movements experience 95th percentile queue lengths of at least 579 feet, 180 feet, and at least 1,341 feet, respectively, which exceed the existing storage lengths.

5.5 2050 Build Intersection Analysis

The 2050 Build LOS, delay, and 95th percentile queues at SR 347/Riggs Road were evaluated using the 2050 Build volumes and the SDI, SPUI, DDI, and DRI interchange design scenarios described previously in Section 3.0 of this report.

All configurations assume that Riggs Road will be widened to two travel lanes in each direction within the project limits, where feasible, per the MCDOT vision for Riggs Road to ultimately become a four-lane facility.

5.5.1 Spread Diamond Interchange Capacity Analysis Results

An intersection diagram extracted from Synchro showing the SDI lane geometry is presented in **Figure 5.1**. The results of the 2050 Build AM and 2050 Build PM intersection capacity analyses with the SDI configuration are shown in **Table 5.8** and **Table 5.9**, respectively. The Synchro output reports for the SDI configuration are provided in **Appendix 3**.

The configuration shown in **Figure 5.1** shows back-to-back EB and WB left turn lanes between the NB and SB ramp intersections. The ability to provide back-to-back left-turn lanes with the appropriate storage lengths and tapers is dependent on the spacing of the NB and SB ramp intersections. If the intersections are spaced so close together that back-to-back left-turn lanes can't provide adequate storage, a side-by-side configuration for the left-turn lanes may be required to provide adequate left-turn storage.

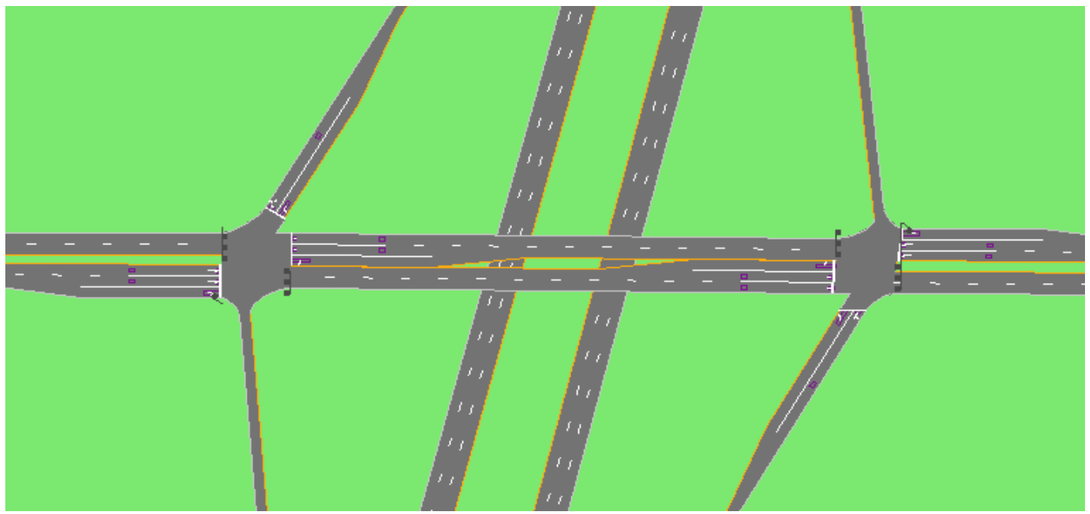


Figure 5.1 – SDI Intersection Diagram

Table 5.8 – 2050 Build with SDI Capacity Analysis Results: AM Peak Hour

Intersection	NB Approach			SB Approach			EB Approach			WB Approach			Overall
	L	T	R	L	T	R	L	T	R	L	T	R	
SR 347 SB Ramps/Riggs Road													
LOS				B	A			B	A	B	A		B
Average Delay (s)				11	5			16	7	19	8		12
95th Percentile Queue (ft)				5	13			21	33	128	53		-
SR 347 NB Ramps/Riggs Road													
LOS	B	A					C	C			A	A	B
Average Delay (s)	16	5					20	30			9	0	11
95th Percentile Queue (ft)	85	34					24	20			57	0	-

Both SR 347/Riggs Road TI ramp intersections are anticipated to operate at an overall LOS B or better in the 2050 Build with SDI scenario during the AM peak hour. All movements are anticipated to operate at LOS C or better, with 95th percentile queues no greater than 128 feet long.

Table 5.9 – 2050 Build with SDI Capacity Analysis Results: PM Peak Hour

Intersection	NB Approach			SB Approach			EB Approach			WB Approach			Overall
	L	T	R	L	T	R	L	T	R	L	T	R	
SR 347 SB Ramps/Riggs Road													
LOS				C	B			C	A	C	A		B
Average Delay (s)				24	13			25	10	27	7		19
95th Percentile Queue (ft)				13	16			63	54	235	35		-
SR 347 NB Ramps/Riggs Road													
LOS	C	A					C	C			B	A	B
Average Delay (s)	31	8					27	31			10	0	16
95th Percentile Queue (ft)	147	48					82	8			112	0	-

Both SR 347/Riggs Road TI ramp intersections are anticipated to operate at an overall LOS B or better in the 2050 Build with SDI scenario during the PM peak hour. All movements are anticipated to operate at LOS C or better, with 95th percentile queues no greater than 235 feet long.

5.5.2 Single Point Urban Interchange Capacity Analysis Results

An intersection diagram extracted from Synchro showing the SPUI lane geometry is presented in **Figure 5.2**. The results of the 2050 Build AM and 2050 Build PM intersection capacity analyses with the SPUI configuration are shown in **Table 5.10** and **Table 5.11**, respectively. The Synchro output reports for the SPUI configuration are provided in **Appendix 3**.

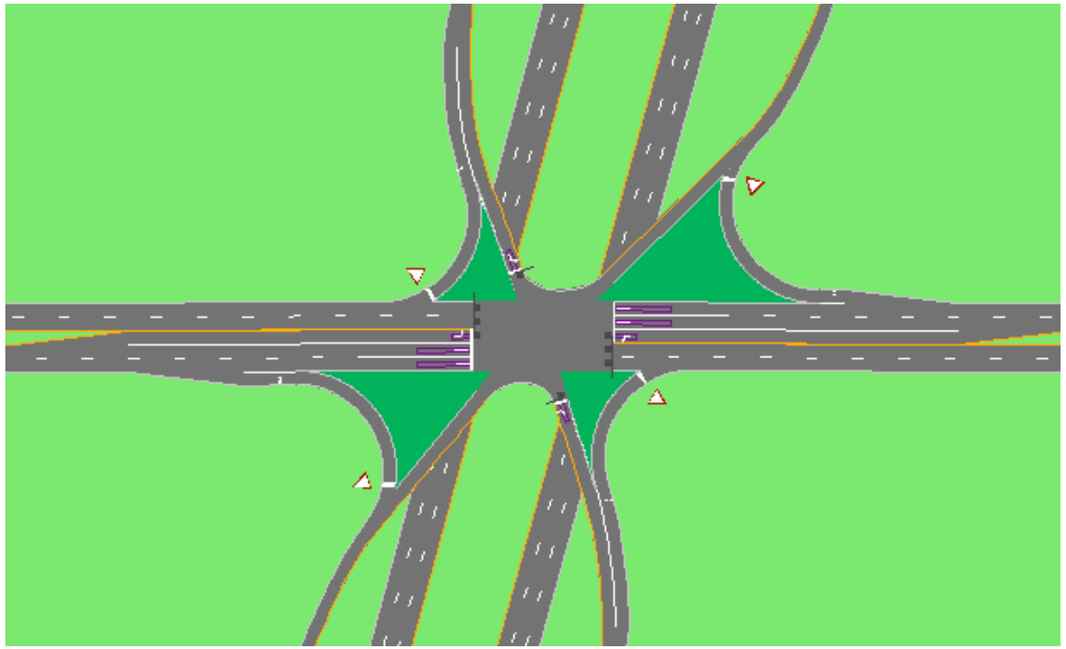


Figure 5.2 – SPUI Intersection Diagram

Table 5.10 – 2050 Build with SPUI Capacity Analysis Results: AM Peak Hour

Intersection	NB Approach			SB Approach			EB Approach			WB Approach			Overall
	L	T	R	L	T	R	L	T	R	L	T	R	
SR 347/Riggs Road SPUI													
LOS	B		A	B		A	C	C	A	B	B	A	A
Average Delay (s)	18		0	17		0	22	21	0	17	11	0	9
95th Percentile Queue (ft)	108		0	6		0	23	22	0	114	20	0	-

The SR 347/Riggs Road TI is anticipated to operate at an overall LOS A in the 2050 Build with SPUI scenario during the AM peak hour. All movements are anticipated to operate at LOS C or better, with 95th percentile queues no greater than 114 feet long.

Table 5.11 – 2050 Build with SPUI Capacity Analysis Results: PM Peak Hour

Intersection	NB Approach			SB Approach			EB Approach			WB Approach			Overall
	L	T	R	L	T	R	L	T	R	L	T	R	
SR 347/Riggs Road SPUI													
LOS	C		A	C		A	C	C	A	C	B	A	B
Average Delay (s)	29		0	28		0	26	30	0	21	15	0	15
95th Percentile Queue (ft)	141		0	13		0	72	45	0	298	17	0	-

The SR 347/Riggs Road TI is anticipated to operate at an overall LOS B in the 2050 Build with SPUI scenario during the PM peak hour. All movements are anticipated to operate at LOS C or better, with 95th percentile queues no greater than 298 feet long.

5.5.3 Diverging Diamond Interchange Capacity Analysis Results

An intersection diagram extracted from Synchro showing the DDI lane geometry and intersection numbering is presented in **Figure 5.3**. Intersection numbers are provided for reference in reviewing the DDI analysis results. The results of the 2050 Build AM and 2050 Build PM intersection capacity analyses with the DDI configuration are shown in **Table 5.12** and **Table 5.13**, respectively. The Synchro output reports for the DDI configuration are provided in **Appendix 3**.

Figure 5.3 – DDI Intersection Diagram

Table 5.12 – 2050 Build with DDI Capacity Analysis Results: AM Peak Hour

Intersection	NB Approach			SB Approach			EB Approach			WB Approach			Overall
	L	T	R	L	T	R	L	T	R	L	T	R	
Riggs Road EB/Riggs Road WB [Int. ID 403]													
LOS								A			A		A
Average Delay (s)								6			5		5
95th Percentile Queue (ft)								8			16		-
Riggs Road EB/SR 347 SBL Off-ramp [Int. ID 404]													
LOS				A				A					A
Average Delay (s)				0				3					3
95th Percentile Queue (ft)				0				3					-
Riggs Road WB/Riggs Road EB [Int. ID 406]													
LOS								A			A		A
Average Delay (s)								10			8		8
95th Percentile Queue (ft)								10			29		-
SR 347 NBR Off-ramp/Riggs Road EB [Int. ID 407]													
LOS			A					A					A
Average Delay (s)			1					3					1
95th Percentile Queue (ft)			0					2					-
SR 347 NBL Off-ramp/Riggs Road WB [Int. ID 410]													
LOS	A										A		A
Average Delay (s)	1										3		2
95th Percentile Queue (ft)	0										7		-
Riggs Road WB/SR 347 SBR Off-ramp [Int. ID 412]													
LOS					A						A		A
Average Delay (s)					0						2		2
95th Percentile Queue (ft)					0						7		-

All SR 347/Riggs Road TI intersections are anticipated to operate at an overall LOS A in the 2050 Build with DDI scenario during the AM peak hour. All movements are anticipated to operate at LOS A, with 95th percentile queues no greater than 29 feet long.

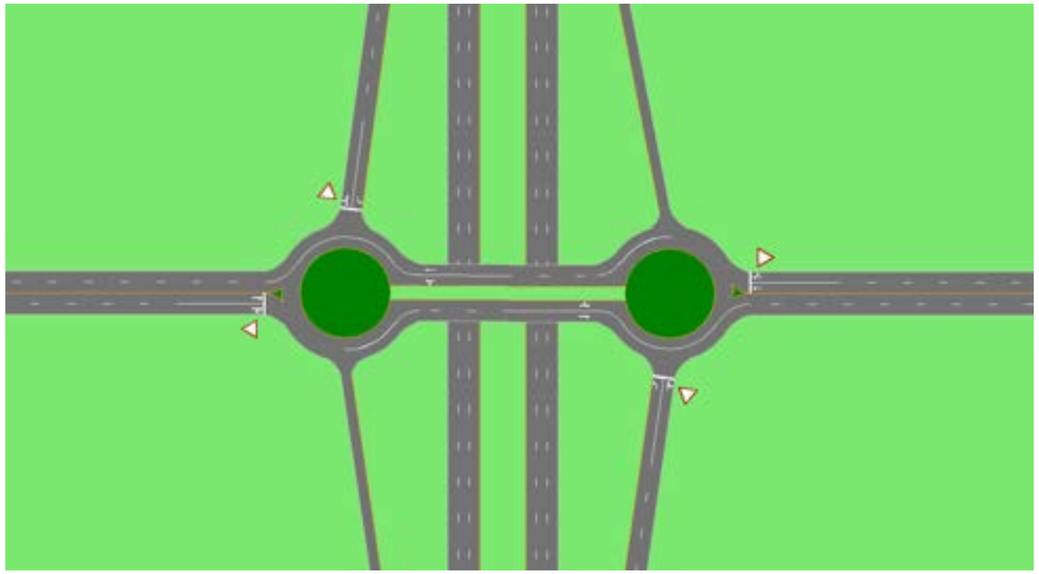
Table 5.13 – 2050 Build with DDI Capacity Analysis Results: PM Peak Hour

Intersection	NB Approach			SB Approach			EB Approach			WB Approach			Overall
	L	T	R	L	T	R	L	T	R	L	T	R	
Riggs Road EB/Riggs Road WB [Int. ID 403]													
LOS								A			A		A
Average Delay (s)								6			6		6
95th Percentile Queue (ft)								14			15		-
Riggs Road EB/SR 347 SBL Off-ramp [Int. ID 404]													
LOS				A				A					A
Average Delay (s)				0				3					3
95th Percentile Queue (ft)				0				5					-
Riggs Road WB/Riggs Road EB [Int. ID 406]													
LOS								B			A		A
Average Delay (s)								13			7		8
95th Percentile Queue (ft)								22			65		-
SR 347 NBR Off-ramp/Riggs Road EB [Int. ID 407]													
LOS			A					A					A
Average Delay (s)			0					4					1
95th Percentile Queue (ft)			0					3					-
SR 347 NBL Off-ramp/Riggs Road WB [Int. ID 410]													
LOS	A										A		A
Average Delay (s)	1										2		2
95th Percentile Queue (ft)	4										12		-
Riggs Road WB/SR 347 SBR Off-ramp [Int. ID 412]													
LOS					A						A		A
Average Delay (s)					0						3		3
95th Percentile Queue (ft)					0						6		-

All SR 347/Riggs Road TI intersections are anticipated to operate at an overall LOS A in the 2050 Build with DDI scenario during the PM peak hour. All movements are anticipated to operate at LOS B or better, with 95th percentile queues no greater than 65 feet long.

5.5.4 Double Roundabout Interchange Capacity Analysis Results

An intersection diagram showing the preliminary layout for the teardrop-style DRI with lane geometry is presented in **Figure 5.4**. The results of the 2050 Build AM and 2050 Build PM intersection capacity analyses with the DRI configuration are shown in **Table 5.14** and **Table 5.15**, respectively. The analysis results are provided by approach and for the total intersection. The Rodel output reports for the DRI are provided in **Appendix 3**.



Note: Synchro diagram shown for visual purposes only. Analysis done using Rodel.

Figure 5.4 – DRI Intersection Diagram

Table 5.14 – 2050 Build with DRI Capacity Analysis Results: AM Peak Hour

Intersection	NB Approach	SB Approach	EB Approach	WB Approach	Overall
SR 347 SB Ramps/Riggs Road					
LOS		A	A	A	A
Average Delay (s)		2	2	3	3
95th Percentile Queue (ft)		2	12	29	-
SR 347 NB Ramps/Riggs Road					
LOS	A		A	A	A
Average Delay (s)	3		2	2	2
95th Percentile Queue (ft)	27		3	10	-

Both SR 347/Riggs Road TI ramp intersections are anticipated to operate at an overall LOS A in the 2050 Build with DRI scenario during the AM peak hour. All approaches are anticipated to operate at LOS A or better, with 95th percentile queues no greater than 29 feet long.

Table 5.15 – 2050 Build with DRI Capacity Analysis Results: PM Peak Hour

Intersection	NB Approach	SB Approach	EB Approach	WB Approach	Overall
SR 347 SB Ramps/Riggs Road					
LOS		A	A	A	A
Average Delay (s)		2	3	3	3
95th Percentile Queue (ft)		1	32	37	-
SR 347 NB Ramps/Riggs Road					
LOS	A		A	A	A
Average Delay (s)	3		3	2	2
95th Percentile Queue (ft)	23		9	24	-

Both SR 347/Riggs Road TI ramp intersections are anticipated to operate at an overall LOS A in the 2050 Build with DRI scenario during the PM peak hour. All approaches are anticipated to operate at LOS A or better, with 95th percentile queues no greater than 37 feet long.

6. FREEWAY OPERATIONAL ANALYSIS

6.1 Analysis Methodology

An operational analysis was performed for SR 347 within the project limits, including the general-purpose lanes, ramp junctions, and merge/diverge sections, for the 2050 Build scenario. Three freeway segment types were analyzed:

- *Basic segments* – Freeway segments not influenced by on-ramp and off-ramp traffic
- *Merging segments* – Freeway segments influenced by on-ramp traffic
- *Diverging segments* – Freeway segments influenced by off-ramp traffic

Highway Capacity Software (HCS) was used to provide measures of effectiveness for each analysis segment. HCS outputs LOS as a function of average vehicle density based on the methodology described in HCM 6. HCS also reports other operational measures such as average vehicle speed.

The concept of LOS uses qualitative measures to characterize operational conditions for roadway segments. Segments are given letter designations from LOS A to LOS F, with LOS A representing uncongested free flow conditions and LOS F representing an overcapacity condition with a high degree of congestion and vehicle delay. Each LOS grade represents a range of operational conditions.

Table 6.1 shows the average vehicle density ranges in passenger cars per mile per lane (pc/mi/ln) that correspond with each segment LOS letter grade for urban conditions. For the 2050 Build LOS analysis, the urban roadway type was used for all roadway segments because SR 347 experiences commuter traffic patterns typical of urban conditions during peak periods and these urban conditions are expected to be present in 2050 as well. Per the ADOT Roadway Design Guidelines Table 103.2A, urban freeways should be designed to ideally achieve LOS C/LOS D or better.

Table 6.1 – Freeway Segment Vehicle Density Ranges and Level of Service

Level of Service	Basic Segment Urban Density Range (pc/mi/ln)	Merge/Diverge Segment Urban Density Range (pc/mi/ln)
A	≤ 11	≤ 10
B	> 11 and ≤ 18	> 10 and ≤ 20
C	> 18 and ≤ 26	> 20 and ≤ 28
D	> 26 and ≤ 35	> 28 and ≤ 35
E	> 35 and ≤ 45	> 35
F	> 45 or v/c > 1.0*	v/c > 1.0*

*v/c = volume-to-capacity ratio
Source: HCM 6th Edition

The 2050 Build analysis utilized the 2050 Build volumes and geometry described in Section 3.0 of this report (e.g., three lanes in each direction on SR 347). At the time of this report, the TI configuration and design have not been finalized. Therefore, all on-ramps and off-ramps were analyzed assuming 1,300-foot-long acceleration lanes and 600-foot-long deceleration lanes, respectively, including tapers. These values represent the minimum "fringe-urban freeway" ramp lengths outlined in Figures 504.7 and 504.8A of the ADOT Roadway Design Guidelines and provide a conservative estimate of LOS. All ramps were analyzed as single-lane ramps. A base free-flow speed of 75 mph was assumed on the SR 347 mainline, and a base free-flow speed of 35 mph was assumed on the SR 347 ramps.

6.2 2050 Build Freeway Analysis Results

The average vehicle speed, vehicle density, and corresponding LOS for each freeway segment and peak hour for the 2050 Build scenario are presented in **Table 6.2**. The 2050 Build scenario HCS output reports are provided in **Appendix 4**.

Table 6.2 – 2050 Build Freeway Level of Service by Segment

Mainline Segment	AM Peak Hour			PM Peak Hour		
	Average Speed (mph)	Average Density (pc/mi/ln)	LOS	Average Speed (mph)	Average Density (pc/mi/ln)	LOS
SR 347 NB						
Basic Segment	72.1	20.3	C	74.1	10.0	A
Merging Segment	67.7	21.7	B	69.6	11.2	A
Diverging Segment	65.3	22.4	C	64.5	11.5	B
SR 347 SB						
Basic Segment	74.1	7.3	A	73.4	17.6	B
Merging Segment	69.4	9.7	A	66.4	24.0	C
Diverging Segment	65.7	8.2	A	66.6	19.4	C

Based on the 2050 Build freeway LOS analysis, all freeway segments within the project area are expected to operate at LOS C or better in the AM and PM peak hours, which meets ADOT's desired LOS threshold for freeway operations. The highest density is 24.0 pc/mi/ln at the SB SR 347 on-ramp merge point in the PM peak hour.

For comparative purposes, the SR 347 mainline was also analyzed as only having two lanes in each direction; however, this results in LOS D and LOS E on several segments. A summary of the delay and LOS of each segment with two travel lanes on SR 347 is shown in the Design Analysis Table sections of the HCS reports in **Appendix 4**.

7. Other Traffic Considerations

Several other traffic-related considerations besides traffic operations should be evaluated when determining the advantages and disadvantages of various traffic interchange configurations. These include motorist safety, interchange familiarity, access, traffic diversion accommodation, pedestrian and bicyclist accommodation and safety, and oversize vehicle accommodation.

7.1 Motorist Safety

One measure of motorist safety for interchange configurations is the number of vehicle conflict points, where vehicles may collide if travel right-of-way rules are not observed. Of particular concern are vehicle crossing points, where vehicles traveling in different directions could potentially collide (such as in an angle or left-turn crash). These types of crashes are more likely to cause severe injury to vehicle occupants than vehicles traveling in the same general direction (such as sideswipe crashes). Perpendicular crossing points have a high potential for severe injury to vehicle occupants. The number of conflict points for each interchange configuration is listed below:

- A standard four-legged signalized intersection (the No-Build scenario) has 32 conflict points, including 16 crossing points (4 of which are perpendicular).
- The SDI has 26 conflict points, including 10 crossing points (4 of which are perpendicular).
- The SPUI has 20 conflict points, including 8 crossing points (0 of which are perpendicular).
- The DDI has 14 conflict points, including 2 crossing points (0 of which are perpendicular).
- The DRI has 4 conflict points, including 4 crossing points (0 of which are perpendicular).

Head-on/wrong-way crashes have a high potential for severe injury to vehicle occupants. Head-on/wrong-way travel is prohibited only by signage at the No-Build, SDI, and SPUI, whereas raised curbs and the angles of intersecting lanes make it more difficult to have head-on/wrong-way travel at the DDI and DRI.

Vehicle speeds at the No-Build, SDI, and SPUI are controlled only by traffic lights and signage, whereas raised curbs and roadway geometry help reduce vehicle speeds at the DDI and DRI. This reduces the likelihood of severe injury to vehicle occupants in the event of a crash.

7.2 Interchange Familiarity

Drivers are very familiar with the No-Build configuration as this is the existing condition. Most drivers that pass through SR 347/Riggs Road are likely very familiar with how the SDI operates as the majority of freeway traffic interchanges in the greater Phoenix area are SDIs (or the related and more compact TDI), including the two existing interchanges closest to SR 347/Riggs Road (I-10/SR 347 and I-10/Riggs Road).

Most drivers that pass through SR 347/Riggs Road are likely familiar with how a SPUI operates as SPUIs, while not as prevalent as SDIs, have been present in the greater Phoenix area along I-17, SR 51, and Loop 101 for decades.

Most drivers that pass through SR 347/Riggs Road are likely not very familiar with how a DDI operates as DDIs are relatively new to Arizona. To date, there are only four operating DDIs in the greater Phoenix area: I-17/Happy Valley Road, I-10/Miller Road, Loop 202 South Mountain/Desert Foothills Parkway, and Loop 202 South Mountain/17th Avenue (the latter two of which are half-interchange DDIs). Another DDI is under construction at I-10/Watson Road. GRIC has voiced a preference for DDIs at the nearby I-10/SR 347 and I-10/Wild Horse Pass Boulevard TIs, which are planned to be converted to DDIs in the near future.

Most drivers that pass through SR 347/Riggs Road are likely somewhat familiar with how a DRI operates. Roundabout intersections have become much more prevalent over the last 20 years, but there are currently a limited number of DRIs in the greater Phoenix metropolitan area. A teardrop-style DRI was recently constructed at Loop 202 South Mountain/Estrella Drive and a teardrop-style DRI is also being planned at the I-10/Casa Blanca Road TI. GRIC has expressed a willingness to consider roundabouts as a possible solution at the SR 347/Riggs Road TI. MCDOT has also voiced support for a DRI at this location.

7.3 Access

As stated in Section 506 of the 2022 ADOT Roadway Design Guidelines (RDG), “adequate access control is essential to the safe and efficient operation of traffic interchanges.” All Build interchange configurations (SDI, SPUI, DDI, and DRI) will likely have the same or similar access control requirements that will affect access options on all four corners of the interchange. The No-Build will not affect existing access conditions.

All Build interchange configurations will require the access to the existing substation on the northwest corner of SR 347/Riggs Road to be relocated farther west along Beltline Road (Riggs Road). Per the ADOT RDG, the closest allowable access is supposed to be a right-in/right-out (RIRO) driveway 660 feet west of the SB ramp radius return of the new interchange, with the closest allowable full access 1,320 feet west of the SB ramp radius return of the new interchange. The ADOT RDG acknowledges that “in areas with existing development, it may sometimes be difficult to obtain minimum access control distance along the crossroad. Right-of-way acquisition for the access control must be considered and evaluated based upon land ownership and existing access”.

Interchange alternatives that push the interchange farther to the east could limit access to the existing tribal allottee parcels to the east of SR 347.

The DRI provides convenient U-turn opportunities at either roundabout, which can help minimize the adverse impacts of access control restrictions on Riggs Road. The SDI, SPUI, and DDI do not typically permit U-turns within the interchange.

7.4 Traffic Diversion Accommodation

When there is a closure or restriction on I-10 through the Gila River Indian Community, SR 347 often serves as an alternate route for diverting traffic from I-10 via Riggs Road as there is no developed arterial network nearby. For the same reason, I-10 serves as an alternate route for diverting traffic from SR 347 via Riggs Road. Riggs Road/Beltline Road also serves as an alternate route for diverting traffic from Loop 202 South Mountain due to a closure or restriction.

Interchange geometry and traffic control at SR 347/Riggs Road should recognize the need for flexibility to accommodate significant diversions of traffic periodically due to incident and construction closures or restrictions, including routing mainline traffic to use interchange ramps to bypass the closures or restrictions. Recognizing this, ADOT has recently implemented the practice of providing a two-lane off-ramp and a four-lane ramp approach at TI ramp/crossroad intersections, where feasible, to provide flexibility in how traffic can be redirected. This practice includes providing the ability for traffic to cross straight through ramp/crossroad intersections and use the on-ramp to reenter the mainline.

The No-Build provides flexibility at the signalized intersection to divert traffic but is capacity-constrained by the existing geometry. The SDI provides the desired ability to allow traffic to exit the mainline at the TI, continue across the crossroad at the TI, and then reenter the mainline. Traffic signal timing at an SDI can easily be modified to better accommodate diverted traffic volumes at the TI, minimizing back-ups onto the mainline.

The SPUI and DDI do not typically allow for exiting mainline traffic to cross straight through the ramp/crossroad intersection and immediately get back on the mainline. Through movements are typically not permitted due to the channelized left-turn and right-turn lanes on the off-ramps and on-ramps. Instead, at a typical SPUI or DDI, exiting traffic would need to make a left- or right-turn at the off-ramp/crossroad intersection, make a U-turn somewhere along the crossroad, return to the TI, and then enter the mainline using the on-ramp.

A SPUI or DDI can be designed to allow for through movements at the ramp/crossroad intersection; however, completing this movement requires making additional turning movements and passing through an additional intersection. The capacity of these through movements is generally lower than the through movement at an SDI or DRI because typically only one lane is provided to make the through movement and it is not as simple of a movement. An example of a DDI that allows for through movements at the ramp/crossroads intersection can be found at the I-17/Happy Valley Road TI. At this location, NB and SB ramp traffic must make a right turn, cross all EB or WB through lanes, and immediately make a left turn to continue NB or SB through the TI. The SPUI and DDI configuration scenarios require a large footprint to achieve this functionality and the construction phasing is complex.

The DRI provides the desired ability to allow traffic to exit the mainline at the TI, continue across the crossroad at the TI by going partway around the roundabout, and then reenter the mainline. Depending on the roundabout configuration, there could be one or two exiting lanes that would allow traffic to go through the interchange and get back on the mainline. Roundabouts operate using yield control, so the DRI does not have the capability that the signalized SDI does to quickly “flush” a large volume of diverted traffic through the TI unless officer control is implemented at each of the entering approaches of the DRI.

7.5 Pedestrian and Bicyclist Accommodation and Safety

The No-Build includes pedestrian crossing indications and shoulders for bicycle travel but does not include any pedestrian facilities like crosswalks, sidewalks, and ramps. Pedestrians and bicyclists can be accommodated at all four TI configurations being analyzed. The SDI, SPUI, and DDI typically provide separate facilities for pedestrians (sidewalks) and bicyclists (bike lanes). Roundabouts do not typically include bike lanes within the circulating area for safety reasons, so the DRI typically includes ramps for bicyclists to transition from the bike lane to the sidewalk on approach to the TI and then again from the sidewalk to the bike lane when departing the TI.

The No-Build requires pedestrians to cross vehicle paths at least one time to get across the intersection. The SDI requires pedestrians to cross vehicle paths at least two times to get across the TI. There are typically pedestrian crossing phases within the traffic signal cycle that provide “protected” time for pedestrians to cross. If right-turn lanes are channelized, the pedestrian crossing is typically not signalized although it can be. It can take up to two signal cycles for pedestrians to cross the TI.

The SPUI requires pedestrians to cross vehicle paths at least four times to get across the TI. There are typically pedestrian crossing phases within the traffic signal cycle that provide “protected” time for pedestrians to cross the left-turn lanes. The right-turn lanes are channelized and the pedestrian crossing may or may not be signalized. It can take up to four signal cycles for pedestrians to cross the TI.

The DDI requires pedestrians to cross vehicle paths at least four times to get across the TI. There are typically pedestrian crossing phases within the traffic signal cycle that provide “protected” time for pedestrians to cross the left-turn lanes. The right-turn lanes are channelized and the pedestrian crossing may or may not be signalized. It can take up to four signal cycles for pedestrians to cross the TI, but the signal cycle lengths for a DDI are usually much shorter than for an SDI or SPUI.

The DRI requires pedestrians to cross vehicle paths at least two times to get across the TI. With the roundabout being yield-controlled, there are typically no signalized crossings for pedestrians, which can make it challenging for those with disabilities to cross. This may be offset to some degree, however, by the lower speed of vehicles at the crossings, as lower vehicle speeds reduce the likelihood of severe injury to pedestrians. Pedestrian-actuated signals or pedestrian hybrid beacons could be added to address this issue but doing so will impede traffic movements entering and exiting the roundabout when the signals/beacons are activated.

7.6 Oversize Vehicle Accommodation

SR 347 and Riggs Road are both sometimes used as routes for oversize vehicles. The SR 347/Riggs Road TI should be designed to accommodate oversize vehicles, where feasible. This includes providing adequate vertical clearance as well as adequate turning radii.

The No-Build accommodates oversize vehicles well as there are no major horizontal or vertical restrictions (besides the signal poles and mast arms). The SDI can provide adequate vertical clearance by allowing oversize vehicles on SR 347 to “ramp around” the TI bridge if needed by allowing vehicles to cross straight through the ramp/crossroad intersection and immediately return to the mainline. The SDI typically provides adequate turning radii for oversize vehicles.

The SPUI and DDI do not allow oversize vehicles on SR 347 to “ramp around” the TI bridge because there is typically no through movement on the off-ramp at the SPUI or DDI. The constrained path of channelized turn lanes at a SPUI or a DDI may be a challenge for some oversize vehicles to navigate without running up on the curbs.

The DRI can provide adequate vertical clearance by allowing oversize vehicles on SR 347 to “ramp around” the TI bridge if needed by allowing vehicles to cross straight through the ramp/crossroad intersection and immediately return to the mainline if the splitter islands and central island have mountable curbs (which is normally the case at a roundabout). The DRI typically provides adequate turning radii for oversize vehicles by providing a truck apron and mountable curbs for the splitter islands and central island. Some low-clearance oversize vehicles, however, may have a challenge navigating roundabouts because of the varying elevation of the intersection from the many curbs and islands present.

Oversize vehicles on Riggs Road won’t have the option to “ramp around” the TI bridge if SR 347 crosses over Riggs Road as there aren’t any ramps on Riggs Road in any of the TI configuration scenarios.

Vehicle requirements should be coordinated with the contact below during final design to make sure the proper design vehicle is being used:

Christina Pippin
Statewide Permit Services Supervisor
cpippin@azdot.gov
602-712-8280

8. ENVIRONMENTAL REPORT DATA SUMMARY

ADOT requires a Noise Report and Air Quality Report as part of the Environmental Planning process, which includes documentation of vehicle classifications, traffic projections and intersection/interchange LOS analysis for the 2022 Existing, 2050 No-Build, and 2050 Build scenarios. The following section summarizes these results for use in the Noise Report and Air Quality Report.

8.1 Noise Report Data Summary

For the purposes of this analysis, vehicle volumes were divided into the following three vehicle classification categories:

- Passenger cars;
- Medium vehicles; and
- Heavy vehicles.

Traffic volumes were categorically classified using the FHWA 13-Class classification scheme, where passenger cars are in FHWA Classes 1-4, medium vehicles are in FHWA Class 5, and heavy vehicles are in FHWA Classes 6-13. **Table 8.1** summarizes the percentages of passenger cars, medium vehicles, and heavy vehicles on each leg of the SR 347/Riggs Road intersection. These percentages were applied uniformly to each of the analysis scenarios.

Table 8.1 – Noise Report Vehicle Classification Percentages

Roadway Segment	Passenger Cars	Medium Vehicles	Heavy Vehicles
SR 347 north of Riggs Road	94%	1%	5%
SR 347 south of Riggs Road	94%	1%	5%
Riggs Road east of SR 347	92%	2%	6%
Riggs Road west of SR 347	87%	2%	11%

Table 8.2 summarizes the bidirectional ADT volumes and peak hour volumes on each leg of the SR 347/Riggs Road intersection. The bidirectional peak hour volumes were calculated using the K-factors shown in the previously referenced **Table 2.1** and **Table 3.2** and the vehicle classification percentages shown in the previously referenced **Table 8.1**.

Table 8.2 – Noise Report Traffic Volumes

	Roadway Segment	ADT Volume (vpd)	Peak Hour Volume (vph)			
			Total	Passenger Cars	Medium Vehicles	Heavy Vehicles
2022 Existing	SR 347 north of Riggs Road	47,629	3,335	3,135	33	167
	SR 347 south of Riggs Road	53,343	3,735	3,511	37	187
	Riggs Road east of SR 347	4,476	448	412	9	27
	Riggs Road west of SR 347	3,777	378	329	8	42
2050 No-Build	SR 347 north of Riggs Road	66,516	4,657	4,378	47	233
	SR 347 south of Riggs Road	74,496	5,215	4,902	52	261
	Riggs Road east of SR 347	11,728	1,173	1,079	23	70
	Riggs Road west of SR 347	9,897	990	861	20	109
2050 Build	SR 347 north of Riggs Road	74,285	5,200	4,888	52	260
	SR 347 south of Riggs Road	83,196	5,824	5,475	58	291
	Riggs Road east of SR 347	10,241	1,025	943	21	62
	Riggs Road west of SR 347	8,642	865	753	17	95

8.2 Air Quality Report Data Summary

Table 8.3 summarizes the ADTs for all vehicles, truck ADTs (includes the combination of medium and heavy vehicles), and truck percentages (both medium and heavy vehicles) on each leg of the SR 347/Riggs Road intersection.

Table 8.3 – Air Quality Report Daily Traffic Volumes and Truck Percentages

	2022 Existing	2050 No-Build	2050 Build	Difference (2050 Build vs. No-Build)
SR 347 north of Riggs Road				
Total ADT	47,629	66,516	74,285	7,769
Truck ADT	2,858	3,991	4,457	466
Truck %	6%	6%	6%	0%
SR 347 south of Riggs Road				
Total ADT	53,343	74,496	83,196	8,700
Truck ADT	3,201	4,470	4,992	522
Truck %	6%	6%	6%	0%
Riggs Road east of SR 347				
Total ADT	4,476	11,728	10,241	-1,487
Truck ADT	358	938	819	-119
Truck %	8%	8%	8%	0%
Riggs Road west of SR 347				
Total ADT	3,777	9,897	8,642	-1,255
Truck ADT	491	1,287	1,123	-164
Truck %	13%	13%	13%	0%

Table 8.4 summarizes the overall intersection/interchange LOS of each design scenario during the AM and PM peak hours.

Table 8.4 – Air Quality Report Intersection Level of Service

Scenario	LOS	
	AM	PM
2022 Existing	E	F
2050 No-Build	F	F
2050 Baseline Build	F	F
2050 Build (all configurations)	A/B*	A/B*

**LOS A or B in all 2050 Build configurations.*

9. SUMMARY

The principal findings of the traffic analysis are summarized below:

SR 347

- With the current roadway geometry of the SR 347 mainline having two GPLs in each direction, SR 347 experiences significant congestion and delays. This situation is anticipated to worsen without improvements.
- The congestion on SR 347 contributes to crashes along SR 347.
- 2050 traffic volumes are projected to be approximately 1.4 times current levels without the construction of a TI and 1.6 times current levels with the construction of a TI.
- Widening the SR 347 mainline to three GPLs in each direction improves traffic operations but is not sufficient to provide acceptable LOS in 2050. Additional improvements such as grade separation of SR 347/Riggs Road are warranted.

SR 347/Riggs Road

- The existing condition provides an overall LOS E/F at the at-grade signalized intersection in 2022.
- The Baseline Build provides an overall LOS F at the at-grade intersection through 2050.
- The SDI provides an overall LOS B or better at each TI ramp intersection through 2050.
- The SPUI provides an overall LOS B or better at the TI ramps intersection through 2050.
- The DDI provides an overall LOS A at each TI ramp intersection and crossover point through 2050.
- The DRI provides an overall LOS A at each TI ramp intersection through 2050.
- **Table 9.1** summarizes the worst intersection LOS for each scenario with its accompanying delay in seconds. It should be noted that all four build TI configuration scenarios provide acceptable LOS.

Table 9.1 – 2050 Level of Service Summary

SR 347/Riggs Road Scenario	Worst Peak Hour Intersection LOS / Average Delay (s)
2050 No Build (existing condition)	F / 367
2050 Baseline Build (widen to 3 lanes NB/SB on SR 347)	F / 270
2050 Spread Diamond Interchange (2 lanes EB/WB on Riggs Road)	B / 19
2050 Single Point Urban Interchange (2 lanes EB/WB on Riggs Road)	B / 15
2050 Diverging Diamond Interchange (2 lanes EB/WB on Riggs Road)	A / 8
2050 Double Roundabout Interchange (2 lanes EB/WB on Riggs Road)	A / 3

Other Traffic-Related Interchange Considerations

- The DRI provides the most benefit in terms of safety, followed in order by the DDI, the SPUI, and the SDI.
- Drivers are most familiar with the SDI, followed in order by the SPUI, the DRI, and the DDI.
- All four analyzed interchange types will likely have similar access requirements, but only the DRI provides U-turn opportunities at the ramp/crossroad intersections to help with access.
- The SDI provides the most benefit in terms of traffic diversion accommodation, followed by the DRI, the SPUI, and the DDI, with the latter three providing a similar level of benefit.
- The DRI and the DDI provide the most benefit in terms of pedestrian and bicyclist accommodation and safety, followed by the SDI and the SPUI, with the latter two providing a similar level of benefit.
- The SDI provides the most benefit in terms of oversize vehicle accommodation, followed in order by the DRI and then the SPUI and the DDI providing a similar level of benefit.
- Other factors besides traffic considerations (e.g., right-of-way impacts, cost, etc.) should be considered before determining the preferred TI configuration at SR 347/Riggs Road.

The various configuration scenarios were compared to each other using several different evaluation criteria. Some of the evaluation criteria used do not lend themselves to numerical quantification, so the evaluation was performed on a “qualitative” basis using the following descriptors to describe the relative impacts of each of the scenarios plus the “No-Build” scenario:

- ● Strong Advantage;
- ◐ Advantage;
- ○ Neutral;
- ◑ Disadvantage; and
- ● Strong Disadvantage.

The Strong Advantage and Advantage descriptors apply when the implementation of a scenario is anticipated to result in a positive change or improvement compared to existing conditions. The Strong Disadvantage and Disadvantage descriptors apply when the implementation of a scenario is anticipated to result in a negative change or worsening compared to existing conditions. The Neutral descriptor applies when the implementation of a scenario is anticipated to have no impact on current conditions or result in both positive and negative changes that effectively cancel each other out.

Table 9.2 summarizes the relative advantages and disadvantages of the No-Build and Build scenarios analyzed (Baseline Build, SDI, SPUI, DDI, and DRI).

Table 9.2 – Evaluation Matrix of Traffic Configuration Scenarios and Criteria

Evaluation Criteria	No-Build (Signalized Intersection)	Baseline Build (Signalized Intersection, widen to three lanes NB/SB on SR 347)	Spread Diamond Interchange (SDI)	Single-Point Urban Interchange (SPUI)	Diverging Diamond Interchange (DDI)	Double Roundabout Interchange (DRI)
Traffic Operations (2050 AM/PM)	● - LOS F/F - Queues of 4,490'/4,191'	● - LOS F/F - Queues of 3,038'/3,077'	◐ - LOS B/B - Queues of 128'/235'	◐ - LOS A/B - Queues of 114'/298'	● - LOS A/A - Queues of 29'/65'	● - LOS A/A - Queues of 29'/37'
Motorist Safety	● - 32 conflict points, 16 crossing points (4 perpendicular) - Speed and wrong-way control by signals and signs - History of frequent crashes, many of which are severe	● - 32 conflict points, 16 crossing points (4 perpendicular) - Speed and wrong-way control by signals and signs - History of frequent crashes, many of which are severe	◑ - 26 conflict points, 10 crossing points (4 perpendicular) - Speed and wrong-way control by signals and signs	○ - 20 conflict points, 8 crossing points (0 perpendicular) - Speed and wrong-way control by signals and signs	◐ - 14 conflict points, 2 crossing points (0 perpendicular) - Speed and wrong-way control by curbs and roadway geometry	● - 4 conflict points, 4 crossing points (0 perpendicular) - Speed and wrong-way control by curbs and roadway geometry
Driver Familiarity	● - Very common configuration	● - Very common configuration	● - Very common configuration	◐ - Common configuration	◑ - Uncommon configuration	○ - Somewhat common configuration
Access to Adjacent Parcels	○ - No change to existing access conditions	○ - No change to existing access conditions	● - Access restrictions require relocation of substation access and could limit access to tribal allottee parcels east of SR 347	● - Access restrictions require relocation of substation access and could limit access to tribal allottee parcels east of SR 347	● - Access restrictions require relocation of substation access and could limit access to tribal allottee parcels east of SR 347	◑ - Access restrictions require relocation of substation access and could limit access to tribal allottee parcels east of SR 347 - Roundabout provides U-turn opportunity within interchange
Traffic Diversion Accommodation	○ - Flexible but capacity-constrained	○ - Flexible but capacity-constrained	● - Increased capacity with direct through movement at ramps - Can easily modify signal timing to clear queues	◐ - Increased capacity but through movement typically not provided or provided only indirectly at ramps - Can easily modify signal timing to clear queues	◐ - Increased capacity but through movement typically not provided or provided only indirectly at ramps - Can easily modify signal timing to clear queues	◐ - Increased capacity with direct through movement at ramps - Yield control cannot easily be modified to clear queues
Pedestrian and Bicyclist Accommodation and Safety	◑ - 1 crossing required, signalized - Includes pedestrian crossing indications and shoulders but is missing crosswalks, sidewalk, and ramps - High vehicle speeds negatively affect pedestrian and bicyclist safety and comfort	◑ - 1 crossing required, signalized - Includes pedestrian crossing indications and shoulders but is missing crosswalks, sidewalk, and ramps - High vehicle speeds negatively affect pedestrian and bicyclist safety and comfort	○ - 2 crossings required, typically all signalized - Includes standard pedestrian and bicyclist facilities - High vehicle speeds negatively affect pedestrian and bicyclist safety and comfort	○ - 4 crossings required, some or all signalized - Includes standard pedestrian and bicyclist facilities - High vehicle speeds negatively affect pedestrian and bicyclist safety and comfort	◐ - 4 crossings required, some or all signalized - Includes standard pedestrian and bicyclist facilities - Moderate vehicle speeds somewhat affect pedestrian and bicyclist safety and comfort	◐ - 2 crossings required, typically all unsignalized but can be signalized - Includes standard pedestrian and bicyclist facilities - Low vehicle speeds positively affect pedestrian and bicyclist safety and comfort
Oversize Vehicle Accommodation	● - Open geometry with no major horizontal or vertical restrictions	● - Open geometry with no major horizontal or vertical restrictions	◐ - Open geometry with ramp around option	● - Restricted geometry with no ramp around option typically	● - Restricted geometry with no ramp around option typically	◑ - Restricted geometry with ramp around option

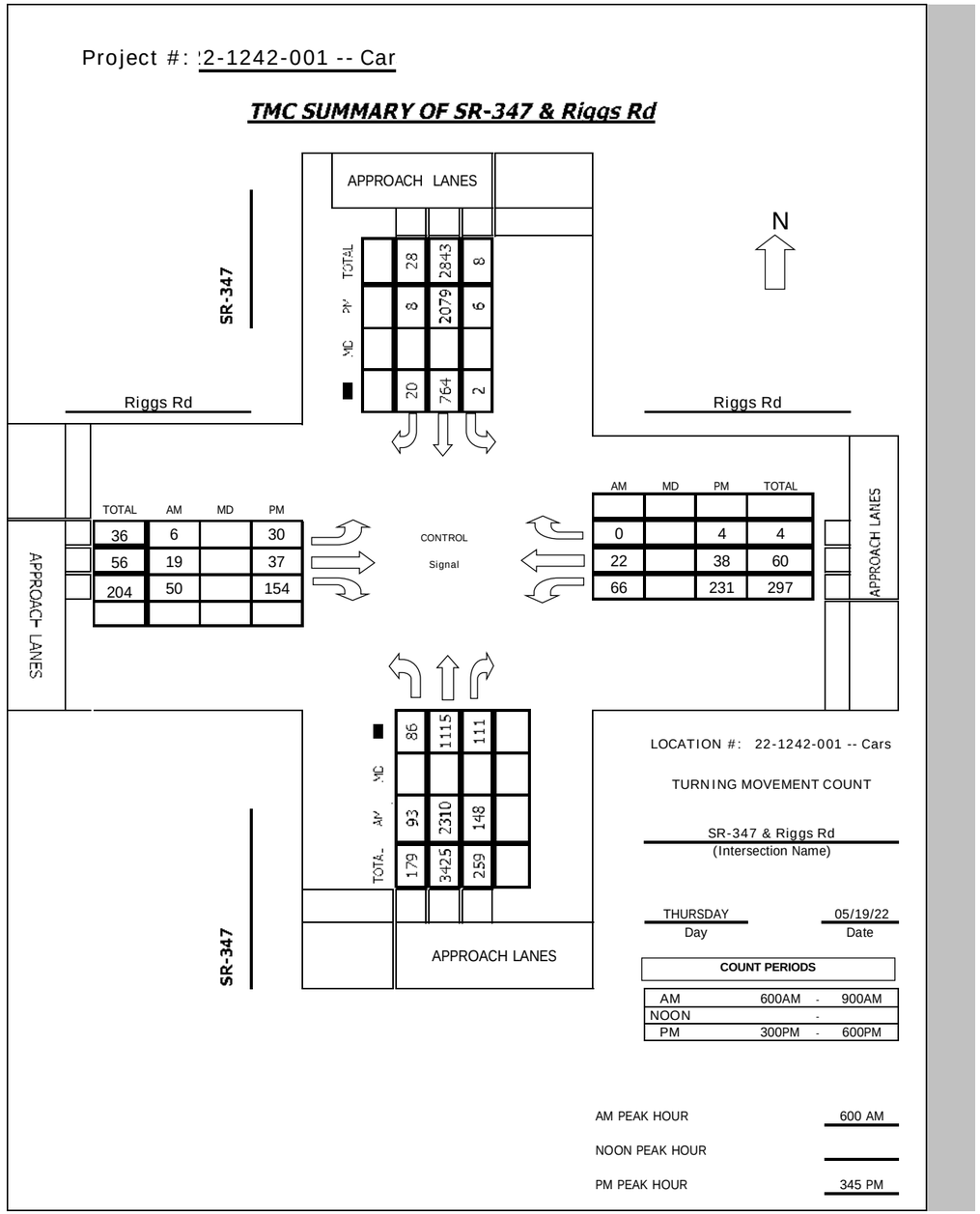
Legend

Strong Advantage ● Advantage ◐ Neutral ○ Disadvantage ◑ Strong Disadvantage ●

Appendix 1. Existing Traffic Volumes and Signal Timings

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745
veracity traffi g

N-S STREET: SR-347 DATE: 05/19/22 LOCATION: Chandler

E-W STREET: Riggs Rd DAY: THURSDAY PROJECT# 22-1242-001 -- Cars

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
6:00 AM	27	593	29	2	203	4	0	7	15	9	0	0	889
6:15 AM	20	599	46	0	202	5	0	5	18	16	5	0	916
6:30 AM	27	557	36	0	182	7	0	2	10	23	7	0	851
6:45 AM	19	561	37	0	177	4	6	5	7	18	10	0	844
7:00 AM	22	552	40	2	193	2	7	5	9	33	7	0	872
7:15 AM	27	572	36	0	224	11	0	8	7	22	9	1	917
7:30 AM	23	490	36	0	185	5	5	7	5	24	7	1	788
7:45 AM	16	411	24	0	213	6	2	11	8	17	2	0	710
8:00 AM	14	388	27	0	195	1	3	4	10	27	3	1	673
8:15 AM	17	396	23	2	220	2	2	9	10	23	4	0	708
8:30 AM	11	291	26	2	168	2	2	3	4	29	6	2	546
8:45 AM	10	322	11	0	169	4	0	2	5	19	5	0	547
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	233	5732	371	8	2331	53	27	68	108	260	65	5	9261
Approach %	3.68	90.47	5.86	0.33	97.45	2.22	13.30	33.50	53.20	78.79	19.70	1.52	
App/Depart	6336	/	5764	2392	/	2699	203	/	447	330	/	351	

AM Peak Hr Begins at: 600 AM

PEAK													
Volumes	93	2310	148	2	764	20	6	19	50	66	22	0	3500
Approach %	3.65	90.55	5.80	0.25	97.20	2.54	8.00	25.33	66.67	75.00	25.00	0.00	
PEAK HR. FACTOR:		0.959			0.940			0.815			0.733		0.955

CONTROL: Signal
COMMENT 1:
GPS: 33.219224, -111.988897

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC. 520.316.6745 veracityraffic

N-S STREET:	SR-347 0	DATE:	05/19/22	LOCATION:	Chandler
E-W STREET:	Riggs Rd	DAY:	THURSDAY	PROJECT#	22-1242-001 -- Cars

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	1	0	1	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM	29	266	23	2	478	6	4	8	26	60	7	0	909
3:15 PM	26	299	32	2	519	1	6	8	22	52	2	0	969
3:30 PM	17	283	33	0	548	4	9	7	32	38	5	1	977
3:45 PM	22	285	21	2	518	1	6	7	29	57	4	2	954
4:00 PM	21	302	30	0	517	3	6	13	37	52	10	2	993
4:15 PM	17	245	32	4	495	2	12	7	41	71	13	0	939
4:30 PM	26	283	28	0	549	2	6	10	47	51	11	0	1013
4:45 PM	16	287	21	0	504	3	5	6	25	48	10	0	925
5:00 PM	14	322	22	4	547	1	2	5	32	50	5	0	1004
5:15 PM	15	287	23	0	471	0	1	6	37	47	8	1	896
5:30 PM	11	236	16	0	455	1	2	7	17	29	6	0	780
5:45 PM	17	159	15	0	391	2	2	2	24	30	2	1	645
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	231	3254	296	14	5992	26	61	86	369	585	83	7	11004
Approach %	6.11	86.06	7.83	0.23	99.34	0.43	11.82	16.67	71.51	86.67	12.30	1.04	
App/Depart	3781	/	3322	6032	/	6946	516	/	396	675	/	340	

PM Peak Hr Begins at: 345 PM

PEAK													
Volumes	86	1115	111	6	2079	8	30	37	154	231	38	4	3899
Approach %	6.55	84.98	8.46	0.29	99.33	0.38	13.57	16.74	69.68	84.62	13.92	1.47	
PEAK HR. FACTOR:		0.929			0.950			0.877			0.813		0.962

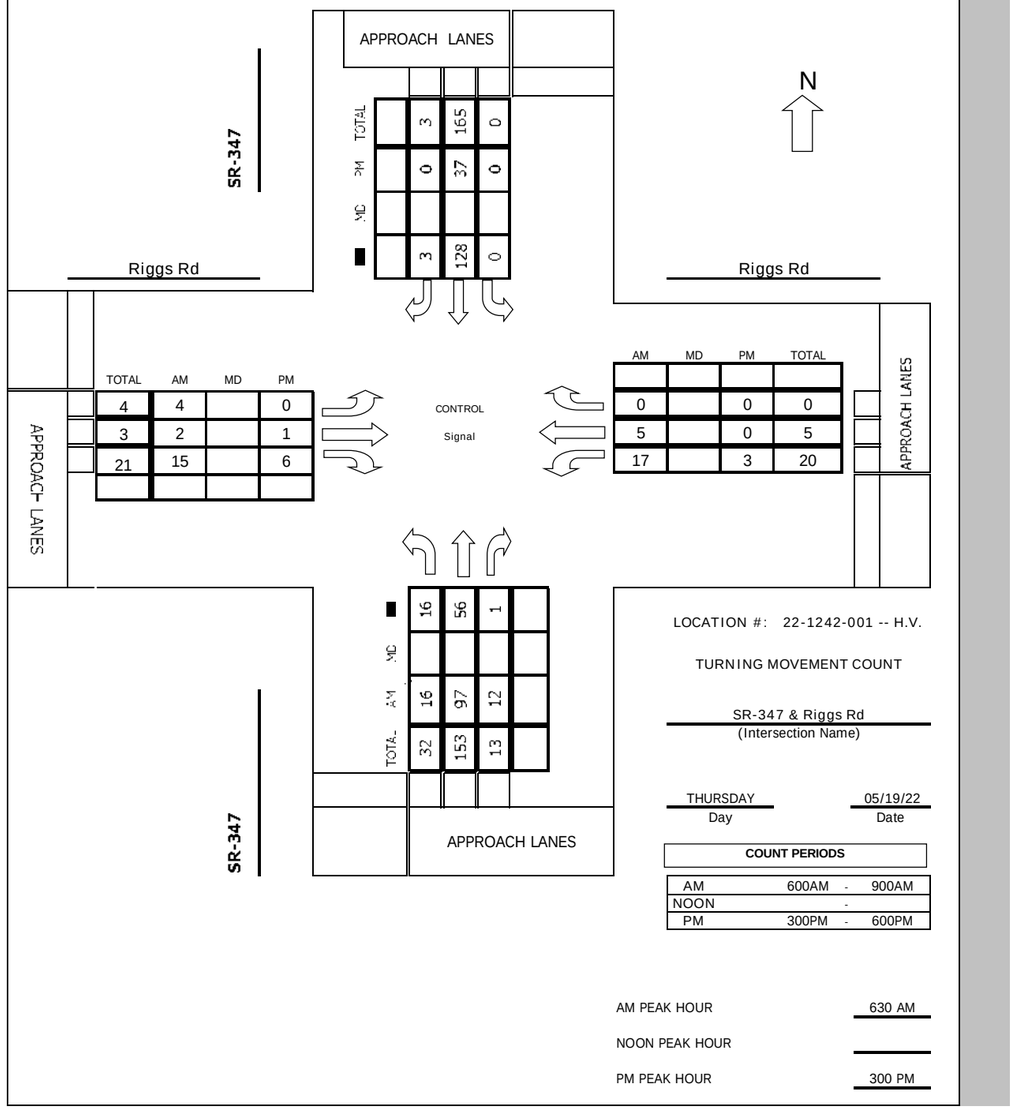
CONTROL: Signal
COMMENT 1: 0
GPS: 33.219224, -111.988897

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC. 520.316.6745

Project #: 22-1242-001 -- H.V

TMC SUMMARY OF SR-347 & Riggs Rd



Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745
veracity traffic

N-S STREET:	SR-347	DATE:	05/19/22	LOCATION:	Chandler
E-W STREET:	Riggs Rd	DAY:	THURSDAY	PROJECT#	22-1242-001 -- H.V.

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	1	0	1	1	0	
6:00 AM	5	25	0	0	33	0	0	0	5	5	2	0	75
6:15 AM	4	24	2	0	24	0	0	0	4	2	0	0	60
6:30 AM	6	22	5	0	32	1	1	1	4	8	0	0	80
6:45 AM	8	27	1	0	34	0	1	0	1	4	1	0	77
7:00 AM	0	13	1	0	31	2	1	1	6	5	2	0	62
7:15 AM	2	35	5	0	31	0	1	0	4	0	2	0	80
7:30 AM	5	24	10	0	27	0	0	1	2	7	1	0	77
7:45 AM	6	21	7	0	25	2	0	3	6	1	2	0	73
8:00 AM	2	27	3	0	24	0	0	1	3	0	0	0	60
8:15 AM	1	33	1	0	29	0	1	0	4	1	0	0	70
8:30 AM	3	19	2	0	16	0	0	0	2	1	0	0	43
8:45 AM	3	22	3	0	36	0	0	0	8	7	1	0	80
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	45	292	40	0	342	5	5	7	49	41	11	0	837
Approach %	11.94	77.45	10.61	0.00	98.56	1.44	8.20	11.48	80.33	78.85	21.15	0.00	
App/Depart	377	/	297	347	/	432	61	/	47	52	/	61	

AM Peak Hr Begins at: 630 AM

PEAK													
Volumes	16	97	12	0	128	3	4	2	15	17	5	0	299
Approach %	12.80	77.60	9.60	0.00	97.71	2.29	19.05	9.52	71.43	77.27	22.73	0.00	
PEAK HR. FACTOR:	0.744			0.963			0.656			0.688			0.934

CONTROL: Signal
COMMENT 1:
GPS: 33.219224, -111.988897

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745
veracity traffic

N-S STREET:	SR-347	DATE:	05/19/22	LOCATION:	Chandler
	0				
E-W STREET:	Riggs Rd	DAY:	THURSDAY	PROJECT#	22-1242-001 -- H.V.

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	1	0	1	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM	4	10	0	0	14	0	0	0	0	1	0	0	29
3:15 PM	5	21	1	0	10	0	0	0	3	0	0	0	40
3:30 PM	1	16	0	0	5	0	0	0	2	1	0	0	25
3:45 PM	6	9	0	0	8	0	0	1	1	1	0	0	26
4:00 PM	2	9	1	0	7	0	0	0	0	1	0	0	20
4:15 PM	0	9	1	1	6	1	1	0	0	0	2	0	21
4:30 PM	1	11	0	0	5	0	0	0	2	1	1	0	21
4:45 PM	0	5	0	0	5	0	0	0	2	0	1	0	13
5:00 PM	2	5	0	0	2	0	0	0	0	1	1	0	11
5:15 PM	0	5	1	0	5	0	0	0	0	0	1	0	12
5:30 PM	1	4	1	0	4	0	0	0	2	0	1	0	13
5:45 PM	1	7	0	0	6	0	0	0	1	3	0	0	18
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	23	111	5	1	77	1	1	1	13	9	7	0	249
Approach %	16.55	79.86	3.60	1.27	97.47	1.27	6.67	6.67	86.67	56.25	43.75	0.00	
App/Depart	139	/	112	79	/	99	15	/	7	16	/	31	

PM Peak Hr Begins at: 300 PM

PEAK													
Volumes	16	56	1	0	37	0	0	1	6	3	0	0	120
Approach %	21.92	76.71	1.37	0.00	100.00	0.00	0.00	14.29	85.71	100.00	0.00	0.00	
PEAK HR. FACTOR:	0.676			0.661			0.583			0.750			0.750

CONTROL: Signal
COMMENT 1: 0
GPS: 33.219224, -111.988897

Field Data Services of Arizona, Inc.

31894 Whitetail Ln.
Temecula, CA 92592
(520) 316-6745

Site Code: Thurs 05/19/22
Station ID: 22-1242-002
SR-347 north of Riggs Rd
33.220198, -111.988581
Latitude: 0' 0.0000 Undefined

Northbound

Start Time	Bikes	Cars & Tlrs	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Total	Truck Total
05/19/2															
2	0	89	6	0	1	1	0	0	7	1	0	0	0	105	10
01:00	0	92	17	0	2	0	0	0	11	1	0	0	0	123	14
02:00	0	138	39	0	1	0	0	0	10	1	0	0	0	189	12
03:00	2	394	123	0	0	1	1	8	48	0	0	0	0	577	58
04:00	12	1020	358	0	3	1	1	10	44	2	1	0	0	1452	62
05:00	9	1444	450	0	9	6	9	5	51	1	0	0	0	1984	81
06:00	19	1877	420	5	8	4	14	10	57	1	1	0	0	2416	100
07:00	9	1675	357	5	7	6	10	8	57	2	0	0	0	2136	95
08:00	3	1182	222	2	10	6	14	10	57	1	2	0	0	1509	102
09:00	6	1111	238	0	13	6	17	11	47	1	1	0	0	1451	96
10:00	7	902	245	0	19	9	9	11	58	3	1	0	0	1264	110
11:00	2	899	205	2	17	18	6	7	64	1	0	0	0	1221	115
12 PM	2	833	251	3	22	6	19	8	46	1	2	0	0	1193	107
13:00	5	820	296	0	27	4	8	7	52	7	3	0	0	1229	108
14:00	3	839	332	0	22	6	1	2	48	0	0	0	0	1253	79
15:00	5	872	284	6	20	5	2	0	21	2	0	0	0	1217	56
16:00	0	927	221	6	12	1	1	3	9	3	0	0	0	1183	35
17:00	4	850	159	2	8	1	0	1	7	2	0	0	0	1034	21
18:00	4	609	90	1	12	1	1	0	7	0	1	0	0	726	23
19:00	5	437	69	0	1	0	0	0	11	1	0	0	0	524	13
20:00	1	339	54	0	5	1	0	1	12	2	0	0	0	415	21
21:00	0	246	22	0	7	1	0	0	6	0	0	0	0	282	14
22:00	1	189	21	0	6	0	0	0	12	0	0	0	0	229	18
23:00	1	78	14	0	1	0	0	0	8	0	0	0	0	102	9
Total	100	17862	4493	32	233	84	113	102	750	33	12	0	0	23814	1359
Percent	0.4%	75.0%	18.9%	0.1%	1.0%	0.4%	0.5%	0.4%	3.1%	0.1%	0.1%	0.0%	0.0%		5.7%
AM Peak	06:00	06:00	05:00	06:00	10:00	11:00	09:00	09:00	11:00	10:00	08:00			06:00	11:00
Vol.	19	1877	450	5	19	18	17	11	64	3	2			2416	115
PM Peak	13:00	16:00	14:00	15:00	13:00	12:00	12:00	12:00	13:00	13:00	13:00			14:00	13:00
Vol.	5	927	332	6	27	6	19	8	52	7	3			1253	108
Grand Total	100	17862	4493	32	233	84	113	102	750	33	12	0	0	23814	1359
Percent	0.4%	75.0%	18.9%	0.1%	1.0%	0.4%	0.5%	0.4%	3.1%	0.1%	0.1%	0.0%	0.0%		5.7%

Field Data Services of Arizona, Inc.
31894 Whitetail Ln.
Temecula, CA 92592
(520) 316-6745
Site Code: Thurs 05/19/22
Station ID: 22-1242-002
SR-347 north of Riggs Rd
33.220198, -111.988581
Latitude: 0' 0.0000 Undefined

Southbound

Start Time	Bikes	Cars & Tlrs	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Total	Truck Total
05/19/2															
2	3	180	24	0	2	0	0	0	15	0	0	0	0	224	17
01:00	0	114	17	0	4	3	0	0	22	0	0	0	0	160	29
02:00	2	103	26	0	3	2	1	3	57	0	1	0	0	198	67
03:00	0	103	56	0	7	6	2	9	47	0	0	0	0	230	71
04:00	5	223	200	0	17	9	8	10	49	0	0	0	0	521	93
05:00	0	314	271	5	31	21	13	23	63	0	0	0	0	741	156
06:00	1	522	263	4	27	15	4	9	65	0	0	0	0	910	124
07:00	5	580	256	2	29	19	2	4	61	0	1	0	0	959	118
08:00	3	537	225	0	21	17	4	3	60	0	0	0	0	870	105
09:00	5	541	182	5	45	20	4	4	67	2	0	0	0	875	147
10:00	3	592	207	0	31	25	3	5	65	1	0	0	0	932	130
11:00	4	713	212	4	16	20	9	3	65	0	0	0	0	1046	117
12 PM	6	902	233	4	20	15	9	5	55	0	0	0	0	1249	108
13:00	3	1093	269	1	18	11	5	1	41	0	0	0	0	1442	77
14:00	9	1460	412	3	10	5	3	3	17	0	0	0	0	1922	41
15:00	5	1668	408	6	16	0	1	2	12	0	0	0	0	2118	37
16:00	12	1692	375	2	7	1	0	4	11	0	0	0	0	2104	25
17:00	7	1543	322	2	4	0	1	0	10	0	0	0	0	1889	17
18:00	3	1247	196	0	4	1	0	0	12	0	0	0	0	1463	17
19:00	1	989	147	0	4	2	0	0	11	0	0	0	0	1154	17
20:00	4	922	118	0	6	0	0	0	7	0	0	0	0	1057	13
21:00	3	652	104	0	2	0	1	0	9	0	0	0	0	771	12
22:00	9	535	65	0	1	0	0	1	6	0	0	0	0	617	8
23:00	2	306	45	0	1	0	0	0	9	0	0	0	0	363	10
Total	95	17531	4633	38	326	192	70	89	836	3	2	0	0	23815	1556
Percent	0.4%	73.6%	19.5%	0.2%	1.4%	0.8%	0.3%	0.4%	3.5%	0.0%	0.0%	0.0%	0.0%		6.5%
AM Peak	04:00	11:00	05:00	05:00	09:00	10:00	05:00	05:00	09:00	09:00	02:00			11:00	05:00
Vol.	5	713	271	5	45	25	13	23	67	2	1			1046	156
PM Peak	16:00	16:00	14:00	15:00	12:00	12:00	12:00	12:00	12:00					15:00	12:00
Vol.	12	1692	412	6	20	15	9	5	55					2118	108
Grand Total	95	17531	4633	38	326	192	70	89	836	3	2	0	0	23815	1556
Percent	0.4%	73.6%	19.5%	0.2%	1.4%	0.8%	0.3%	0.4%	3.5%	0.0%	0.0%	0.0%	0.0%		6.5%

Field Data Services of Arizona, Inc.

31894 Whitetail Ln.
Temecula, CA 92592
(520) 316-6745

Site Code: Thurs 05/19/22
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SR-347 north of Riggs Rd
33.220198, -111.988581
Latitude: 0' 0.0000 Undefined

Northbound, Southbound

Start Time	Bikes	Cars & Tlrs	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Total	Truck Total
05/19/2															
2	3	269	30	0	3	1	0	0	22	1	0	0	0	329	27
01:00	0	206	34	0	6	3	0	0	33	1	0	0	0	283	43
02:00	2	241	65	0	4	2	1	3	67	1	1	0	0	387	79
03:00	2	497	179	0	7	7	3	17	95	0	0	0	0	807	129
04:00	17	1243	558	0	20	10	9	20	93	2	1	0	0	1973	155
05:00	9	1758	721	5	40	27	22	28	114	1	0	0	0	2725	237
06:00	20	2399	683	9	35	19	18	19	122	1	1	0	0	3326	224
07:00	14	2255	613	7	36	25	12	12	118	2	1	0	0	3095	213
08:00	6	1719	447	2	31	23	18	13	117	1	2	0	0	2379	207
09:00	11	1652	420	5	58	26	21	15	114	3	1	0	0	2326	243
10:00	10	1494	452	0	50	34	12	16	123	4	1	0	0	2196	240
11:00	6	1612	417	6	33	38	15	10	129	1	0	0	0	2267	232
12 PM	8	1735	484	7	42	21	28	13	101	1	2	0	0	2442	215
13:00	8	1913	565	1	45	15	13	8	93	7	3	0	0	2671	185
14:00	12	2299	744	3	32	11	4	5	65	0	0	0	0	3175	120
15:00	10	2540	692	12	36	5	3	2	33	2	0	0	0	3335	93
16:00	12	2619	596	8	19	2	1	7	20	3	0	0	0	3287	60
17:00	11	2393	481	4	12	1	1	1	17	2	0	0	0	2923	38
18:00	7	1856	286	1	16	2	1	0	19	0	1	0	0	2189	40
19:00	6	1426	216	0	5	2	0	0	22	1	0	0	0	1678	30
20:00	5	1261	172	0	11	1	0	1	19	2	0	0	0	1472	34
21:00	3	898	126	0	9	1	1	0	15	0	0	0	0	1053	26
22:00	10	724	86	0	7	0	0	1	18	0	0	0	0	846	26
23:00	3	384	59	0	2	0	0	0	17	0	0	0	0	465	19
Total	195	35393	9126	70	559	276	183	191	1586	36	14	0	0	47629	2915
Percent	0.4%	74.3%	19.2%	0.1%	1.2%	0.6%	0.4%	0.4%	3.3%	0.1%	0.0%	0.0%	0.0%		6.1%
AM Peak	06:00	06:00	05:00	06:00	09:00	11:00	05:00	05:00	11:00	10:00	08:00			06:00	09:00
Vol.	20	2399	721	9	58	38	22	28	129	4	2			3326	243
PM Peak	14:00	16:00	14:00	15:00	13:00	12:00	12:00	12:00	12:00	13:00	13:00			15:00	12:00
Vol.	12	2619	744	12	45	21	28	13	101	7	3			3335	215
Grand Total	195	35393	9126	70	559	276	183	191	1586	36	14	0	0	47629	2915
Percent	0.4%	74.3%	19.2%	0.1%	1.2%	0.6%	0.4%	0.4%	3.3%	0.1%	0.0%	0.0%	0.0%		6.1%

Field Data Services of Arizona, Inc.

31894 Whitetail Ln.
Temecula, CA 92592
(520) 316-6745

Site Code: Thurs 05/19/22
Station ID: 22-1242-003
SR-347 south of Riggs Rd
33.218334, -111.989182
Latitude: 0' 0.0000 Undefined

Northbound

Start Time	Bikes	Cars & Tlrs	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Total	Truck Total
05/19/2															
2	0	102	7	0	2	1	0	0	8	2	0	0	0	122	13
01:00	0	96	20	0	3	0	0	0	13	2	0	0	0	134	18
02:00	0	158	39	0	1	0	0	0	12	1	0	0	0	211	14
03:00	3	439	142	0	0	1	1	10	51	1	0	0	0	648	64
04:00	15	1100	398	0	3	1	4	17	50	2	1	0	0	1591	78
05:00	10	1568	506	0	11	6	15	7	62	1	0	0	0	2186	102
06:00	19	2048	484	5	10	5	15	19	73	1	1	0	0	2680	129
07:00	10	1826	413	5	8	7	18	17	71	2	1	0	0	2378	129
08:00	3	1275	258	1	11	7	15	17	64	1	3	0	0	1655	119
09:00	8	1196	278	0	16	8	21	11	56	1	1	1	0	1597	115
10:00	7	959	274	0	22	9	12	14	74	3	1	1	0	1376	136
11:00	3	978	244	2	23	25	6	8	82	2	0	0	0	1373	148
12 PM	3	931	289	4	25	10	19	8	64	3	2	0	0	1358	135
13:00	6	910	336	0	33	4	8	7	66	7	4	0	0	1381	129
14:00	3	937	402	0	27	9	1	2	73	0	0	0	0	1454	112
15:00	6	974	356	7	24	6	3	0	30	2	1	0	0	1409	73
16:00	0	1043	265	6	13	1	1	4	11	3	0	0	0	1347	39
17:00	4	942	191	2	9	2	0	1	10	2	1	0	0	1164	27
18:00	4	684	113	1	15	1	1	0	10	0	1	0	0	830	29
19:00	6	476	84	0	1	0	0	0	13	1	0	0	0	581	15
20:00	2	373	62	0	5	1	0	1	13	2	0	0	0	459	22
21:00	0	281	29	0	7	1	0	0	7	0	0	0	0	325	15
22:00	1	218	24	0	6	0	0	0	16	0	0	0	0	265	22
23:00	1	91	18	0	1	0	0	0	9	0	0	0	0	120	10
Total	114	19605	5232	33	276	105	140	143	938	39	17	2	0	26644	1693
Percent	0.4%	73.6%	19.6%	0.1%	1.0%	0.4%	0.5%	0.5%	3.5%	0.1%	0.1%	0.0%	0.0%		6.4%
AM Peak	06:00	06:00	05:00	06:00	11:00	11:00	09:00	06:00	11:00	10:00	08:00	09:00		06:00	11:00
Vol.	19	2048	506	5	23	25	21	19	82	3	3	1		2680	148
PM Peak	13:00	16:00	14:00	15:00	13:00	12:00	12:00	12:00	14:00	13:00	13:00			14:00	12:00
Vol.	6	1043	402	7	33	10	19	8	73	7	4			1454	135
Grand Total	114	19605	5232	33	276	105	140	143	938	39	17	2	0	26644	1693
Percent	0.4%	73.6%	19.6%	0.1%	1.0%	0.4%	0.5%	0.5%	3.5%	0.1%	0.1%	0.0%	0.0%		6.4%

Field Data Services of Arizona, Inc.

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Temecula, CA 92592
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SR-347 south of Riggs Rd
33.218334, -111.989182
Latitude: 0' 0.0000 Undefined

Southbound

Start Time	Bikes	Cars & Tlrs	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Total	Truck Total
05/19/2															
2	3	197	26	0	2	0	0	0	20	0	0	0	0	248	22
01:00	0	125	19	0	4	4	0	0	24	0	0	0	0	176	32
02:00	3	108	28	0	4	2	1	3	62	0	1	0	0	212	73
03:00	0	117	63	0	10	11	2	10	54	0	2	0	0	269	89
04:00	5	268	217	0	20	13	9	11	59	0	0	0	0	602	112
05:00	1	366	294	5	35	29	14	23	70	0	0	0	0	837	176
06:00	1	591	288	3	36	26	5	9	77	0	0	0	0	1036	156
07:00	5	646	289	0	31	33	2	5	73	0	1	0	0	1085	145
08:00	3	616	260	0	23	23	5	3	76	1	0	0	0	1010	131
09:00	5	598	198	3	49	32	4	3	80	2	1	0	0	975	174
10:00	3	645	233	1	33	30	4	5	68	1	0	0	0	1023	142
11:00	3	781	238	3	18	22	10	6	71	0	0	0	0	1152	130
12 PM	7	981	271	4	22	19	9	4	66	0	0	0	0	1383	124
13:00	4	1195	311	1	21	14	6	1	47	0	0	0	0	1600	90
14:00	11	1641	467	3	15	5	4	3	20	0	0	0	0	2169	50
15:00	6	1909	464	6	21	0	1	2	16	0	0	0	0	2425	46
16:00	13	1973	451	2	9	2	0	4	12	0	0	0	0	2466	29
17:00	8	1754	368	3	7	3	1	0	10	0	0	0	0	2154	24
18:00	4	1394	223	0	4	1	0	0	13	0	0	0	0	1639	18
19:00	1	1059	160	0	4	2	0	0	13	0	0	0	0	1239	19
20:00	4	976	123	0	6	0	0	0	10	0	0	0	0	1119	16
21:00	3	691	110	0	2	1	1	0	12	0	1	0	0	821	17
22:00	9	569	69	0	1	0	0	1	7	0	0	0	0	656	9
23:00	2	342	48	0	1	0	0	0	10	0	0	0	0	403	11
Total	104	19542	5218	34	378	272	78	93	970	4	6	0	0	26699	1835
Percent	0.4%	73.2%	19.5%	0.1%	1.4%	1.0%	0.3%	0.3%	3.6%	0.0%	0.0%	0.0%	0.0%		6.9%
AM Peak	04:00	11:00	05:00	05:00	09:00	07:00	05:00	05:00	09:00	09:00	03:00			11:00	05:00
Vol.	5	781	294	5	49	33	14	23	80	2	2			1152	176
PM Peak	16:00	16:00	14:00	15:00	12:00	12:00	12:00	12:00	12:00		21:00			16:00	12:00
Vol.	13	1973	467	6	22	19	9	4	66		1			2466	124
Grand Total	104	19542	5218	34	378	272	78	93	970	4	6	0	0	26699	1835
Percent	0.4%	73.2%	19.5%	0.1%	1.4%	1.0%	0.3%	0.3%	3.6%	0.0%	0.0%	0.0%	0.0%		6.9%

Field Data Services of Arizona, Inc.
31894 Whitetail Ln.
Temecula, CA 92592
(520) 316-6745

Site Code: Thurs 05/19/22
Station ID: 22-1242-003
SR-347 south of Riggs Rd
33.218334, -111.989182
Latitude: 0' 0.0000 Undefined

Northbound, Southbound

Start Time	Bikes	Cars & Tlrs	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Total	Truck Total
05/19/2															
2	3	299	33	0	4	1	0	0	28	2	0	0	0	370	35
01:00	0	221	39	0	7	4	0	0	37	2	0	0	0	310	50
02:00	3	266	67	0	5	2	1	3	74	1	1	0	0	423	87
03:00	3	556	205	0	10	12	3	20	105	1	2	0	0	917	153
04:00	20	1368	615	0	23	14	13	28	109	2	1	0	0	2193	190
05:00	11	1934	800	5	46	35	29	30	132	1	0	0	0	3023	278
06:00	20	2639	772	8	46	31	20	28	150	1	1	0	0	3716	285
07:00	15	2472	702	5	39	40	20	22	144	2	2	0	0	3463	274
08:00	6	1891	518	1	34	30	20	20	140	2	3	0	0	2665	250
09:00	13	1794	476	3	65	40	25	14	136	3	2	1	0	2572	289
10:00	10	1604	507	1	55	39	16	19	142	4	1	1	0	2399	278
11:00	6	1759	482	5	41	47	16	14	153	2	0	0	0	2525	278
12 PM	10	1912	560	8	47	29	28	12	130	3	2	0	0	2741	259
13:00	10	2105	647	1	54	18	14	8	113	7	4	0	0	2981	219
14:00	14	2578	869	3	42	14	5	5	93	0	0	0	0	3623	162
15:00	12	2883	820	13	45	6	4	2	46	2	1	0	0	3834	119
16:00	13	3016	716	8	22	3	1	8	23	3	0	0	0	3813	68
17:00	12	2696	559	5	16	5	1	1	20	2	1	0	0	3318	51
18:00	8	2078	336	1	19	2	1	0	23	0	1	0	0	2469	47
19:00	7	1535	244	0	5	2	0	0	26	1	0	0	0	1820	34
20:00	6	1349	185	0	11	1	0	1	23	2	0	0	0	1578	38
21:00	3	972	139	0	9	2	1	0	19	0	1	0	0	1146	32
22:00	10	787	93	0	7	0	0	1	23	0	0	0	0	921	31
23:00	3	433	66	0	2	0	0	0	19	0	0	0	0	523	21
Total	218	39147	10450	67	654	377	218	236	1908	43	23	2	0	53343	3528
Percent	0.4%	73.4%	19.6%	0.1%	1.2%	0.7%	0.4%	0.4%	3.6%	0.1%	0.0%	0.0%	0.0%		6.6%
AM Peak	04:00	06:00	05:00	06:00	09:00	11:00	05:00	05:00	11:00	10:00	08:00	09:00		06:00	09:00
Vol.	20	2639	800	8	65	47	29	30	153	4	3	1		3716	289
PM Peak	14:00	16:00	14:00	15:00	13:00	12:00	12:00	12:00	12:00	13:00	13:00			15:00	12:00
Vol.	14	3016	869	13	54	29	28	12	130	7	4			3834	259
Grand Total	218	39147	10450	67	654	377	218	236	1908	43	23	2	0	53343	3528
Percent	0.4%	73.4%	19.6%	0.1%	1.2%	0.7%	0.4%	0.4%	3.6%	0.1%	0.0%	0.0%	0.0%		6.6%

Field Data Services of Arizona, Inc.

31894 Whitetail Ln.
Temecula, CA 92592
(520) 316-6745

Site Code: Thurs 05/19/22
Station ID: 22-1242-004
Riggs Rd east of SR-347
33.219227, -111.987197
Latitude: 0' 0.0000 Undefined

Eastbound

Start Time	Bikes	Cars & Tlrs	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Total	Truck Total
05/19/2															
2	0	6	1	0	0	0	0	0	0	1	0	0	0	8	1
01:00	0	5	1	0	1	0	0	0	0	1	0	0	0	8	2
02:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11	0
03:00	0	21	8	0	0	0	0	2	0	1	0	0	0	32	3
04:00	1	45	26	0	0	0	2	7	1	0	0	0	0	82	10
05:00	2	80	45	0	1	2	4	2	1	0	0	0	0	137	10
06:00	0	125	44	1	0	0	0	7	1	0	0	0	0	178	9
07:00	0	124	45	1	2	1	8	10	5	0	1	0	0	197	28
08:00	0	78	31	0	1	0	1	7	1	0	0	0	0	119	10
09:00	1	79	30	0	6	1	4	1	0	0	1	0	0	123	13
10:00	0	63	26	0	2	0	3	5	4	0	0	0	0	103	14
11:00	0	77	38	0	3	1	0	1	6	1	0	1	0	128	13
12 PM	1	76	26	1	1	4	0	1	1	2	0	0	0	113	10
13:00	0	61	33	0	5	1	0	0	3	0	1	0	0	104	10
14:00	1	84	47	0	3	1	0	0	4	0	0	0	0	140	8
15:00	1	93	51	1	0	0	1	0	0	0	0	0	0	147	2
16:00	0	125	26	1	0	0	0	0	2	0	0	0	0	154	3
17:00	0	78	22	0	1	0	0	0	0	0	1	0	0	102	2
18:00	0	53	17	0	0	0	0	1	1	0	0	0	0	72	2
19:00	0	32	12	0	0	0	0	0	0	0	0	0	0	44	0
20:00	1	27	8	0	0	0	0	0	2	0	0	0	0	38	2
21:00	0	25	6	0	0	0	0	0	0	0	0	0	0	31	0
22:00	0	25	3	0	0	0	0	0	2	0	0	0	0	30	2
23:00	0	7	4	0	0	0	0	0	0	0	0	0	0	11	0
Total	8	1400	550	5	26	11	23	44	34	6	4	1	0	2112	154
Percent	0.4%	66.3%	26.0%	0.2%	1.2%	0.5%	1.1%	2.1%	1.6%	0.3%	0.2%	0.0%	0.0%		7.3%
AM Peak	05:00	06:00	05:00	06:00	09:00	05:00	07:00	07:00	11:00	00:00	07:00	11:00		07:00	07:00
Vol.	2	125	45	1	6	2	8	10	6	1	1	1		197	28
PM Peak	12:00	16:00	15:00	12:00	13:00	12:00	15:00	12:00	14:00	12:00	13:00			16:00	12:00
Vol.	1	125	51	1	5	4	1	1	4	2	1			154	10
Grand Total	8	1400	550	5	26	11	23	44	34	6	4	1	0	2112	154
Percent	0.4%	66.3%	26.0%	0.2%	1.2%	0.5%	1.1%	2.1%	1.6%	0.3%	0.2%	0.0%	0.0%		7.3%

Field Data Services of Arizona, Inc.
31894 Whitetail Ln.
Temecula, CA 92592
(520) 316-6745
Site Code: Thurs 05/19/22
Station ID: 22-1242-004
Riggs Rd east of SR-347
33.219227, -111.987197
Latitude: 0' 0.0000 Undefined

Westbound

Start Time	Bikes	Cars & Tlrs	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Total	Truck Total
05/19/2															
2	0	7	2	0	0	0	0	0	0	0	0	0	0	9	0
01:00	0	6	2	0	0	0	0	0	0	0	0	0	0	8	0
02:00	1	6	3	0	1	0	0	0	1	0	0	0	0	12	2
03:00	0	13	10	0	2	3	0	0	2	0	2	0	0	32	9
04:00	0	18	21	0	2	2	0	0	3	0	0	0	0	46	7
05:00	1	48	29	0	3	5	0	0	1	0	0	0	0	87	9
06:00	0	63	25	1	7	8	0	0	6	0	0	0	0	110	22
07:00	0	84	39	0	2	10	0	4	4	0	0	0	0	143	20
08:00	0	81	38	0	2	6	0	0	2	0	0	0	0	129	10
09:00	0	53	27	1	3	11	0	0	7	0	2	0	0	104	24
10:00	0	63	26	1	1	4	0	0	2	0	0	0	0	97	8
11:00	0	74	32	0	3	2	0	4	1	0	0	0	0	116	10
12 PM	0	71	41	1	1	4	0	0	4	0	0	0	0	122	10
13:00	0	86	37	0	5	1	0	1	5	0	0	0	0	135	12
14:00	1	126	47	0	5	0	0	0	2	0	0	0	0	181	7
15:00	0	174	54	0	3	0	0	0	0	0	0	0	0	231	3
16:00	1	205	62	0	1	1	0	0	3	0	1	0	0	274	6
17:00	1	151	27	0	3	2	0	2	0	0	0	0	0	186	7
18:00	1	103	22	0	0	0	0	0	0	0	0	0	0	126	0
19:00	0	52	14	0	0	0	0	0	0	0	0	0	0	66	0
20:00	0	43	8	0	1	0	0	0	1	0	0	0	0	53	2
21:00	1	24	9	0	0	1	0	0	1	0	1	1	0	38	4
22:00	0	28	5	0	0	0	0	0	0	0	0	0	0	33	0
23:00	0	20	6	0	0	0	0	0	0	0	0	0	0	26	0
Total	7	1599	586	4	45	60	0	11	45	0	6	1	0	2364	172
Percent	0.3%	67.6%	24.8%	0.2%	1.9%	2.5%	0.0%	0.5%	1.9%	0.0%	0.3%	0.0%	0.0%		7.3%
AM Peak	02:00	07:00	07:00	06:00	06:00	09:00		07:00	09:00		03:00			07:00	09:00
Vol.	1	84	39	1	7	11		4	7		2			143	24
PM Peak	14:00	16:00	16:00	12:00	13:00	12:00		17:00	13:00		16:00	21:00		16:00	13:00
Vol.	1	205	62	1	5	4		2	5		1	1		274	12
Grand Total	7	1599	586	4	45	60	0	11	45	0	6	1	0	2364	172
Percent	0.3%	67.6%	24.8%	0.2%	1.9%	2.5%	0.0%	0.5%	1.9%	0.0%	0.3%	0.0%	0.0%		7.3%

Field Data Services of Arizona, Inc.

31894 Whitetail Ln.
Temecula, CA 92592
(520) 316-6745

Site Code: Thurs 05/19/22
Station ID: 22-1242-004
Riggs Rd east of SR-347
33.219227, -111.987197
Latitude: 0' 0.0000 Undefined

Eastbound, Westbound

Start Time	Bikes	Cars & Tlrs	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Total	Truck Total
05/19/2															
2	0	13	3	0	0	0	0	0	0	1	0	0	0	17	1
01:00	0	11	3	0	1	0	0	0	0	1	0	0	0	16	2
02:00	1	17	3	0	1	0	0	0	1	0	0	0	0	23	2
03:00	0	34	18	0	2	3	0	2	2	1	2	0	0	64	12
04:00	1	63	47	0	2	2	2	7	4	0	0	0	0	128	17
05:00	3	128	74	0	4	7	4	2	2	0	0	0	0	224	19
06:00	0	188	69	2	7	8	0	7	7	0	0	0	0	288	31
07:00	0	208	84	1	4	11	8	14	9	0	1	0	0	340	48
08:00	0	159	69	0	3	6	1	7	3	0	0	0	0	248	20
09:00	1	132	57	1	9	12	4	1	7	0	3	0	0	227	37
10:00	0	126	52	1	3	4	3	5	6	0	0	0	0	200	22
11:00	0	151	70	0	6	3	0	5	7	1	0	1	0	244	23
12 PM	1	147	67	2	2	8	0	1	5	2	0	0	0	235	20
13:00	0	147	70	0	10	2	0	1	8	0	1	0	0	239	22
14:00	2	210	94	0	8	1	0	0	6	0	0	0	0	321	15
15:00	1	267	105	1	3	0	1	0	0	0	0	0	0	378	5
16:00	1	330	88	1	1	1	0	0	5	0	1	0	0	428	9
17:00	1	229	49	0	4	2	0	2	0	0	1	0	0	288	9
18:00	1	156	39	0	0	0	0	1	1	0	0	0	0	198	2
19:00	0	84	26	0	0	0	0	0	0	0	0	0	0	110	0
20:00	1	70	16	0	1	0	0	0	3	0	0	0	0	91	4
21:00	1	49	15	0	0	1	0	0	1	0	1	1	0	69	4
22:00	0	53	8	0	0	0	0	0	2	0	0	0	0	63	2
23:00	0	27	10	0	0	0	0	0	0	0	0	0	0	37	0
Total	15	2999	1136	9	71	71	23	55	79	6	10	2	0	4476	326
Percent	0.3%	67.0%	25.4%	0.2%	1.6%	1.6%	0.5%	1.2%	1.8%	0.1%	0.2%	0.0%	0.0%		7.3%
AM Peak	05:00	07:00	07:00	06:00	09:00	09:00	07:00	07:00	07:00	00:00	09:00	11:00		07:00	07:00
Vol.	3	208	84	2	9	12	8	14	9	1	3	1		340	48
PM Peak	14:00	16:00	15:00	12:00	13:00	12:00	15:00	17:00	13:00	12:00	13:00	21:00		16:00	13:00
Vol.	2	330	105	2	10	8	1	2	8	2	1	1		428	22
Grand Total	15	2999	1136	9	71	71	23	55	79	6	10	2	0	4476	326
Percent	0.3%	67.0%	25.4%	0.2%	1.6%	1.6%	0.5%	1.2%	1.8%	0.1%	0.2%	0.0%	0.0%		7.3%

Field Data Services of Arizona, Inc.

31894 Whitetail Ln.
Temecula, CA 92592
(520) 316-6745

Site Code: Thurs 05/19/22
Station ID: 22-1242-005
Riggs Rd west of SR-347
33.219208, -111.990737
Latitude: 0' 0.0000 Undefined

Eastbound

Start Time	Bikes	Cars & Tlrs	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Total	Truck Total
05/19/2															
2	0	13	1	0	0	0	0	0	5	0	0	0	0	19	5
01:00	0	9	2	0	0	1	0	0	3	0	0	0	0	15	4
02:00	0	3	0	0	0	0	0	0	6	0	0	0	0	9	6
03:00	0	18	3	0	1	2	0	1	5	0	0	0	0	30	9
04:00	0	39	10	0	3	2	1	1	7	0	0	0	0	63	14
05:00	1	42	15	0	1	5	1	0	6	0	0	0	0	71	13
06:00	0	53	22	1	2	3	1	0	10	0	0	0	0	92	17
07:00	0	45	29	1	5	5	0	1	13	0	0	0	0	99	25
08:00	0	36	18	1	1	0	1	1	14	1	0	0	0	73	19
09:00	0	36	15	0	8	1	0	1	9	0	0	0	0	70	19
10:00	0	34	22	0	5	1	1	3	5	0	0	0	0	71	15
11:00	0	42	26	0	1	0	2	0	9	0	1	0	0	81	13
12 PM	1	45	16	0	2	3	0	0	8	0	0	0	0	75	13
13:00	1	56	34	0	2	3	1	0	5	0	0	0	0	102	11
14:00	3	105	39	0	0	0	1	0	2	0	0	0	0	150	3
15:00	1	131	32	1	2	0	0	0	4	0	0	0	0	171	7
16:00	0	169	46	1	1	1	0	0	2	0	0	0	0	220	5
17:00	1	103	33	1	0	2	0	0	0	0	0	0	0	140	3
18:00	0	68	11	0	0	0	0	1	2	0	0	0	0	82	3
19:00	0	32	3	0	0	0	0	0	2	0	0	0	0	37	2
20:00	0	29	3	0	0	0	0	0	4	0	0	0	0	36	4
21:00	0	26	3	0	0	0	0	0	3	0	0	0	0	32	3
22:00	0	23	3	0	0	0	0	0	1	0	0	0	0	27	1
23:00	0	21	1	0	0	0	0	0	2	0	0	0	0	24	2
Total	8	1178	387	6	34	29	9	9	127	1	1	0	0	1789	216
Percent	0.4%	65.8%	21.6%	0.3%	1.9%	1.6%	0.5%	0.5%	7.1%	0.1%	0.1%	0.0%	0.0%		12.1%
AM Peak	05:00	06:00	07:00	06:00	09:00	05:00	11:00	10:00	08:00	08:00	11:00			07:00	07:00
Vol.	1	53	29	1	8	5	2	3	14	1	1			99	25
PM Peak	14:00	16:00	16:00	15:00	12:00	12:00	13:00	18:00	12:00					16:00	12:00
Vol.	3	169	46	1	2	3	1	1	8					220	13
Grand Total	8	1178	387	6	34	29	9	9	127	1	1	0	0	1789	216
Percent	0.4%	65.8%	21.6%	0.3%	1.9%	1.6%	0.5%	0.5%	7.1%	0.1%	0.1%	0.0%	0.0%		12.1%

Field Data Services of Arizona, Inc.

31894 Whitetail Ln.
Temecula, CA 92592
(520) 316-6745

Site Code: Thurs 05/19/22
Station ID: 22-1242-005
Riggs Rd west of SR-347
33.219208, -111.990737
Latitude: 0' 0.0000 Undefined

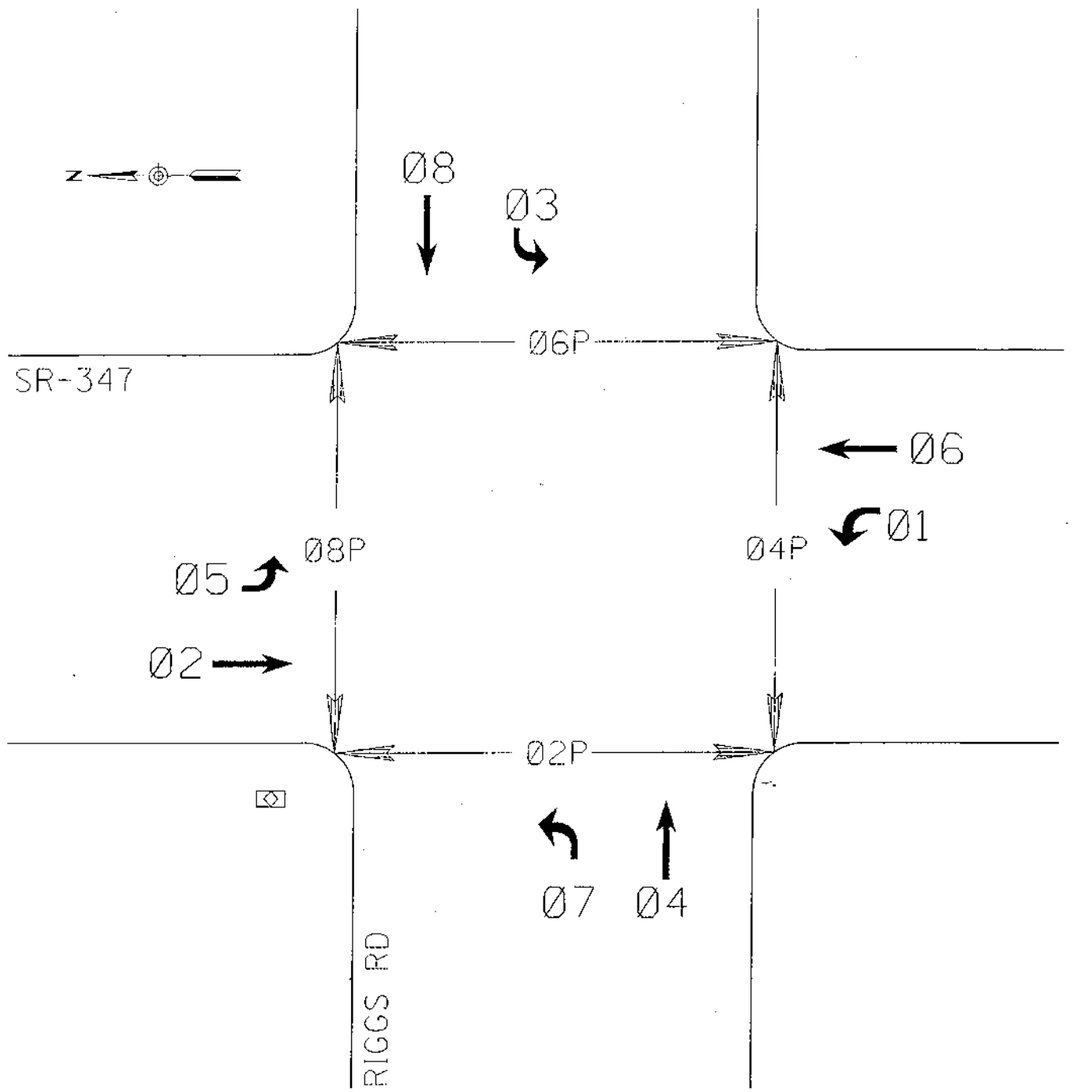
Westbound

Start Time	Bikes	Cars & Tlrs	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Total	Truck Total
05/19/2															
2	0	10	1	0	1	0	0	0	1	0	0	0	0	13	2
01:00	0	3	4	0	0	0	0	0	3	0	0	0	0	10	3
02:00	0	13	1	0	0	0	0	0	4	0	0	0	0	18	4
03:00	1	41	17	0	0	0	0	0	3	0	0	0	0	62	3
04:00	2	47	28	0	2	0	1	0	5	0	0	0	0	85	8
05:00	0	82	32	0	1	0	2	0	10	0	0	0	0	127	13
06:00	0	93	42	2	2	1	1	2	19	0	0	0	0	162	27
07:00	1	90	46	2	4	1	0	3	14	0	0	0	0	161	24
08:00	0	53	26	0	1	1	0	1	6	0	1	0	0	89	10
09:00	1	38	36	3	4	1	0	1	12	0	0	1	0	97	22
10:00	0	38	25	0	5	0	0	1	16	0	0	1	0	86	23
11:00	2	50	33	1	5	7	1	1	16	0	0	0	0	116	31
12 PM	0	59	31	1	3	3	0	0	18	0	0	0	0	115	25
13:00	1	69	36	0	5	0	0	1	15	0	0	0	0	127	21
14:00	1	64	54	0	2	2	0	0	22	0	0	0	0	145	26
15:00	0	73	51	1	4	1	0	0	9	0	1	0	0	140	16
16:00	0	84	50	0	1	1	0	1	4	0	1	0	0	142	8
17:00	1	57	24	0	0	2	0	2	3	0	0	0	0	89	7
18:00	0	46	12	0	3	0	0	0	3	0	0	0	0	64	6
19:00	1	21	7	0	0	0	0	0	2	0	0	0	0	31	2
20:00	0	25	6	0	1	0	0	0	1	0	0	0	0	33	2
21:00	1	21	7	0	0	0	0	0	2	0	0	1	0	32	3
22:00	0	21	4	0	0	0	0	0	2	0	0	0	0	27	2
23:00	0	11	4	0	0	0	0	0	2	0	0	0	0	17	2
Total	12	1109	577	10	44	20	5	13	192	0	3	3	0	1988	290
Percent	0.6%	55.8%	29.0%	0.5%	2.2%	1.0%	0.3%	0.7%	9.7%	0.0%	0.2%	0.2%	0.0%		14.6%
AM Peak	04:00	06:00	07:00	09:00	10:00	11:00	05:00	07:00	06:00		08:00	09:00		06:00	11:00
Vol.	2	93	46	3	5	7	2	3	19		1	1		162	31
PM Peak	13:00	16:00	14:00	12:00	13:00	12:00		17:00	14:00		15:00	21:00		14:00	14:00
Vol.	1	84	54	1	5	3		2	22		1	1		145	26
Grand Total	12	1109	577	10	44	20	5	13	192	0	3	3	0	1988	290
Percent	0.6%	55.8%	29.0%	0.5%	2.2%	1.0%	0.3%	0.7%	9.7%	0.0%	0.2%	0.2%	0.0%		14.6%

Field Data Services of Arizona, Inc.
31894 Whitetail Ln.
Temecula, CA 92592
(520) 316-6745
Site Code: Thurs 05/19/22
Station ID: 22-1242-005
Riggs Rd west of SR-347
33.219208, -111.990737
Latitude: 0' 0.0000 Undefined

Eastbound, Westbound

Start Time	Bikes	Cars & Tlrs	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Total	Truck Total
05/19/2															
2	0	23	2	0	1	0	0	0	6	0	0	0	0	32	7
01:00	0	12	6	0	0	1	0	0	6	0	0	0	0	25	7
02:00	0	16	1	0	0	0	0	0	10	0	0	0	0	27	10
03:00	1	59	20	0	1	2	0	1	8	0	0	0	0	92	12
04:00	2	86	38	0	5	2	2	1	12	0	0	0	0	148	22
05:00	1	124	47	0	2	5	3	0	16	0	0	0	0	198	26
06:00	0	146	64	3	4	4	2	2	29	0	0	0	0	254	44
07:00	1	135	75	3	9	6	0	4	27	0	0	0	0	260	49
08:00	0	89	44	1	2	1	1	2	20	1	1	0	0	162	29
09:00	1	74	51	3	12	2	0	2	21	0	0	1	0	167	41
10:00	0	72	47	0	10	1	1	4	21	0	0	1	0	157	38
11:00	2	92	59	1	6	7	3	1	25	0	1	0	0	197	44
12 PM	1	104	47	1	5	6	0	0	26	0	0	0	0	190	38
13:00	2	125	70	0	7	3	1	1	20	0	0	0	0	229	32
14:00	4	169	93	0	2	2	1	0	24	0	0	0	0	295	29
15:00	1	204	83	2	6	1	0	0	13	0	1	0	0	311	23
16:00	0	253	96	1	2	2	0	1	6	0	1	0	0	362	13
17:00	2	160	57	1	0	4	0	2	3	0	0	0	0	229	10
18:00	0	114	23	0	3	0	0	1	5	0	0	0	0	146	9
19:00	1	53	10	0	0	0	0	0	4	0	0	0	0	68	4
20:00	0	54	9	0	1	0	0	0	5	0	0	0	0	69	6
21:00	1	47	10	0	0	0	0	0	5	0	0	1	0	64	6
22:00	0	44	7	0	0	0	0	0	3	0	0	0	0	54	3
23:00	0	32	5	0	0	0	0	0	4	0	0	0	0	41	4
Total	20	2287	964	16	78	49	14	22	319	1	4	3	0	3777	506
Percent	0.5%	60.6%	25.5%	0.4%	2.1%	1.3%	0.4%	0.6%	8.4%	0.0%	0.1%	0.1%	0.0%		13.4%
AM Peak	04:00	06:00	07:00	06:00	09:00	11:00	05:00	07:00	06:00	08:00	08:00	09:00		07:00	07:00
Vol.	2	146	75	3	12	7	3	4	29	1	1	1		260	49
PM Peak	14:00	16:00	16:00	15:00	13:00	12:00	13:00	17:00	12:00		15:00	21:00		16:00	12:00
Vol.	4	253	96	2	7	6	1	2	26		1	1		362	38
Grand Total	20	2287	964	16	78	49	14	22	319	1	4	3	0	3777	506
Percent	0.5%	60.6%	25.5%	0.4%	2.1%	1.3%	0.4%	0.6%	8.4%	0.0%	0.1%	0.1%	0.0%		13.4%



SR-347 @ RIGGS ROAD
GILA RIVER RESERVATION

ASC3 MaxView Timing Sheet

MaxView Controller Information

Controller Number	2010
Controller Name	SR-347 @ Riggs Rd
Main St.	SR-347
Side St.	Riggs Rd
IP Address	10.16.31.8
NTCIP Receive Port	Automatic
NTCIP Send Port	2600
NTCIP Timeout	1000

Sequence

Ring	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	2	3	4	9	10	13	14	0	0	0	0	0	0	0	0
2	5	6	7	8	11	12	15	16	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barrier																

Phase In Use/Ped

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
In Use	X	X	X	X	X	X	X	X	.	.	.	.	.	.	.	.
Exclusive ped	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Load Switch Assignment

			Dim				Auto Flash		
Channel	Source	Type	G	Y	R	D	Y	R	T
1	1	Phase Vehicle	.	.	.	.	.	X	.
2	2	Phase Vehicle	.	.	.	.	.	X	X
3	3	Phase Vehicle	.	.	.	.	.	X	.
4	4	Phase Vehicle	.	.	.	.	.	X	X
5	5	Phase Vehicle	.	.	.	X	.	X	.
6	6	Phase Vehicle	.	.	.	X	.	X	X
7	7	Phase Vehicle	.	.	.	X	.	X	.
8	8	Phase Vehicle	.	.	.	X	.	X	X
9	2	Phase Pedestrian	.	.	.	.	.	.	.
10	4	Phase Pedestrian	.	.	.	.	.	.	.
11	6	Phase Pedestrian	.	.	.	X	.	.	.
12	8	Phase Pedestrian	.	.	.	X	.	.	.
13	1	Overlap	.	.	.	.	.	X	.
14	2	Overlap	.	.	.	X	.	X	X
15	3	Overlap	.	.	.	.	.	X	.
16	4	Overlap	.	.	.	X	.	X	X

Start Up Options

Flash > Mon	All Red	Start Up Flash	Power Start Seq
Disabled	8	8	1

Phase

Phase	1	2	3	4	5	6	7	8
Interval	.	redClear	.	.	.	redClear	.	.

Phase	9	10	11	12	13	14	15	16
Interval	.	.	.	.	.	.	.	.

Overlap

Overlap	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	X	X	X	X	.	.	.	.	.	.	.	.	.	.	.	.

Automatic Flash Options

Flash > Mon	Exit Flash	Min Flash
Disabled	Green Walk	8

Phase

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Falsh Entry	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
Flash Exit	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.

Controller Timing Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Green	6	20	6	6	6	20	6	6	5	5	5	5	5	5	5	5
Bike Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cond Service Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	22	0	43	0	20	0	40	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Veh Ext	3.5	4.5	2.5	2.5	2.5	4.5	2.5	2.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Veh Ext2	0.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	40	75	38	55	40	75	23	55	35	35	35	35	35	35	35	35
Max2	40	170	40	72	23	170	40	72	40	40	40	40	40	40	40	40
Max3	25	180	25	45	15	120	35	35	0	0	0	0	0	0	0	0
Dynamic Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	2.0	1.0	2.0	2.0	2.0	1.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Actuations Before	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Added Initial	0.0	2.5	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	0	40	0	0	0	40	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Times

Overlap	Type	Lag GRN	Yellow	Red	Advance GRN
1	Other/Econolite	0.0	0.0	0.0	0.0
2	Other/Econolite	0.0	0.0	0.0	0.0
3	Other/Econolite	0.0	0.0	0.0	0.0
4	Other/Econolite	0.0	0.0	0.0	0.0
5	Other/Econolite	0.0	0.0	0.0	0.0
6	Other/Econolite	0.0	0.0	0.0	0.0
7	Other/Econolite	0.0	0.0	0.0	0.0
8	Other/Econolite	0.0	0.0	0.0	0.0
9	Other/Econolite	0.0	0.0	0.0	0.0
10	Other/Econolite	0.0	0.0	0.0	0.0
11	Other/Econolite	0.0	0.0	0.0	0.0
12	Other/Econolite	0.0	0.0	0.0	0.0
13	Other/Econolite	0.0	0.0	0.0	0.0
14	Other/Econolite	0.0	0.0	0.0	0.0
15	Other/Econolite	0.0	0.0	0.0	0.0
16	Other/Econolite	0.0	0.0	0.0	0.0

Overlap Configuration

Overlap	A

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	N

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	O

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Overlap	P

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Included	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Protected	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Modifier	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Protect	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Not Overlap	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag X Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lag 2 Phase	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Phase Table

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Guar Passage	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
Non Act I	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Non Act II	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dual Entry	.	.	.	X	.	.	.	X	.	.	.	.	.	.	.	.
Cond Reservice	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Reservice	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Act Rest in Walk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Flashing Walk	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr thru Yellow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ped Clr thru Red	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Immed Gap Red	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Options

Enable Pretimed Mode	Free Input Enables Pretimed
Enabled	Disabled

Pre-Timed Phases

Phases	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Phases Recall

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Locking Detector	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Vehicle Detector	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
Ped Detector	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Max Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Soft Recall	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
No Rest	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Added Int Calc	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Coordination Options

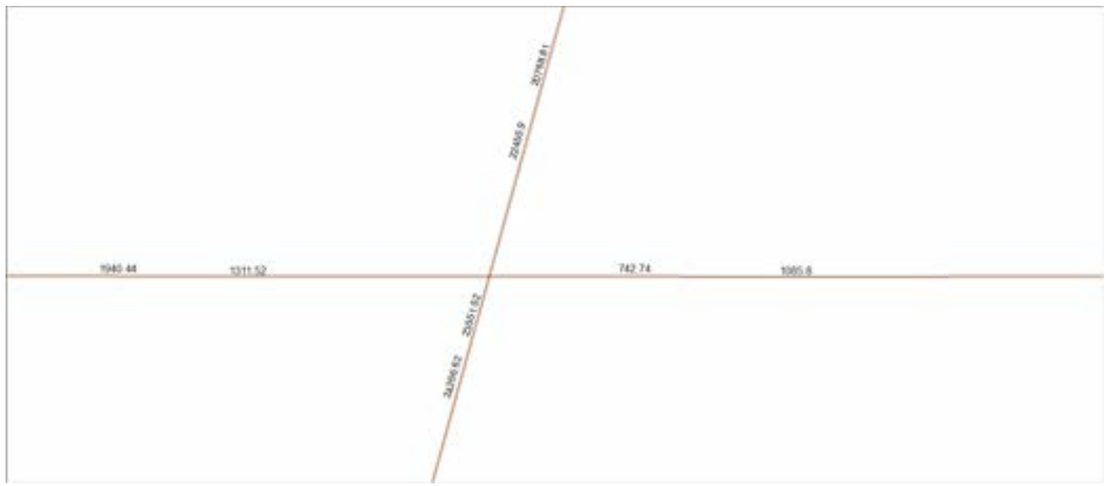
System Source	System	ECPI Coord	Enabled
Transition	Shortway	System Format	Standard
Dwell Add Time	30	Max Select	MaxInhibit
Delay Coord Walk	Disabled	Call Use Ped Time	Enabled
Offset Ref	Lead	Ped Reservice	Disabled
Ped Recall	Disabled	FO Add Initial	Disabled
Local Zero Override	Disabled	Multi Sync	Disabled
Re-sync Count	0	Force Mode	Floating

Patterns

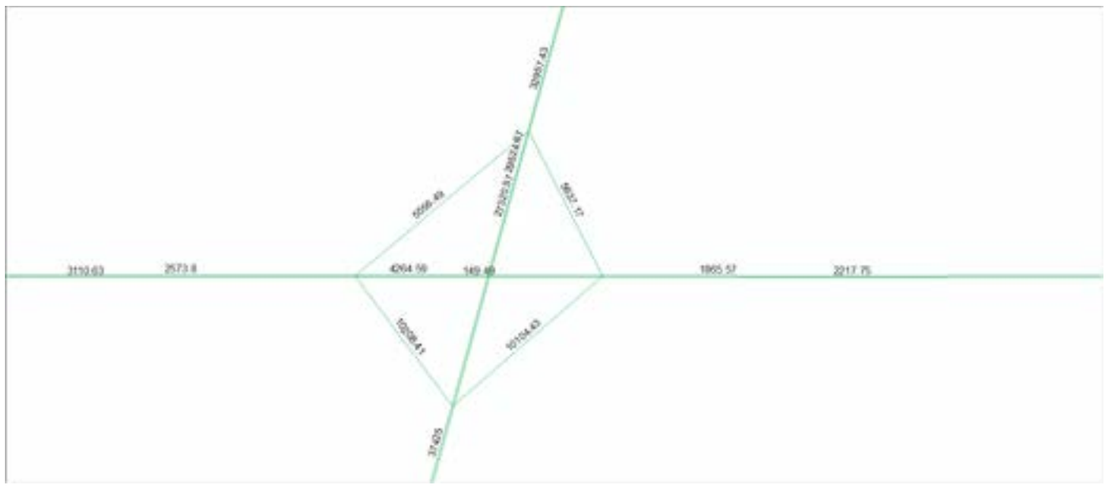
Pattern	Split #	Cycle	Offset	Phase Splits																Coordination Phases													
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	3	180	0	23	143	22	52	21	145	22	52	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
2	2	190	0	23	104	21	40	21	104	23	40	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
3	3	180	0	13	93	12	62	11	95	12	62	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
4	4	135	0	21	52	21	41	21	52	21	41	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
5	5	135	0	11	92	11	21	11	92	11	21	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
6	6	135	0	11	52	11	61	11	52	11	61	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
7	7	240	0	23	130	32	55	21	132	22	65	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
8	8	180	0	13	128	11	28	10	131	11	28	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
9	9	180	0	13	93	12	62	11	95	12	62	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
10	10	120	0	18	53	20	29	16	55	20	29	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
11	11	180	0	11	145	11	13	11	145	11	13	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
12	12	180	0	130	26	11	13	130	26	11	13	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
13	13	180	0	130	26	11	13	26	130	11	13	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
14	14	180	0	26	130	11	13	130	26	11	13	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
15	15	180	0	11	26	11	132	11	26	11	132	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
16	16	180	0	11	26	130	13	11	26	130	13	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
17	17	180	0	11	26	11	132	11	26	130	13	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
18	18	180	0	11	26	130	13	11	26	13	130	0	0	0	0	0	0	0	0	.	X	.	.	.	X	.	.	.	.	.	.	.	.	.	.
19	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
23	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
24	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
25	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
26	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
27	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
28	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
29	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
31	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
32	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
33	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
34	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
35	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
36	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
37	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
38	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
39	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
40	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
41	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
42	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
43	43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
44	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
45	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
46	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
47	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Appendix 2. MAG Model Traffic Volumes

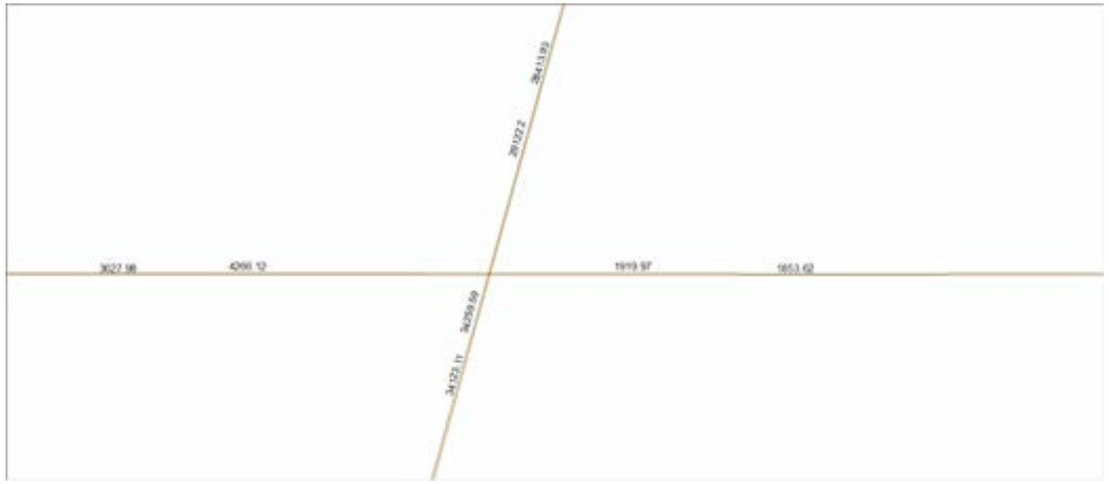
MAG Existing 2020 – 24 Hour Segment Volumes



MAG 2050 Build – 24 Hour Segment Volumes



MAG 2050 No-Build – 24 Hour Segment Volumes



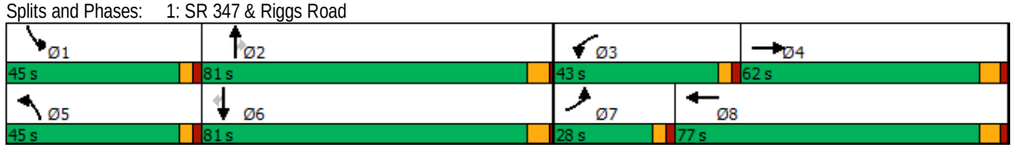
Appendix 3. Synchro and Rodel Output Reports (Existing, 2050 No-Build, 2050 Baseline Build, 2050 Build)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	20	64	85	25	1	116	2408	156	2	887	21
Future Volume (vph)	8	20	64	85	25	1	116	2408	156	2	887	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	155		0	165		175	175		185
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			180			180		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.886			0.996				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	1517	0	1703	1785	0	1719	3438	1538	1719	3438	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1626	1517	0	1703	1785	0	1719	3438	1538	1719	3438	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64			1				90			90
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		4234			5790			9202			8325	
Travel Time (s)		52.5			71.8			114.1			103.2	
Peak Hour Factor	0.85	0.85	0.85	0.72	0.72	0.72	0.96	0.96	0.96	0.94	0.94	0.94
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	9	24	75	118	35	1	121	2508	163	2	944	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	99	0	118	36	0	121	2508	163	2	944	22
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases									2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	20.0	20.0	6.0	20.0	20.0
Minimum Split (s)	11.0	57.0		11.0	54.0		11.0	35.0	35.0	11.0	33.0	33.0
Total Split (s)	28.0	62.0		43.0	77.0		45.0	81.0	81.0	45.0	81.0	81.0
Total Split (%)	12.1%	26.8%		18.6%	33.3%		19.5%	35.1%	35.1%	19.5%	35.1%	35.1%
Maximum Green (s)	23.0	55.0		38.0	70.0		40.0	75.0	75.0	40.0	75.0	75.0
Yellow Time (s)	3.0	5.0		3.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		5.0	7.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.5	4.5	3.5	4.5	4.5
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		43.0			40.0			22.0	22.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	6.4	9.0		14.4	26.3		14.6	75.7	75.7	6.3	58.1	58.1
Actuated g/C Ratio	0.05	0.08		0.12	0.22		0.12	0.64	0.64	0.05	0.49	0.49
v/c Ratio	0.10	0.57		0.58	0.09		0.58	1.15	0.16	0.02	0.56	0.03
Control Delay	61.6	36.6		61.9	38.7		61.8	96.5	5.9	60.0	25.1	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	36.6		61.9	38.7		61.8	96.5	5.9	60.0	25.1	0.0
LOS	E	D		E	D		E	F	A	E	C	A
Approach Delay		38.7			56.5			89.7			24.6	
Approach LOS		D			E			F			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 231			
Actuated Cycle Length: 119.2			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.15			
Intersection Signal Delay: 71.4		Intersection LOS: E	
Intersection Capacity Utilization 97.9%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: SR 347 & Riggs Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	9	99	118	36	121	2508	163	2	944	22
v/c Ratio	0.10	0.57	0.58	0.09	0.58	1.15	0.16	0.02	0.56	0.03
Control Delay	61.6	36.6	61.9	38.7	61.8	96.5	5.9	60.0	25.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	36.6	61.9	38.7	61.8	96.5	5.9	60.0	25.1	0.0
Queue Length 50th (ft)	7	25	84	20	86	~1138	18	1	257	0
Queue Length 95th (ft)	26	82	130	47	170	#1714	70	12	427	0
Internal Link Dist (ft)		4154		5710		9122			8245	
Turn Bay Length (ft)	165		155		165		175	175		185
Base Capacity (vph)	316	740	547	1058	582	2181	1009	582	2181	1009
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.13	0.22	0.03	0.21	1.15	0.16	0.00	0.43	0.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

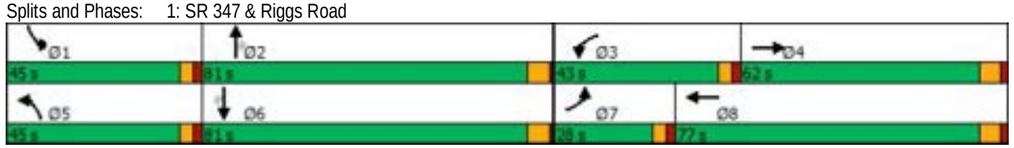
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	36	126	202	21	5	100	1224	118	4	2132	9
Future Volume (vph)	27	36	126	202	21	5	100	1224	118	4	2132	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	155		0	165		175	175		185
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			180			180		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.883			0.971				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	1511	0	1703	1740	0	1719	3438	1538	1719	3438	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1626	1511	0	1703	1740	0	1719	3438	1538	1719	3438	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		72			5				90			90
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		4234			5790			9202			8325	
Travel Time (s)		52.5			71.8			114.1			103.2	
Peak Hour Factor	0.94	0.94	0.94	0.84	0.84	0.84	0.94	0.94	0.94	0.96	0.96	0.96
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	29	38	134	240	25	6	106	1302	126	4	2221	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	172	0	240	31	0	106	1302	126	4	2221	9
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases									2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	20.0	20.0	6.0	20.0	20.0
Minimum Split (s)	11.0	57.0		11.0	54.0		11.0	35.0	35.0	11.0	33.0	33.0
Total Split (s)	28.0	62.0		43.0	77.0		45.0	81.0	81.0	45.0	81.0	81.0
Total Split (%)	12.1%	26.8%		18.6%	33.3%		19.5%	35.1%	35.1%	19.5%	35.1%	35.1%
Maximum Green (s)	23.0	55.0		38.0	70.0		40.0	75.0	75.0	40.0	75.0	75.0
Yellow Time (s)	3.0	5.0		3.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		5.0	7.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.5	4.5	3.5	4.5	4.5
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		43.0			40.0			22.0	22.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	16.3	16.4		28.5	34.0		15.1	93.9	93.9	6.5	75.8	75.8
Actuated g/C Ratio	0.10	0.10		0.18	0.21		0.09	0.59	0.59	0.04	0.48	0.48
v/c Ratio	0.17	0.78		0.79	0.08		0.65	0.64	0.13	0.06	1.36	0.01
Control Delay	77.5	65.0		82.4	43.6		90.5	26.1	7.0	83.0	198.0	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.5	65.0		82.4	43.6		90.5	26.1	7.0	83.0	198.0	0.0
LOS	E	E		F	D		F	C	A	F	F	A
Approach Delay		66.8			77.9			29.0			197.0	
Approach LOS		E			E			C			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 231			
Actuated Cycle Length: 159.1			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.36			
Intersection Signal Delay: 122.5		Intersection LOS: F	
Intersection Capacity Utilization 104.5%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 1: SR 347 & Riggs Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	29	172	240	31	106	1302	126	4	2221	9
v/c Ratio	0.17	0.78	0.79	0.08	0.65	0.64	0.13	0.06	1.36	0.01
Control Delay	77.5	65.0	82.4	43.6	90.5	26.1	7.0	83.0	198.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.5	65.0	82.4	43.6	90.5	26.1	7.0	83.0	198.0	0.0
Queue Length 50th (ft)	30	103	240	21	108	441	15	4	~1595	0
Queue Length 95th (ft)	73	207	350	49	195	774	64	20	#2115	0
Internal Link Dist (ft)		4154		5710		9122			8245	
Turn Bay Length (ft)	165		155		165		175	175		185
Base Capacity (vph)	285	575	411	777	436	2028	944	436	1638	780
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.30	0.58	0.04	0.24	0.64	0.13	0.01	1.36	0.01

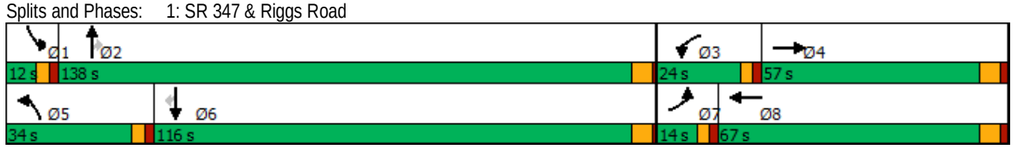
Intersection Summary
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	52	168	223	66	3	162	3363	218	3	1239	29
Future Volume (vph)	21	52	168	223	66	3	162	3363	218	3	1239	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	155		0	160		175	175		185
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			180			180		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.885			0.993				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	1515	0	1703	1780	0	1719	3438	1538	1719	3438	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1626	1515	0	1703	1780	0	1719	3438	1538	1719	3438	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		65			1				90			113
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		4234			5790			9202			8325	
Travel Time (s)		52.5			71.8			114.1			103.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	25	61	198	262	78	4	180	3737	242	3	1377	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	25	259	0	262	82	0	180	3737	242	3	1377	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases									2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	20.0	20.0	6.0	20.0	20.0
Minimum Split (s)	11.0	57.0		11.0	54.0		11.0	35.0	35.0	11.0	33.0	33.0
Total Split (s)	14.0	57.0		24.0	67.0		34.0	138.0	138.0	12.0	116.0	116.0
Total Split (%)	6.1%	24.7%		10.4%	29.0%		14.7%	59.7%	59.7%	5.2%	50.2%	50.2%
Maximum Green (s)	9.0	50.0		19.0	60.0		29.0	132.0	132.0	7.0	110.0	110.0
Yellow Time (s)	3.0	5.0		3.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		5.0	7.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.5	4.5	3.5	4.5	4.5
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		43.0			40.0			22.0	22.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	7.7	32.7		19.1	46.5		25.3	135.0	135.0	6.4	106.8	106.8
Actuated g/C Ratio	0.04	0.16		0.09	0.22		0.12	0.65	0.65	0.03	0.52	0.52
v/c Ratio	0.42	0.88		1.67	0.20		0.86	1.67	0.23	0.06	0.78	0.04
Control Delay	122.5	93.2		377.1	67.2		122.7	329.7	10.8	107.0	46.1	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	122.5	93.2		377.1	67.2		122.7	329.7	10.8	107.0	46.1	0.1
LOS	F	F		F	E		F	F	B	F	D	A
Approach Delay		95.8			303.2			302.2			45.2	
Approach LOS		F			F			F			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 231			
Actuated Cycle Length: 207			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.67			
Intersection Signal Delay: 234.2		Intersection LOS: F	
Intersection Capacity Utilization 142.6%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: SR 347 & Riggs Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	25	259	262	82	180	3737	242	3	1377	32
v/c Ratio	0.42	0.88	1.67	0.20	0.86	1.67	0.23	0.06	0.78	0.04
Control Delay	122.5	93.2	377.1	67.2	122.7	329.7	10.8	107.0	46.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	122.5	93.2	377.1	67.2	122.7	329.7	10.8	107.0	46.1	0.1
Queue Length 50th (ft)	33	262	~502	90	235	~3792	76	4	818	0
Queue Length 95th (ft)	75	369	#757	146	#413	#4490	168	20	1043	0
Internal Link Dist (ft)		4154		5710		9122			8245	
Turn Bay Length (ft)	165		155		160		175	175		185
Base Capacity (vph)	70	417	157	519	242	2241	1034	58	1836	874
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.62	1.67	0.16	0.74	1.67	0.23	0.05	0.75	0.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	94	330	529	55	13	140	1709	165	6	2977	13
Future Volume (vph)	71	94	330	529	55	13	140	1709	165	6	2977	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	155		0	160		175	175		185
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			180			180		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.883			0.972				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	1511	0	1703	1742	0	1719	3438	1538	1719	3438	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1626	1511	0	1703	1742	0	1719	3438	1538	1719	3438	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		54			5				90			90
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		4234			5790			9202			8325	
Travel Time (s)		52.5			71.8			114.1			103.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	84	111	388	622	65	15	156	1899	183	7	3308	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	499	0	622	80	0	156	1899	183	7	3308	14
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases									2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	20.0	20.0	6.0	20.0	20.0
Minimum Split (s)	11.0	57.0		11.0	54.0		11.0	35.0	35.0	11.0	33.0	33.0
Total Split (s)	25.0	61.0		41.0	77.0		17.0	117.0	117.0	12.0	112.0	112.0
Total Split (%)	10.8%	26.4%		17.7%	33.3%		7.4%	50.6%	50.6%	5.2%	48.5%	48.5%
Maximum Green (s)	20.0	54.0		36.0	70.0		12.0	111.0	111.0	7.0	106.0	106.0
Yellow Time (s)	3.0	5.0		3.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		5.0	7.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.5	4.5	3.5	4.5	4.5
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		43.0			40.0			22.0	22.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	16.1	54.0		36.0	73.9		12.0	118.2	118.2	6.6	106.0	106.0
Actuated g/C Ratio	0.07	0.23		0.16	0.32		0.05	0.51	0.51	0.03	0.46	0.46
v/c Ratio	0.74	1.27		2.35	0.14		1.75	1.08	0.22	0.14	2.10	0.02
Control Delay	140.2	196.1		650.2	54.3		431.0	98.1	16.6	115.7	525.3	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	140.2	196.1		650.2	54.3		431.0	98.1	16.6	115.7	525.3	0.1
LOS	F	F		F	D		F	F	B	F	F	A
Approach Delay		188.1			582.3			114.6			522.2	
Approach LOS		F			F			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 231			
Actuated Cycle Length: 231			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.35			
Intersection Signal Delay: 366.8		Intersection LOS: F	
Intersection Capacity Utilization 163.8%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: SR 347 & Riggs Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	84	499	622	80	156	1899	183	7	3308	14
v/c Ratio	0.74	1.27	2.35	0.14	1.75	1.08	0.22	0.14	2.10	0.02
Control Delay	140.2	196.1	650.2	54.3	431.0	98.1	16.6	115.7	525.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	140.2	196.1	650.2	54.3	431.0	98.1	16.6	115.7	525.3	0.1
Queue Length 50th (ft)	128	~888	~1543	83	~351	~1632	71	11	~4181	0
Queue Length 95th (ft)	188	#1041	#1682	129	#531	#1888	141	34	#4191	0
Internal Link Dist (ft)		4154		5710		9122			8245	
Turn Bay Length (ft)	165		155		160		175	175		185
Base Capacity (vph)	140	394	265	560	89	1759	831	52	1577	754
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	1.27	2.35	0.14	1.75	1.08	0.22	0.13	2.10	0.02

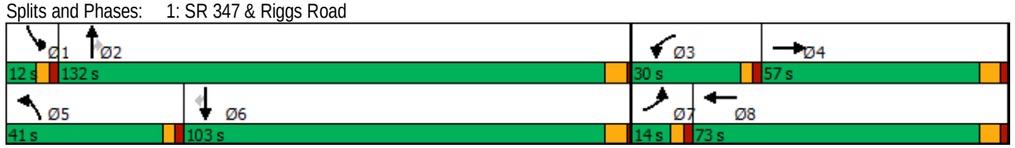
Intersection Summary
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	46	146	194	57	2	181	3756	243	3	1383	33
Future Volume (vph)	18	46	146	194	57	2	181	3756	243	3	1383	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	155		0	160		175	175		185
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			180			180		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.886			0.996				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	1517	0	1703	1785	0	1719	4940	1538	1719	4940	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1626	1517	0	1703	1785	0	1719	4940	1538	1719	4940	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		63			1				90			113
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		4234			5790			9202			8325	
Travel Time (s)		52.5			71.8			114.1			103.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.85	0.85	0.85
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	21	54	172	228	67	2	201	4173	270	4	1627	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	226	0	228	69	0	201	4173	270	4	1627	39
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases									2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	20.0	20.0	6.0	20.0	20.0
Minimum Split (s)	11.0	57.0		11.0	54.0		11.0	35.0	35.0	11.0	33.0	33.0
Total Split (s)	14.0	57.0		30.0	73.0		41.0	132.0	132.0	12.0	103.0	103.0
Total Split (%)	6.1%	24.7%		13.0%	31.6%		17.7%	57.1%	57.1%	5.2%	44.6%	44.6%
Maximum Green (s)	9.0	50.0		25.0	66.0		36.0	126.0	126.0	7.0	97.0	97.0
Yellow Time (s)	3.0	5.0		3.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		5.0	7.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.5	4.5	3.5	4.5	4.5
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		43.0			40.0			22.0	22.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	7.5	27.4		25.1	49.8		27.6	127.7	127.7	6.5	97.2	97.2
Actuated g/C Ratio	0.04	0.14		0.13	0.25		0.14	0.64	0.64	0.03	0.48	0.48
v/c Ratio	0.35	0.87		1.07	0.16		0.85	1.33	0.27	0.07	0.68	0.05
Control Delay	114.1	90.5		159.1	61.1		115.2	180.7	12.2	103.3	43.3	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	114.1	90.5		159.1	61.1		115.2	180.7	12.2	103.3	43.3	0.1
LOS	F	F		F	E		F	F	B	F	D	A
Approach Delay		92.5			136.4			168.1			42.4	
Approach LOS		F			F			F			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 231			
Actuated Cycle Length: 200.5			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.33			
Intersection Signal Delay: 133.4		Intersection LOS: F	
Intersection Capacity Utilization 118.9%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: SR 347 & Riggs Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	21	226	228	69	201	4173	270	4	1627	39
v/c Ratio	0.35	0.87	1.07	0.16	0.85	1.33	0.27	0.07	0.68	0.05
Control Delay	114.1	90.5	159.1	61.1	115.2	180.7	12.2	103.3	43.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	114.1	90.5	159.1	61.1	115.2	180.7	12.2	103.3	43.3	0.1
Queue Length 50th (ft)	27	214	~319	72	256	~2527	93	5	599	0
Queue Length 95th (ft)	64	315	#555	122	393	#3038	197	21	723	0
Internal Link Dist (ft)		4154		5710		9122			8245	
Turn Bay Length (ft)	165		155		160		175	175		185
Base Capacity (vph)	73	427	213	590	309	3147	1012	60	2429	813
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.53	1.07	0.12	0.65	1.33	0.27	0.07	0.67	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

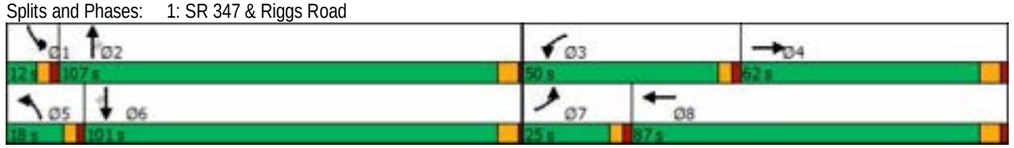
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	82	288	462	48	11	156	1909	184	6	3325	14
Future Volume (vph)	62	82	288	462	48	11	156	1909	184	6	3325	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	165		0	155		0	160		175	175		185
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	100			100			180			180		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt		0.883			0.972				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	1511	0	1703	1742	0	1719	4940	1538	1719	4940	1538
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1626	1511	0	1703	1742	0	1719	4940	1538	1719	4940	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		68			6				90			113
Link Speed (mph)		55			55			55			55	
Link Distance (ft)		4234			5790			9202			8325	
Travel Time (s)		52.5			71.8			114.1			103.2	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	73	96	339	544	56	13	173	2121	204	7	3694	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	435	0	544	69	0	173	2121	204	7	3694	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases									2			6
Detector Phase	7	4		3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	20.0	20.0	6.0	20.0	20.0
Minimum Split (s)	11.0	57.0		11.0	54.0		11.0	35.0	35.0	11.0	33.0	33.0
Total Split (s)	25.0	62.0		50.0	87.0		18.0	107.0	107.0	12.0	101.0	101.0
Total Split (%)	10.8%	26.8%		21.6%	37.7%		7.8%	46.3%	46.3%	5.2%	43.7%	43.7%
Maximum Green (s)	20.0	55.0		45.0	80.0		13.0	101.0	101.0	7.0	95.0	95.0
Yellow Time (s)	3.0	5.0		3.0	5.0		3.0	5.0	5.0	3.0	5.0	5.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.0		5.0	7.0		5.0	6.0	6.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.5	4.5	3.5	4.5	4.5
Recall Mode	None	None		None	None		None	Min	Min	None	Min	Min
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		43.0			40.0			22.0	22.0		20.0	20.0
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	15.0	55.0		45.0	85.0		13.0	108.2	108.2	6.6	95.0	95.0
Actuated g/C Ratio	0.06	0.24		0.19	0.37		0.06	0.47	0.47	0.03	0.41	0.41
v/c Ratio	0.70	1.06		1.64	0.11		1.80	0.92	0.27	0.14	1.82	0.02
Control Delay	137.2	127.2		351.6	45.5		447.4	64.1	21.8	115.7	405.8	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	137.2	127.2		351.6	45.5		447.4	64.1	21.8	115.7	405.8	0.1
LOS	F	F		F	D		F	E	C	F	F	A
Approach Delay		128.6			317.1			87.2			403.5	
Approach LOS		F			F			F			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 231			
Actuated Cycle Length: 231			
Natural Cycle: 145			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.82			
Intersection Signal Delay: 269.5		Intersection LOS: F	
Intersection Capacity Utilization 139.7%		ICU Level of Service H	
Analysis Period (min) 15			

Splits and Phases: 1: SR 347 & Riggs Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	73	435	544	69	173	2121	204	7	3694	16
v/c Ratio	0.70	1.06	1.64	0.11	1.80	0.92	0.27	0.14	1.82	0.02
Control Delay	137.2	127.2	351.6	45.5	447.4	64.1	21.8	115.7	405.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	137.2	127.2	351.6	45.5	447.4	64.1	21.8	115.7	405.8	0.1
Queue Length 50th (ft)	111	~640	~1192	64	~393	1058	98	11	~3093	0
Queue Length 95th (ft)	166	#799	#1341	106	#579	#1247	180	34	#3077	0
Internal Link Dist (ft)		4154		5710		9122			8245	
Turn Bay Length (ft)	165		155		160		175	175		185
Base Capacity (vph)	140	411	331	645	96	2313	768	52	2031	699
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	1.06	1.64	0.11	1.80	0.92	0.27	0.13	1.82	0.02

Intersection Summary
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

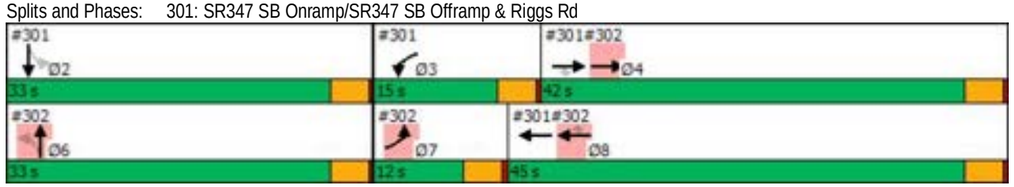
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	64	146	194	238	0	0	0	0	3	1	33
Future Volume (vph)	0	64	146	194	238	0	0	0	0	3	1	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	150		0	0		0	150		0
Storage Lanes	0		1	1		0	0		0	1		0
Taper Length (ft)	25			100			25			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.854	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3252	1455	1703	3406	0	0	0	0	1719	1545	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3252	1455	1703	3406	0	0	0	0	1719	1545	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			172								41	
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		1429			660			834			962	
Travel Time (s)		21.7			10.0			19.0			14.6	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.92	0.92	0.92	0.80	0.80	0.80
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	0	75	172	228	280	0	0	0	0	4	1	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	172	228	280	0	0	0	0	4	42	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	
Detector Template		Thru	Right	Left	Thru					Left	Thru	
Leading Detector (ft)		100	20	20	100					20	100	
Trailing Detector (ft)		0	0	0	0					0	0	
Detector 1 Position(ft)		0	0	0	0					0	0	
Detector 1 Size(ft)		6	20	20	6					20	6	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Perm	NA	
Protected Phases		4		3	8						2	

Lane Group	Ø6	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	6	7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4							2		
Detector Phase		4	4	3	8					2	2	
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	
Minimum Split (s)		20.0	20.0	17.0	20.0					20.0	20.0	
Total Split (s)		42.0	42.0	15.0	45.0					33.0	33.0	
Total Split (%)		46.7%	46.7%	16.7%	50.0%					36.7%	36.7%	
Maximum Green (s)		38.0	38.0	11.0	41.0					29.0	29.0	
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	
All-Red Time (s)		0.5	0.5	0.5	0.5					0.5	0.5	
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	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	
Recall Mode		None	None	None	None					None	None	
Walk Time (s)		5.0	5.0		5.0					5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		7.1	7.1	11.5	18.1					10.9	10.9	
Actuated g/C Ratio		0.18	0.18	0.29	0.46					0.28	0.28	
v/c Ratio		0.13	0.43	0.46	0.18					0.01	0.09	
Control Delay		15.9	7.4	18.5	8.0					11.3	5.4	
Queue Delay		0.0	0.0	0.0	0.0					0.0	0.0	
Total Delay		15.9	7.4	18.5	8.0					11.3	5.4	
LOS		B	A	B	A					B	A	
Approach Delay		10.0			12.7						6.0	
Approach LOS		A			B						A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 39.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.46			
Intersection Signal Delay: 11.5		Intersection LOS: B	
Intersection Capacity Utilization 36.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 301: SR347 SB Onramp/SR347 SB Offramp & Riggs Rd



Lane Group	Ø6	Ø7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	20.0	9.0
Total Split (s)	33.0	12.0
Total Split (%)	37%	13%
Maximum Green (s)	29.0	8.0
Yellow Time (s)	3.5	3.5
All-Red Time (s)	0.5	0.5
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		Lead
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	5.0	
Flash Dont Walk (s)	11.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	75	172	228	280	4	42
v/c Ratio	0.13	0.43	0.46	0.18	0.01	0.09
Control Delay	15.9	7.4	18.5	8.0	11.3	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	7.4	18.5	8.0	11.3	5.4
Queue Length 50th (ft)	7	0	27	5	1	0
Queue Length 95th (ft)	21	33	128	53	5	13
Internal Link Dist (ft)	1349			580		882
Turn Bay Length (ft)		150	150		150	
Base Capacity (vph)	3003	1357	499	3259	1294	1173
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.13	0.46	0.09	0.00	0.04

Intersection Summary

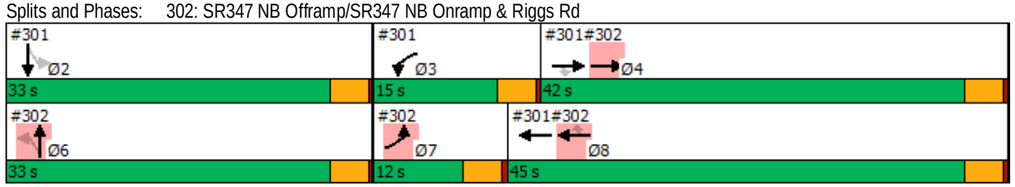
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	49	0	0	251	2	181	1	243	0	0	0
Future Volume (vph)	18	49	0	0	251	2	181	1	243	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		150	150		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	100			25			100			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.851				
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1626	3252	0	0	3406	1524	1719	1540	0	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1626	3252	0	0	3406	1524	1719	1540	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						61		286				
Link Speed (mph)		45			45			45			30	
Link Distance (ft)		660			2381			973			807	
Travel Time (s)		10.0			36.1			14.7			18.3	
Peak Hour Factor	0.80	0.80	0.80	0.85	0.85	0.85	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	2%	2%	2%
Adj. Flow (vph)	23	61	0	0	295	2	213	1	286	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	61	0	0	295	2	213	287	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Perm	NA				
Protected Phases	7	4			8			6				

Lane Group	Ø2	Ø3
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	2	3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8	6					
Detector Phase	7	4			8	8	6	6				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0				
Minimum Split (s)	9.0	20.0			20.0	20.0	20.0	20.0				
Total Split (s)	12.0	42.0			45.0	45.0	33.0	33.0				
Total Split (%)	13.3%	46.7%			50.0%	50.0%	36.7%	36.7%				
Maximum Green (s)	8.0	38.0			41.0	41.0	29.0	29.0				
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5	0.5	0.5	0.5				
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	Lead	Lag			Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Recall Mode	None	None			None	None	None	None				
Walk Time (s)		5.0			5.0	5.0	5.0	5.0				
Flash Dont Walk (s)		11.0			11.0	11.0	11.0	11.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	6.4	7.1			18.1	18.1	10.9	10.9				
Actuated g/C Ratio	0.16	0.18			0.46	0.46	0.28	0.28				
v/c Ratio	0.09	0.10			0.19	0.00	0.45	0.45				
Control Delay	20.1	29.9			8.5	0.0	16.0	4.7				
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0				
Total Delay	20.1	29.9			8.5	0.0	16.0	4.7				
LOS	C	C			A	A	B	A				
Approach Delay		27.2			8.4			9.5				
Approach LOS		C			A			A				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 39.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.46			
Intersection Signal Delay: 10.8		Intersection LOS: B	
Intersection Capacity Utilization 36.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 302: SR347 NB Offramp/SR347 NB Onramp & Riggs Rd



Lane Group	Ø2	Ø3
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	20.0	17.0
Total Split (s)	33.0	15.0
Total Split (%)	37%	17%
Maximum Green (s)	29.0	11.0
Yellow Time (s)	3.5	3.5
All-Red Time (s)	0.5	0.5
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		Lead
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	5.0	
Flash Dont Walk (s)	11.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT
Lane Group Flow (vph)	23	61	295	2	213	287
v/c Ratio	0.09	0.10	0.19	0.00	0.45	0.45
Control Delay	20.1	29.9	8.5	0.0	16.0	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	29.9	8.5	0.0	16.0	4.7
Queue Length 50th (ft)	6	8	14	0	40	0
Queue Length 95th (ft)	24	20	57	0	85	34
Internal Link Dist (ft)		580	2301			893
Turn Bay Length (ft)	150			150	150	
Base Capacity (vph)	347	3003	3259	1461	1294	1230
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.02	0.09	0.00	0.16	0.23

Intersection Summary

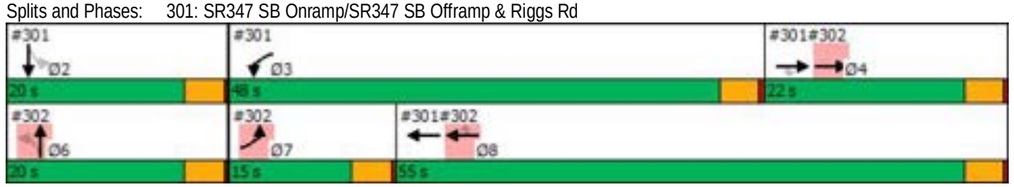
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	144	288	462	204	0	0	0	0	6	1	14
Future Volume (vph)	0	144	288	462	204	0	0	0	0	6	1	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	150		0	0		0	150		0
Storage Lanes	0		1	1		0	0		0	1		0
Taper Length (ft)	25			100			25			100		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.858	
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	3252	1455	1703	3406	0	0	0	0	1719	1553	0
Flt Permitted				0.950						0.950		
Satd. Flow (perm)	0	3252	1455	1703	3406	0	0	0	0	1719	1553	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			339								18	
Link Speed (mph)		45			45			30			45	
Link Distance (ft)		1429			660			834			962	
Travel Time (s)		21.7			10.0			19.0			14.6	
Peak Hour Factor	0.85	0.85	0.85	0.90	0.90	0.90	0.92	0.92	0.92	0.80	0.80	0.80
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	0	169	339	513	227	0	0	0	0	8	1	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	169	339	513	227	0	0	0	0	8	19	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2	1	1	2					1	2	
Detector Template		Thru	Right	Left	Thru					Left	Thru	
Leading Detector (ft)		100	20	20	100					20	100	
Trailing Detector (ft)		0	0	0	0					0	0	
Detector 1 Position(ft)		0	0	0	0					0	0	
Detector 1 Size(ft)		6	20	20	6					20	6	
Detector 1 Type		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex					Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Queue (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 1 Delay (s)		0.0	0.0	0.0	0.0					0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA	Perm	Prot	NA					Perm	NA	
Protected Phases		4		3	8						2	

Lane Group	Ø6	Ø7
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	6	7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases			4							2		
Detector Phase		4	4	3	8					2	2	
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	
Minimum Split (s)		20.0	20.0	9.0	20.0					20.0	20.0	
Total Split (s)		22.0	22.0	48.0	55.0					20.0	20.0	
Total Split (%)		24.4%	24.4%	53.3%	61.1%					22.2%	22.2%	
Maximum Green (s)		18.0	18.0	44.0	51.0					16.0	16.0	
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5	3.5	
All-Red Time (s)		0.5	0.5	0.5	0.5					0.5	0.5	
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	Lag	Lead	Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	
Recall Mode		Min	Min	None	Min					None	None	
Walk Time (s)		5.0	5.0		5.0					5.0	5.0	
Flash Dont Walk (s)		11.0	11.0		11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0					0	0	
Act Effct Green (s)		10.1	10.1	23.3	30.7					11.7	11.7	
Actuated g/C Ratio		0.17	0.17	0.40	0.53					0.20	0.20	
v/c Ratio		0.30	0.64	0.75	0.13					0.02	0.06	
Control Delay		25.1	9.7	27.4	6.9					24.3	13.4	
Queue Delay		0.0	0.0	0.0	0.0					0.0	0.0	
Total Delay		25.1	9.7	27.4	6.9					24.3	13.4	
LOS		C	A	C	A					C	B	
Approach Delay		14.8			21.1						16.6	
Approach LOS		B			C						B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 58			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 55.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 301: SR347 SB Onramp/SR347 SB Offramp & Riggs Rd



Lane Group	Ø6	Ø7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	20.0	9.0
Total Split (s)	20.0	15.0
Total Split (%)	22%	17%
Maximum Green (s)	16.0	11.0
Yellow Time (s)	3.5	3.5
All-Red Time (s)	0.5	0.5
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		Lead
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	5.0	
Flash Dont Walk (s)	11.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	169	339	513	227	8	19
v/c Ratio	0.30	0.64	0.75	0.13	0.02	0.06
Control Delay	25.1	9.7	27.4	6.9	24.3	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	9.7	27.4	6.9	24.3	13.4
Queue Length 50th (ft)	26	0	194	17	2	0
Queue Length 95th (ft)	63	54	235	35	13	16
Internal Link Dist (ft)	1349			580		882
Turn Bay Length (ft)		150	150		150	
Base Capacity (vph)	1088	712	1341	2933	511	474
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.48	0.38	0.08	0.02	0.04

Intersection Summary

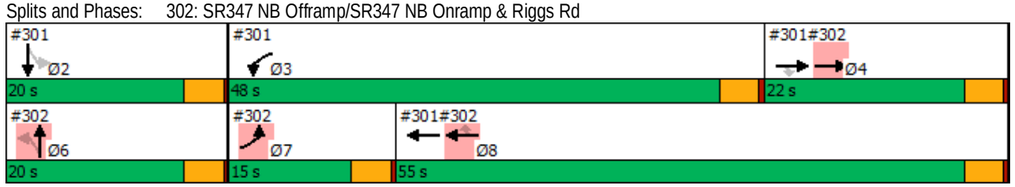
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	88	0	0	510	11	156	1	184	0	0	0
Future Volume (vph)	62	88	0	0	510	11	156	1	184	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		150	150		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	100			25			100			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850		0.851				
Flt Protected	0.950						0.950					
Satd. Flow (prot)	1626	3252	0	0	3406	1524	1719	1540	0	0	0	0
Flt Permitted	0.950						0.950					
Satd. Flow (perm)	1626	3252	0	0	3406	1524	1719	1540	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						61		216				
Link Speed (mph)		45			45			45			30	
Link Distance (ft)		660			2381			973			807	
Travel Time (s)		10.0			36.1			14.7			18.3	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	2%	2%	2%
Adj. Flow (vph)	73	104	0	0	600	13	184	1	216	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	104	0	0	600	13	184	217	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2			2	1	1	2				
Detector Template	Left	Thru			Thru	Right	Left	Thru				
Leading Detector (ft)	20	100			100	20	20	100				
Trailing Detector (ft)	0	0			0	0	0	0				
Detector 1 Position(ft)	0	0			0	0	0	0				
Detector 1 Size(ft)	20	6			6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Prot	NA			NA	Perm	Perm	NA				
Protected Phases	7	4			8			6				

Lane Group	Ø2	Ø3
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	2	3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases						8	6					
Detector Phase	7	4			8	8	6	6				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0				
Minimum Split (s)	9.0	20.0			20.0	20.0	20.0	20.0				
Total Split (s)	15.0	22.0			55.0	55.0	20.0	20.0				
Total Split (%)	16.7%	24.4%			61.1%	61.1%	22.2%	22.2%				
Maximum Green (s)	11.0	18.0			51.0	51.0	16.0	16.0				
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5	0.5	0.5	0.5				
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	Lead	Lag			Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Recall Mode	None	Min			Min	Min	None	None				
Walk Time (s)		5.0			5.0	5.0	5.0	5.0				
Flash Dont Walk (s)		11.0			11.0	11.0	11.0	11.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	8.3	10.1			30.7	30.7	11.7	11.7				
Actuated g/C Ratio	0.14	0.17			0.53	0.53	0.20	0.20				
v/c Ratio	0.31	0.18			0.33	0.02	0.53	0.45				
Control Delay	27.4	30.6			10.0	0.0	30.5	8.0				
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0				
Total Delay	27.4	30.6			10.0	0.0	30.5	8.0				
LOS	C	C			B	A	C	A				
Approach Delay		29.3			9.8			18.3				
Approach LOS		C			A			B				

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 58			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 15.6		Intersection LOS: B	
Intersection Capacity Utilization 55.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 302: SR347 NB Offramp/SR347 NB Onramp & Riggs Rd



Lane Group	Ø2	Ø3
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	20.0	9.0
Total Split (s)	20.0	48.0
Total Split (%)	22%	53%
Maximum Green (s)	16.0	44.0
Yellow Time (s)	3.5	3.5
All-Red Time (s)	0.5	0.5
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		Lead
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	5.0	
Flash Dont Walk (s)	11.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		

Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT
Lane Group Flow (vph)	73	104	600	13	184	217
v/c Ratio	0.31	0.18	0.33	0.02	0.53	0.45
Control Delay	27.4	30.6	10.0	0.0	30.5	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	30.6	10.0	0.0	30.5	8.0
Queue Length 50th (ft)	28	21	68	0	54	0
Queue Length 95th (ft)	82	8	112	0	147	48
Internal Link Dist (ft)		580	2301			893
Turn Bay Length (ft)	150			150	150	
Base Capacity (vph)	332	1088	2933	1321	511	609
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.10	0.20	0.01	0.36	0.36

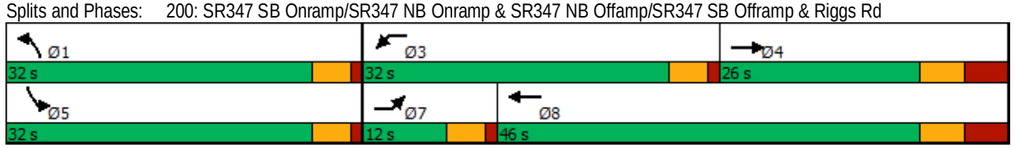
Intersection Summary

Lane Group	EBL	EBT	EBR2	WBL	WBT	WBR2	NBL	NBR2	SBL	SBR2
Lane Configurations										
Traffic Volume (vph)	18	46	146	194	57	2	181	243	3	33
Future Volume (vph)	18	46	146	194	57	2	181	243	3	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			300			0		0	
Storage Lanes	1			1			1		1	
Taper Length (ft)	100			100			25		25	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.850		0.850
Flt Protected	0.950			0.950			0.950		0.950	
Satd. Flow (prot)	1626	3252	1455	1703	3406	1524	1719	1538	1719	1538
Flt Permitted	0.950			0.950			0.950		0.950	
Satd. Flow (perm)	1626	3252	1455	1703	3406	1524	1719	1538	1719	1538
Right Turn on Red			Yes			Yes		Yes		Yes
Satd. Flow (RTOR)			224			224		286		224
Link Speed (mph)		45			45					
Link Distance (ft)		1169			1072					
Travel Time (s)		17.7			16.2					
Peak Hour Factor	0.80	0.80	0.80	0.85	0.85	0.85	0.85	0.85	0.80	0.80
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	5%
Adj. Flow (vph)	23	58	183	228	67	2	213	286	4	41
Shared Lane Traffic (%)										
Lane Group Flow (vph)	23	58	183	228	67	2	213	286	4	41
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right
Median Width(ft)		12			12					
Link Offset(ft)		0			0					
Crosswalk Width(ft)		16			16					
Two way Left Turn Lane										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		15	60	15	60	15
Number of Detectors	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left			Left	Right	Left	
Leading Detector (ft)	20	50	20	20	50	50	20	20	20	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	50	20	20	50	50	20	20	20	50
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel										
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	Free	Prot	Free
Protected Phases	7	4		3	8		1		5	
Permitted Phases			Free			Free		Free		Free
Detector Phase	7	4		3	8		1		5	
Switch Phase										
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0		5.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		9.5		9.5	

Lane Group	EBL	EBT	EBR2	WBL	WBT	WBR2	NBL	NBR2	SBL	SBR2
Total Split (s)	12.0	26.0		32.0	46.0		32.0		32.0	
Total Split (%)	13.3%	28.9%		35.6%	51.1%		35.6%		35.6%	
Maximum Green (s)	7.5	18.0		27.5	38.0		27.5		27.5	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5		3.5	
All-Red Time (s)	1.0	4.0		1.0	4.0		1.0		1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0		0.0	
Total Lost Time (s)	4.5	8.0		4.5	8.0		4.5		4.5	
Lead/Lag	Lead	Lag		Lead	Lag					
Lead-Lag Optimize?										
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0		3.0	
Recall Mode	None	None		None	None		None		None	
Walk Time (s)		5.0			5.0					
Flash Dont Walk (s)		11.0			11.0					
Pedestrian Calls (#/hr)		0			0					
Act Effct Green (s)	7.7	7.9	39.9	13.1	15.0	39.9	12.4	39.9	8.8	39.9
Actuated g/C Ratio	0.19	0.20	1.00	0.33	0.38	1.00	0.31	1.00	0.22	1.00
v/c Ratio	0.07	0.09	0.13	0.41	0.05	0.00	0.40	0.19	0.01	0.03
Control Delay	22.2	20.6	0.2	17.2	10.5	0.0	17.7	0.3	17.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.2	20.6	0.2	17.2	10.5	0.0	17.7	0.3	17.3	0.0
LOS	C	C	A	B	B	A	B	A	B	A
Approach Delay		6.6			15.6					
Approach LOS		A			B					

Intersection Summary		
Area Type:	Other	
Cycle Length: 90		
Actuated Cycle Length: 39.9		
Natural Cycle: 60		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.41		
Intersection Signal Delay: 9.3		Intersection LOS: A
Intersection Capacity Utilization 37.9%		ICU Level of Service A
Analysis Period (min) 15		

Splits and Phases: 200: SR347 SB Onramp/SR347 NB Onramp & SR347 NB Offamp/SR347 SB Offramp & Riggs Rd



Lane Group	EBL	EBT	EBR2	WBL	WBT	WBR2	NBL	NBR2	SBL	SBR2
Lane Group Flow (vph)	23	58	183	228	67	2	213	286	4	41
v/c Ratio	0.07	0.09	0.13	0.41	0.05	0.00	0.40	0.19	0.01	0.03
Control Delay	22.2	20.6	0.2	17.2	10.5	0.0	17.7	0.3	17.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.2	20.6	0.2	17.2	10.5	0.0	17.7	0.3	17.3	0.0
Queue Length 50th (ft)	6	7	0	53	4	0	49	0	1	0
Queue Length 95th (ft)	23	22	0	114	20	0	108	0	6	0
Internal Link Dist (ft)		1089			992					
Turn Bay Length (ft)	300		200	300		200		200		200
Base Capacity (vph)	396	1766	1455	1219	2850	1524	1231	1538	1231	1538
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.03	0.13	0.19	0.02	0.00	0.17	0.19	0.00	0.03

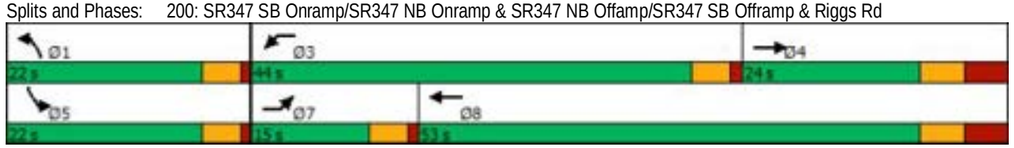
Intersection Summary

Lane Group	EBL	EBT	EBR2	WBL	WBT	WBR2	NBL	NBR2	SBL	SBR2
Lane Configurations										
Traffic Volume (vph)	62	82	288	462	48	11	156	184	6	14
Future Volume (vph)	62	82	288	462	48	11	156	184	6	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300			300			0		0	
Storage Lanes	1			1			1		1	
Taper Length (ft)	100			100			25		25	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.850		0.850
Flt Protected	0.950			0.950			0.950		0.950	
Satd. Flow (prot)	1626	3252	1455	1703	3406	1524	1719	1538	1719	1538
Flt Permitted	0.950			0.950			0.950		0.950	
Satd. Flow (perm)	1626	3252	1455	1703	3406	1524	1719	1538	1719	1538
Right Turn on Red			Yes			Yes		Yes		Yes
Satd. Flow (RTOR)			339			224		224		224
Link Speed (mph)		40			40					
Link Distance (ft)		1169			1072					
Travel Time (s)		19.9			18.3					
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.80	0.80
Heavy Vehicles (%)	11%	11%	11%	6%	6%	6%	5%	5%	5%	5%
Adj. Flow (vph)	73	96	339	544	56	13	184	216	8	18
Shared Lane Traffic (%)										
Lane Group Flow (vph)	73	96	339	544	56	13	184	216	8	18
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right
Median Width(ft)		12			12					
Link Offset(ft)		0			0					
Crosswalk Width(ft)		16			16					
Two way Left Turn Lane										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15	9	15	9
Number of Detectors	1	1	1	1	1	1	1	1	1	1
Detector Template	Left		Right	Left			Left	Right	Left	
Leading Detector (ft)	20	50	20	20	50	50	20	20	20	50
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	50	20	20	50	50	20	20	20	50
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel										
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	Free	Prot	Free
Protected Phases	7	4		3	8		1		5	
Permitted Phases			Free			Free		Free		Free
Detector Phase	7	4		3	8		1		5	
Switch Phase										
Minimum Initial (s)	5.0	4.0		5.0	4.0		5.0		5.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		9.5		9.5	

Lane Group	EBL	EBT	EBR2	WBL	WBT	WBR2	NBL	NBR2	SBL	SBR2
Total Split (s)	15.0	24.0		44.0	53.0		22.0		22.0	
Total Split (%)	16.7%	26.7%		48.9%	58.9%		24.4%		24.4%	
Maximum Green (s)	10.5	16.0		39.5	45.0		17.5		17.5	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5		3.5	
All-Red Time (s)	1.0	4.0		1.0	4.0		1.0		1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0		0.0	
Total Lost Time (s)	4.5	8.0		4.5	8.0		4.5		4.5	
Lead/Lag	Lead	Lag		Lead	Lag					
Lead-Lag Optimize?										
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0		3.0	
Recall Mode	None	None		None	None		None		None	
Walk Time (s)		5.0			5.0					
Flash Dont Walk (s)		11.0			11.0					
Pedestrian Calls (#/hr)		0			0					
Act Effct Green (s)	15.7	9.3	57.6	26.8	22.9	57.6	13.9	57.6	9.4	57.6
Actuated g/C Ratio	0.27	0.16	1.00	0.47	0.40	1.00	0.24	1.00	0.16	1.00
v/c Ratio	0.17	0.18	0.23	0.69	0.04	0.01	0.44	0.14	0.03	0.01
Control Delay	26.3	30.1	0.4	21.0	14.5	0.0	29.0	0.2	27.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	30.1	0.4	21.0	14.5	0.0	29.0	0.2	27.8	0.0
LOS	C	C	A	C	B	A	C	A	C	A
Approach Delay		9.7			19.9					
Approach LOS		A			B					

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 57.6			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 51.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 200: SR347 SB Onramp/SR347 NB Onramp & SR347 NB Offamp/SR347 SB Offramp & Riggs Rd



Lane Group	EBL	EBT	EBR2	WBL	WBT	WBR2	NBL	NBR2	SBL	SBR2
Lane Group Flow (vph)	73	96	339	544	56	13	184	216	8	18
v/c Ratio	0.17	0.18	0.23	0.69	0.04	0.01	0.44	0.14	0.03	0.01
Control Delay	26.3	30.1	0.4	21.0	14.5	0.0	29.0	0.2	27.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	30.1	0.4	21.0	14.5	0.0	29.0	0.2	27.8	0.0
Queue Length 50th (ft)	8	17	0	171	10	0	62	0	3	0
Queue Length 95th (ft)	72	45	0	298	17	0	141	0	13	0
Internal Link Dist (ft)		1089			992					
Turn Bay Length (ft)	300		200	300		200		200		200
Base Capacity (vph)	566	1246	1455	1156	2540	1524	708	1538	708	1538
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.08	0.23	0.47	0.02	0.01	0.26	0.14	0.01	0.01

Intersection Summary

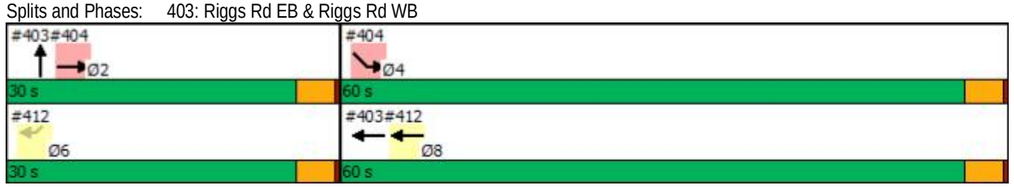
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	238	0	0	64	0	0	0	0
Future Volume (vph)	0	0	0	0	238	0	0	64	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	0	0	0	3438	0	0	3252	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	0	0	0	3438	0	0	3252	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		275			309			280			328	
Travel Time (s)		4.2			4.7			4.2			5.0	
Peak Hour Factor	0.92	0.92	0.92	0.85	0.85	0.85	0.80	0.80	0.80	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	5%	5%	5%	11%	11%	11%	0%	0%	0%
Adj. Flow (vph)	0	0	0	0	280	0	0	80	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	280	0	0	80	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		0			0			0			0	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					1			1				
Detector Template					Pres			Pres				
Leading Detector (ft)					50			50				
Trailing Detector (ft)					0			0				
Detector 1 Position(ft)					0			0				
Detector 1 Size(ft)					50			50				
Detector 1 Type					Cl+Ex			Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0			0.0				
Detector 1 Queue (s)					0.0			0.0				
Detector 1 Delay (s)					0.0			0.0				
Turn Type					NA			NA				
Protected Phases					8			2				
Permitted Phases												
Detector Phase					8			2				
Switch Phase												
Minimum Initial (s)					4.0			4.0				
Minimum Split (s)					20.0			20.0				
Total Split (s)					60.0			30.0				
Total Split (%)					66.7%			33.3%				
Maximum Green (s)					56.0			26.0				

Lane Group	Ø4	Ø6
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Turn Type		
Protected Phases	4	6
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	20.0	20.0
Total Split (s)	60.0	30.0
Total Split (%)	67%	33%
Maximum Green (s)	56.0	26.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Yellow Time (s)					3.5			3.5				
All-Red Time (s)					0.5			0.5				
Lost Time Adjust (s)					0.0			0.0				
Total Lost Time (s)					4.0			4.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)					3.0			3.0				
Recall Mode					None			None				
Walk Time (s)					5.0			5.0				
Flash Dont Walk (s)					11.0			11.0				
Pedestrian Calls (#/hr)					0			0				
Act Effct Green (s)					8.2			6.6				
Actuated g/C Ratio					0.44			0.35				
v/c Ratio					0.18			0.07				
Control Delay					4.5			6.2				
Queue Delay					0.0			0.0				
Total Delay					4.5			6.2				
LOS					A			A				
Approach Delay					4.5			6.2				
Approach LOS					A			A				

Intersection Summary		
Area Type:	Other	
Cycle Length: 90		
Actuated Cycle Length: 18.6		
Natural Cycle: 40		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.18		
Intersection Signal Delay: 4.9		Intersection LOS: A
Intersection Capacity Utilization 16.6%		ICU Level of Service A
Analysis Period (min) 15		

Splits and Phases: 403: Riggs Rd EB & Riggs Rd WB



Lane Group	Ø4	Ø6
Yellow Time (s)	3.5	3.5
All-Red Time (s)	0.5	0.5
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	5.0	5.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		

Intersection Summary

Lane Group	WBT	NBT
Lane Group Flow (vph)	280	80
v/c Ratio	0.18	0.07
Control Delay	4.5	6.2
Queue Delay	0.0	0.0
Total Delay	4.5	6.2
Queue Length 50th (ft)	8	3
Queue Length 95th (ft)	16	8
Internal Link Dist (ft)	229	200
Turn Bay Length (ft)		
Base Capacity (vph)	3438	3252
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.08	0.02

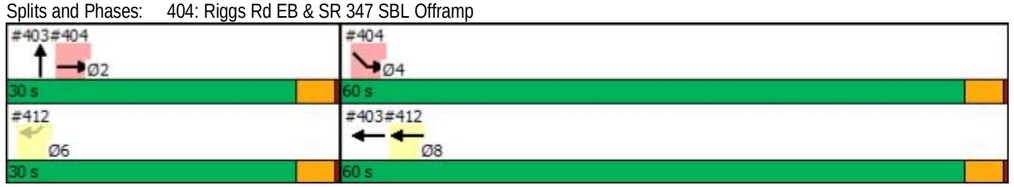
Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SEL	SER	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	0	64	0	0	3	0		
Future Volume (vph)	0	64	0	0	3	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00		
Frt								
Flt Protected					0.950			
Satd. Flow (prot)	0	3252	0	0	1719	0		
Flt Permitted					0.950			
Satd. Flow (perm)	0	3252	0	0	1719	0		
Right Turn on Red				Yes	Yes	Yes		
Satd. Flow (RTOR)					767			
Link Speed (mph)		45	45		45			
Link Distance (ft)		328	280		313			
Travel Time (s)		5.0	4.2		4.7			
Peak Hour Factor	0.80	0.80	0.92	0.92	0.80	0.80		
Heavy Vehicles (%)	11%	11%	0%	0%	5%	5%		
Adj. Flow (vph)	0	80	0	0	4	0		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	80	0	0	4	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Left	Left	Right	Left	Right		
Median Width(ft)		0	0		12			
Link Offset(ft)		0	0		0			
Crosswalk Width(ft)		16	16		16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15			9	15	9		
Number of Detectors		1			1			
Detector Template		Pres			Pres			
Leading Detector (ft)		50			50			
Trailing Detector (ft)		0			0			
Detector 1 Position(ft)		0			0			
Detector 1 Size(ft)		50			50			
Detector 1 Type		Cl+Ex			Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)		0.0			0.0			
Detector 1 Queue (s)		0.0			0.0			
Detector 1 Delay (s)		0.0			0.0			
Turn Type		NA			Prot			
Protected Phases		2			4		6	8
Permitted Phases								
Detector Phase		2			4			
Switch Phase								
Minimum Initial (s)		4.0			4.0		4.0	4.0
Minimum Split (s)		20.0			20.0		20.0	20.0
Total Split (s)		30.0			60.0		30.0	60.0
Total Split (%)		33.3%			66.7%		33%	67%
Maximum Green (s)		26.0			56.0		26.0	56.0

Lane Group	EBL	EBT	WBT	WBR	SEL	SER	Ø6	Ø8
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			
Total Lost Time (s)		4.0			4.0			
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)		3.0			3.0		3.0	3.0
Recall Mode		None			None		None	None
Walk Time (s)		5.0			5.0		5.0	5.0
Flash Dont Walk (s)		11.0			11.0		11.0	11.0
Pedestrian Calls (#/hr)		0			0		0	0
Act Effct Green (s)		6.6			8.2			
Actuated g/C Ratio		0.35			0.44			
v/c Ratio		0.07			0.00			
Control Delay		3.3			0.0			
Queue Delay		0.0			0.0			
Total Delay		3.3			0.0			
LOS		A			A			
Approach Delay		3.3						
Approach LOS		A						

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 18.6			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.18			
Intersection Signal Delay: 3.1		Intersection LOS: A	
Intersection Capacity Utilization 13.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 404: Riggs Rd EB & SR 347 SBL Offramp



Lane Group	EBT	SEL
Lane Group Flow (vph)	80	4
v/c Ratio	0.07	0.00
Control Delay	3.3	0.0
Queue Delay	0.0	0.0
Total Delay	3.3	0.0
Queue Length 50th (ft)	1	0
Queue Length 95th (ft)	3	0
Internal Link Dist (ft)	248	233
Turn Bay Length (ft)		
Base Capacity (vph)	3252	1719
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.02	0.00

Intersection Summary

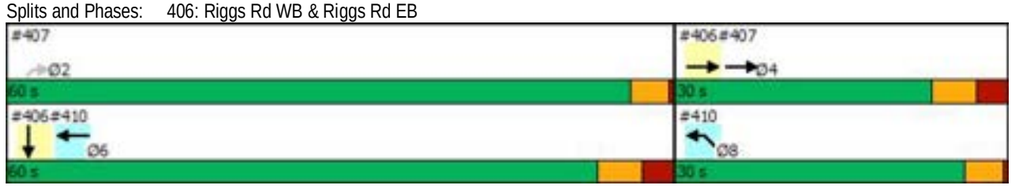
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	49	0	0	0	0	0	0	0	0	251	0
Future Volume (vph)	0	49	0	0	0	0	0	0	0	0	251	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3252	0	0	0	0	0	0	0	0	3406	0
Flt Permitted												
Satd. Flow (perm)	0	3252	0	0	0	0	0	0	0	0	3406	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		229			261			263			242	
Travel Time (s)		3.5			4.0			4.0			3.7	
Peak Hour Factor	0.80	0.80	0.80	0.92	0.92	0.92	0.92	0.92	0.92	0.85	0.85	0.85
Heavy Vehicles (%)	11%	11%	11%	0%	0%	0%	0%	0%	0%	6%	6%	6%
Adj. Flow (vph)	0	61	0	0	0	0	0	0	0	0	295	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	61	0	0	0	0	0	0	0	0	295	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		0			0			0			0	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1									1	
Detector Template		Pres									Pres	
Leading Detector (ft)		50									50	
Trailing Detector (ft)		0									0	
Detector 1 Position(ft)		0									0	
Detector 1 Size(ft)		50									50	
Detector 1 Type		Cl+Ex									Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0									0.0	
Detector 1 Queue (s)		0.0									0.0	
Detector 1 Delay (s)		0.0									0.0	
Turn Type		NA									NA	
Protected Phases		4									6	
Permitted Phases												
Detector Phase		4									6	
Switch Phase												
Minimum Initial (s)		4.0									4.0	
Minimum Split (s)		23.0									11.0	
Total Split (s)		30.0									60.0	
Total Split (%)		33.3%									66.7%	
Maximum Green (s)		23.0									53.0	

Lane Group	Ø2	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Turn Type		
Protected Phases	2	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	20.0	20.0
Total Split (s)	60.0	30.0
Total Split (%)	67%	33%
Maximum Green (s)	56.0	26.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Yellow Time (s)		4.0									4.0	
All-Red Time (s)		3.0									3.0	
Lost Time Adjust (s)		0.0									0.0	
Total Lost Time (s)		7.0									7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0									3.0	
Recall Mode		None									None	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		6.4									11.2	
Actuated g/C Ratio		0.25									0.44	
v/c Ratio		0.07									0.20	
Control Delay		9.6									7.7	
Queue Delay		0.0									0.0	
Total Delay		9.6									7.7	
LOS		A									A	
Approach Delay		9.6									7.7	
Approach LOS		A									A	

Intersection Summary		
Area Type:	Other	
Cycle Length: 90		
Actuated Cycle Length: 25.6		
Natural Cycle: 45		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.24		
Intersection Signal Delay: 8.1	Intersection LOS: A	
Intersection Capacity Utilization 21.9%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 406: Riggs Rd WB & Riggs Rd EB



Lane Group	Ø2	Ø8
Yellow Time (s)	3.5	3.5
All-Red Time (s)	0.5	0.5
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	5.0	5.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		

Intersection Summary

Lane Group	EBT	SBT
Lane Group Flow (vph)	61	295
v/c Ratio	0.07	0.20
Control Delay	9.6	7.7
Queue Delay	0.0	0.0
Total Delay	9.6	7.7
Queue Length 50th (ft)	3	16
Queue Length 95th (ft)	10	29
Internal Link Dist (ft)	149	162
Turn Bay Length (ft)		
Base Capacity (vph)	2744	3406
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.02	0.09

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NEL	NER	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	49	0	0	0	0	243		
Future Volume (vph)	49	0	0	0	0	243		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00		
Frt						0.865		
Flt Protected								
Satd. Flow (prot)	3252	0	0	0	0	1565		
Flt Permitted								
Satd. Flow (perm)	3252	0	0	0	0	1565		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)						805		
Link Speed (mph)	45			45	45			
Link Distance (ft)	261			599	409			
Travel Time (s)	4.0			9.1	6.2			
Peak Hour Factor	0.80	0.80	0.92	0.92	0.85	0.85		
Heavy Vehicles (%)	11%	11%	2%	2%	5%	5%		
Adj. Flow (vph)	61	0	0	0	0	286		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	61	0	0	0	0	286		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			0	0			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)		9	15		15	9		
Number of Detectors	2					1		
Detector Template	Thru					Right		
Leading Detector (ft)	100					20		
Trailing Detector (ft)	0					0		
Detector 1 Position(ft)	0					0		
Detector 1 Size(ft)	6					20		
Detector 1 Type	Cl+Ex					Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0					0.0		
Detector 1 Queue (s)	0.0					0.0		
Detector 1 Delay (s)	0.0					0.0		
Detector 2 Position(ft)	94							
Detector 2 Size(ft)	6							
Detector 2 Type	Cl+Ex							
Detector 2 Channel								
Detector 2 Extend (s)	0.0							
Turn Type	NA					Perm		
Protected Phases	4						6	8
Permitted Phases						2		
Detector Phase	4					2		
Switch Phase								

Lane Group	EBT	EBR	WBL	WBT	NEL	NER	Ø6	Ø8
Minimum Initial (s)	4.0					4.0	4.0	4.0
Minimum Split (s)	23.0					20.0	11.0	20.0
Total Split (s)	30.0					60.0	60.0	30.0
Total Split (%)	33.3%					66.7%	67%	33%
Maximum Green (s)	23.0					56.0	53.0	26.0
Yellow Time (s)	4.0					3.5	4.0	3.5
All-Red Time (s)	3.0					0.5	3.0	0.5
Lost Time Adjust (s)	0.0					0.0		
Total Lost Time (s)	7.0					4.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0					3.0	3.0	3.0
Recall Mode	None					None	None	None
Walk Time (s)						5.0		5.0
Flash Dont Walk (s)						11.0		11.0
Pedestrian Calls (#/hr)						0		0
Act Effct Green (s)	6.4					13.4		
Actuated g/C Ratio	0.25					0.52		
v/c Ratio	0.07					0.24		
Control Delay	3.2					0.5		
Queue Delay	0.0					0.0		
Total Delay	3.2					0.5		
LOS	A					A		
Approach Delay	3.2					0.5		
Approach LOS	A					A		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 25.6			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.24			
Intersection Signal Delay: 0.9		Intersection LOS: A	
Intersection Capacity Utilization 27.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 407: SR347 NBR Offramp & Riggs Rd EB

Lane Group	EBT	NER
Lane Group Flow (vph)	61	286
v/c Ratio	0.07	0.24
Control Delay	3.2	0.5
Queue Delay	0.0	0.0
Total Delay	3.2	0.5
Queue Length 50th (ft)	1	0
Queue Length 95th (ft)	2	0
Internal Link Dist (ft)	181	
Turn Bay Length (ft)		
Base Capacity (vph)	2744	1565
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.02	0.18

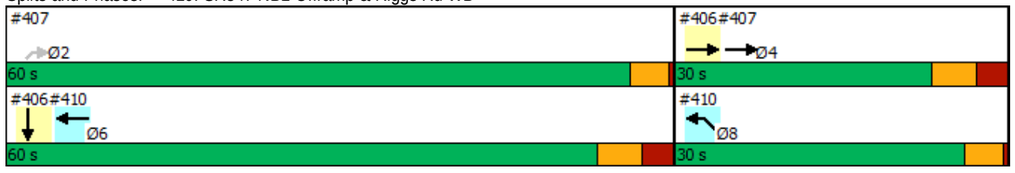
Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NWL	NWR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	0	251	181	0		
Future Volume (vph)	0	0	0	251	181	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00		
Frt								
Flt Protected					0.950			
Satd. Flow (prot)	0	0	0	3406	1719	0		
Flt Permitted					0.950			
Satd. Flow (perm)	0	0	0	3406	1719	0		
Right Turn on Red		Yes			Yes	Yes		
Satd. Flow (RTOR)					574			
Link Speed (mph)	45			45	45			
Link Distance (ft)	268			263	331			
Travel Time (s)	4.1			4.0	5.0			
Peak Hour Factor	0.92	0.92	0.85	0.85	0.85	0.85		
Heavy Vehicles (%)	0%	0%	6%	6%	5%	5%		
Adj. Flow (vph)	0	0	0	295	213	0		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	0	295	213	0		
Enter Blocked Intersection	No	No	No	No	Yes	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			0	12			
Link Offset(ft)	12			-12	0			
Crosswalk Width(ft)	0			0	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)		9	15		15	9		
Number of Detectors				1	1			
Detector Template				Pres	Pres			
Leading Detector (ft)				50	50			
Trailing Detector (ft)				0	0			
Detector 1 Position(ft)				0	0			
Detector 1 Size(ft)				50	50			
Detector 1 Type				Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)				0.0	0.0			
Detector 1 Queue (s)				0.0	0.0			
Detector 1 Delay (s)				0.0	0.0			
Turn Type				NA	Prot			
Protected Phases				6	8		2	4
Permitted Phases								
Detector Phase				6	8			
Switch Phase								
Minimum Initial (s)				4.0	4.0		4.0	4.0
Minimum Split (s)				11.0	20.0		20.0	23.0
Total Split (s)				60.0	30.0		60.0	30.0
Total Split (%)				66.7%	33.3%		67%	33%
Maximum Green (s)				53.0	26.0		56.0	23.0

Lane Group	EBT	EBR	WBL	WBT	NWL	NWR	Ø2	Ø4
Yellow Time (s)				4.0	3.5		3.5	4.0
All-Red Time (s)				3.0	0.5		0.5	3.0
Lost Time Adjust (s)				0.0	0.0			
Total Lost Time (s)				7.0	4.0			
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)				3.0	3.0		3.0	3.0
Recall Mode				None	None		None	None
Walk Time (s)					5.0		5.0	
Flash Dont Walk (s)					11.0		11.0	
Pedestrian Calls (#/hr)					0		0	
Act Effct Green (s)				11.2	8.6			
Actuated g/C Ratio				0.44	0.34			
v/c Ratio				0.20	0.22			
Control Delay				2.8	0.5			
Queue Delay				0.0	0.0			
Total Delay				2.8	0.5			
LOS				A	A			
Approach Delay				2.8	0.5			
Approach LOS				A	A			

Intersection Summary		
Area Type:	Other	
Cycle Length: 90		
Actuated Cycle Length: 25.6		
Natural Cycle: 45		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.24		
Intersection Signal Delay: 1.8		Intersection LOS: A
Intersection Capacity Utilization 37.7%		ICU Level of Service A
Analysis Period (min) 15		

Splits and Phases: 410: SR347 NBL Offramp & Riggs Rd WB



Lane Group	WBT	NWL
Lane Group Flow (vph)	295	213
v/c Ratio	0.20	0.22
Control Delay	2.8	0.5
Queue Delay	0.0	0.0
Total Delay	2.8	0.5
Queue Length 50th (ft)	4	0
Queue Length 95th (ft)	7	0
Internal Link Dist (ft)	183	251
Turn Bay Length (ft)		
Base Capacity (vph)	3406	1636
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.09	0.13

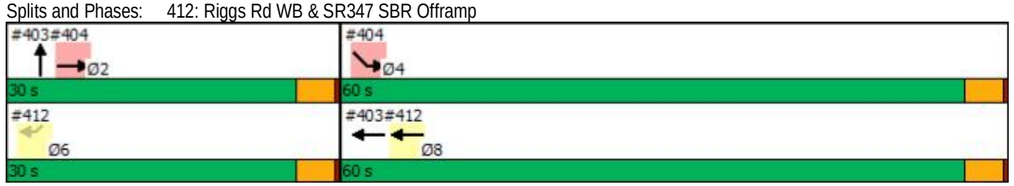
Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	238	0	0	33		
Future Volume (vph)	0	0	238	0	0	33		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00		
Frt						0.865		
Flt Protected								
Satd. Flow (prot)	0	0	3438	0	0	1565		
Flt Permitted								
Satd. Flow (perm)	0	0	3438	0	0	1565		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)						613		
Link Speed (mph)		45	45		45			
Link Distance (ft)		393	275		549			
Travel Time (s)		6.0	4.2		8.3			
Peak Hour Factor	0.92	0.92	0.85	0.85	0.80	0.80		
Heavy Vehicles (%)	2%	2%	5%	5%	5%	5%		
Adj. Flow (vph)	0	0	280	0	0	41		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	280	0	0	41		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Left	Left	Right	Left	Right		
Median Width(ft)		0	0		0			
Link Offset(ft)		0	0		0			
Crosswalk Width(ft)		16	16		16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15			9	15	9		
Number of Detectors			2			1		
Detector Template			Thru			Right		
Leading Detector (ft)			100			20		
Trailing Detector (ft)			0			0		
Detector 1 Position(ft)			0			0		
Detector 1 Size(ft)			6			20		
Detector 1 Type			Cl+Ex			Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)			0.0			0.0		
Detector 1 Queue (s)			0.0			0.0		
Detector 1 Delay (s)			0.0			0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type			NA			Perm		
Protected Phases			8				2	4
Permitted Phases						6		
Detector Phase			8			6		
Switch Phase								

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	Ø2	Ø4
Minimum Initial (s)			4.0			4.0	4.0	4.0
Minimum Split (s)			20.0			20.0	20.0	20.0
Total Split (s)			60.0			30.0	30.0	60.0
Total Split (%)			66.7%			33.3%	33%	67%
Maximum Green (s)			56.0			26.0	26.0	56.0
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		
Total Lost Time (s)			4.0			4.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)			3.0			3.0	3.0	3.0
Recall Mode			None			None	None	None
Walk Time (s)			5.0			5.0	5.0	5.0
Flash Dont Walk (s)			11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)			0			0	0	0
Act Effct Green (s)			8.2			6.5		
Actuated g/C Ratio			0.44			0.35		
v/c Ratio			0.18			0.04		
Control Delay			2.4			0.1		
Queue Delay			0.0			0.0		
Total Delay			2.4			0.1		
LOS			A			A		
Approach Delay			2.4			0.1		
Approach LOS			A			A		

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 18.6	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.18	
Intersection Signal Delay: 2.1	Intersection LOS: A
Intersection Capacity Utilization 16.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 412: Riggs Rd WB & SR347 SBR Offramp



Lane Group	WBT	SWR
Lane Group Flow (vph)	280	41
v/c Ratio	0.18	0.04
Control Delay	2.4	0.1
Queue Delay	0.0	0.0
Total Delay	2.4	0.1
Queue Length 50th (ft)	4	0
Queue Length 95th (ft)	7	0
Internal Link Dist (ft)	195	
Turn Bay Length (ft)		
Base Capacity (vph)	3438	1565
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.08	0.03

Intersection Summary

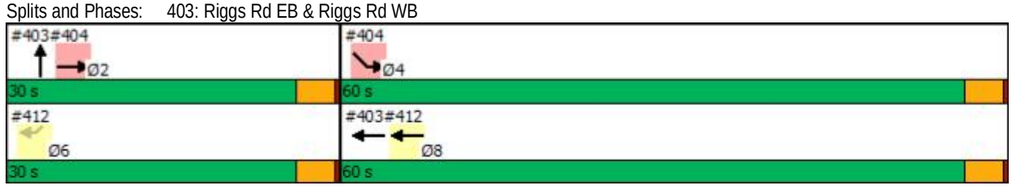
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	204	0	0	144	0	0	0	0
Future Volume (vph)	0	0	0	0	204	0	0	144	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	0	0	0	3438	0	0	3252	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	0	0	0	3438	0	0	3252	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		275			309			280			328	
Travel Time (s)		4.2			4.7			4.2			5.0	
Peak Hour Factor	0.92	0.92	0.92	0.85	0.85	0.85	0.85	0.85	0.85	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	5%	5%	5%	11%	11%	11%	0%	0%	0%
Adj. Flow (vph)	0	0	0	0	240	0	0	169	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	240	0	0	169	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		0			0			0			0	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					1			1				
Detector Template					Pres			Pres				
Leading Detector (ft)					50			50				
Trailing Detector (ft)					0			0				
Detector 1 Position(ft)					0			0				
Detector 1 Size(ft)					50			50				
Detector 1 Type					Cl+Ex			Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0			0.0				
Detector 1 Queue (s)					0.0			0.0				
Detector 1 Delay (s)					0.0			0.0				
Turn Type					NA			NA				
Protected Phases					8			2				
Permitted Phases												
Detector Phase					8			2				
Switch Phase												
Minimum Initial (s)					4.0			4.0				
Minimum Split (s)					20.0			20.0				
Total Split (s)					60.0			30.0				
Total Split (%)					66.7%			33.3%				
Maximum Green (s)					56.0			26.0				

Lane Group	Ø4	Ø6
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Turn Type		
Protected Phases	4	6
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	20.0	20.0
Total Split (s)	60.0	30.0
Total Split (%)	67%	33%
Maximum Green (s)	56.0	26.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Yellow Time (s)					3.5			3.5				
All-Red Time (s)					0.5			0.5				
Lost Time Adjust (s)					0.0			0.0				
Total Lost Time (s)					4.0			4.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)					3.0			3.0				
Recall Mode					None			None				
Walk Time (s)					5.0			5.0				
Flash Dont Walk (s)					11.0			11.0				
Pedestrian Calls (#/hr)					0			0				
Act Effct Green (s)					7.5			6.7				
Actuated g/C Ratio					0.36			0.33				
v/c Ratio					0.19			0.16				
Control Delay					5.5			6.4				
Queue Delay					0.0			0.0				
Total Delay					5.5			6.4				
LOS					A			A				
Approach Delay					5.5			6.4				
Approach LOS					A			A				

Intersection Summary		
Area Type:	Other	
Cycle Length: 90		
Actuated Cycle Length: 20.6		
Natural Cycle: 40		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.19		
Intersection Signal Delay: 5.9		Intersection LOS: A
Intersection Capacity Utilization 16.3%		ICU Level of Service A
Analysis Period (min) 15		

Splits and Phases: 403: Riggs Rd EB & Riggs Rd WB



Lane Group	Ø4	Ø6
Yellow Time (s)	3.5	3.5
All-Red Time (s)	0.5	0.5
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)	5.0	
Flash Dont Walk (s)	11.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		

Intersection Summary

403: Riggs Rd EB & Riggs Rd WB

Lane Group	WBT	NBT
Lane Group Flow (vph)	240	169
v/c Ratio	0.19	0.16
Control Delay	5.5	6.4
Queue Delay	0.0	0.0
Total Delay	5.5	6.4
Queue Length 50th (ft)	7	5
Queue Length 95th (ft)	15	14
Internal Link Dist (ft)	229	200
Turn Bay Length (ft)		
Base Capacity (vph)	3438	3252
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.07	0.05

Intersection Summary

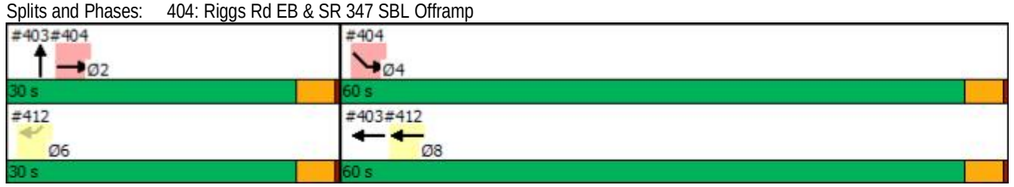
404: Riggs Rd EB & SR 347 SBL Offramp

Lane Group	EBL	EBT	WBT	WBR	SEL	SER	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	0	144	0	0	6	0		
Future Volume (vph)	0	144	0	0	6	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00		
Frt								
Flt Protected					0.950			
Satd. Flow (prot)	0	3252	0	0	1719	0		
Flt Permitted					0.950			
Satd. Flow (perm)	0	3252	0	0	1719	0		
Right Turn on Red				Yes	Yes	Yes		
Satd. Flow (RTOR)					515			
Link Speed (mph)		45	45		45			
Link Distance (ft)		328	280		313			
Travel Time (s)		5.0	4.2		4.7			
Peak Hour Factor	0.85	0.85	0.92	0.92	0.80	0.80		
Heavy Vehicles (%)	11%	11%	0%	0%	5%	5%		
Adj. Flow (vph)	0	169	0	0	8	0		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	169	0	0	8	0		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Left	Left	Right	Left	Right		
Median Width(ft)		0	0		12			
Link Offset(ft)		0	0		0			
Crosswalk Width(ft)		16	16		16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15			9	15	9		
Number of Detectors		1			1			
Detector Template		Pres			Pres			
Leading Detector (ft)		50			50			
Trailing Detector (ft)		0			0			
Detector 1 Position(ft)		0			0			
Detector 1 Size(ft)		50			50			
Detector 1 Type		Cl+Ex			Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)		0.0			0.0			
Detector 1 Queue (s)		0.0			0.0			
Detector 1 Delay (s)		0.0			0.0			
Turn Type		NA			Prot			
Protected Phases		2			4		6	8
Permitted Phases								
Detector Phase		2			4			
Switch Phase								
Minimum Initial (s)		4.0			4.0		4.0	4.0
Minimum Split (s)		20.0			20.0		20.0	20.0
Total Split (s)		30.0			60.0		30.0	60.0
Total Split (%)		33.3%			66.7%		33%	67%
Maximum Green (s)		26.0			56.0		26.0	56.0

Lane Group	EBL	EBT	WBT	WBR	SEL	SER	Ø6	Ø8
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			
Total Lost Time (s)		4.0			4.0			
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)		3.0			3.0		3.0	3.0
Recall Mode		None			None		None	None
Walk Time (s)		5.0			5.0			5.0
Flash Dont Walk (s)		11.0			11.0			11.0
Pedestrian Calls (#/hr)		0			0			0
Act Effct Green (s)		6.7			7.5			
Actuated g/C Ratio		0.33			0.36			
v/c Ratio		0.16			0.01			
Control Delay		3.4			0.0			
Queue Delay		0.0			0.0			
Total Delay		3.4			0.0			
LOS		A			A			
Approach Delay		3.4						
Approach LOS		A						

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 20.6			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.19			
Intersection Signal Delay: 3.3		Intersection LOS: A	
Intersection Capacity Utilization 14.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 404: Riggs Rd EB & SR 347 SBL Offramp



Lane Group	EBT	SEL
Lane Group Flow (vph)	169	8
v/c Ratio	0.16	0.01
Control Delay	3.4	0.0
Queue Delay	0.0	0.0
Total Delay	3.4	0.0
Queue Length 50th (ft)	3	0
Queue Length 95th (ft)	5	0
Internal Link Dist (ft)	248	233
Turn Bay Length (ft)		
Base Capacity (vph)	3252	1719
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.05	0.00

Intersection Summary

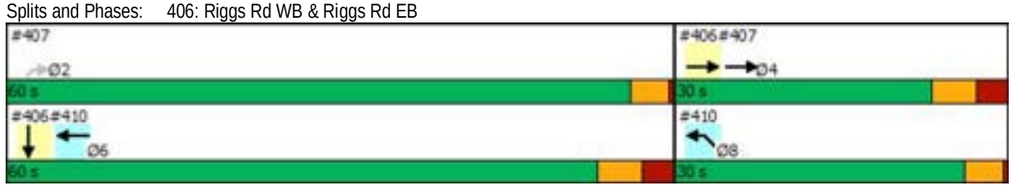
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	88	0	0	0	0	0	0	0	0	510	0
Future Volume (vph)	0	88	0	0	0	0	0	0	0	0	510	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3252	0	0	0	0	0	0	0	0	3406	0
Flt Permitted												
Satd. Flow (perm)	0	3252	0	0	0	0	0	0	0	0	3406	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)												
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		229			261			263			242	
Travel Time (s)		3.5			4.0			4.0			3.7	
Peak Hour Factor	0.85	0.85	0.85	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Heavy Vehicles (%)	11%	11%	11%	0%	0%	0%	0%	0%	0%	6%	6%	6%
Adj. Flow (vph)	0	104	0	0	0	0	0	0	0	0	567	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	104	0	0	0	0	0	0	0	0	567	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		0			0			0			0	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		1									1	
Detector Template		Pres									Pres	
Leading Detector (ft)		50									50	
Trailing Detector (ft)		0									0	
Detector 1 Position(ft)		0									0	
Detector 1 Size(ft)		50									50	
Detector 1 Type		Cl+Ex									Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0									0.0	
Detector 1 Queue (s)		0.0									0.0	
Detector 1 Delay (s)		0.0									0.0	
Turn Type		NA									NA	
Protected Phases		4									6	
Permitted Phases												
Detector Phase		4									6	
Switch Phase												
Minimum Initial (s)		4.0									4.0	
Minimum Split (s)		23.0									23.0	
Total Split (s)		30.0									60.0	
Total Split (%)		33.3%									66.7%	
Maximum Green (s)		23.0									53.0	

Lane Group	Ø2	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Heavy Vehicles (%)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Turn Type		
Protected Phases	2	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	4.0	4.0
Minimum Split (s)	20.0	20.0
Total Split (s)	60.0	30.0
Total Split (%)	67%	33%
Maximum Green (s)	56.0	26.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Yellow Time (s)		4.0									4.0	
All-Red Time (s)		3.0									3.0	
Lost Time Adjust (s)		0.0									0.0	
Total Lost Time (s)		7.0									7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0									3.0	
Recall Mode		None									None	
Walk Time (s)		5.0									5.0	
Flash Dont Walk (s)		11.0									11.0	
Pedestrian Calls (#/hr)		0									0	
Act Effct Green (s)		7.1									16.6	
Actuated g/C Ratio		0.23									0.53	
v/c Ratio		0.14									0.32	
Control Delay		13.0									7.4	
Queue Delay		0.0									0.0	
Total Delay		13.0									7.4	
LOS		B									A	
Approach Delay		13.0									7.4	
Approach LOS		B									A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 31.5			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.32			
Intersection Signal Delay: 8.2		Intersection LOS: A	
Intersection Capacity Utilization 29.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 406: Riggs Rd WB & Riggs Rd EB



Lane Group	Ø2	Ø8
Yellow Time (s)	3.5	3.5
All-Red Time (s)	0.5	0.5
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)		5.0
Flash Dont Walk (s)		11.0
Pedestrian Calls (#/hr)		0
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		

Intersection Summary

Lane Group	EBT	SBT
Lane Group Flow (vph)	104	567
v/c Ratio	0.14	0.32
Control Delay	13.0	7.4
Queue Delay	0.0	0.0
Total Delay	13.0	7.4
Queue Length 50th (ft)	8	35
Queue Length 95th (ft)	22	65
Internal Link Dist (ft)	149	162
Turn Bay Length (ft)		
Base Capacity (vph)	2355	3406
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.04	0.17

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NEL	NER	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	88	0	0	0	0	184		
Future Volume (vph)	88	0	0	0	0	184		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	1.00		
Frt						0.865		
Flt Protected								
Satd. Flow (prot)	3252	0	0	0	0	1565		
Flt Permitted								
Satd. Flow (perm)	3252	0	0	0	0	1565		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)						648		
Link Speed (mph)	45			45	45			
Link Distance (ft)	261			599	409			
Travel Time (s)	4.0			9.1	6.2			
Peak Hour Factor	0.85	0.85	0.92	0.92	0.85	0.85		
Heavy Vehicles (%)	11%	11%	2%	2%	5%	5%		
Adj. Flow (vph)	104	0	0	0	0	216		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	104	0	0	0	0	216		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			0	0			
Link Offset(ft)	0			0	0			
Crosswalk Width(ft)	16			16	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)		9	15		15	9		
Number of Detectors	2					1		
Detector Template	Thru					Right		
Leading Detector (ft)	100					20		
Trailing Detector (ft)	0					0		
Detector 1 Position(ft)	0					0		
Detector 1 Size(ft)	6					20		
Detector 1 Type	Cl+Ex					Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)	0.0					0.0		
Detector 1 Queue (s)	0.0					0.0		
Detector 1 Delay (s)	0.0					0.0		
Detector 2 Position(ft)	94							
Detector 2 Size(ft)	6							
Detector 2 Type	Cl+Ex							
Detector 2 Channel								
Detector 2 Extend (s)	0.0							
Turn Type	NA					Perm		
Protected Phases	4						6	8
Permitted Phases						2		
Detector Phase	4					2		
Switch Phase								

Lane Group	EBT	EBR	WBL	WBT	NEL	NER	Ø6	Ø8
Minimum Initial (s)	4.0					4.0	4.0	4.0
Minimum Split (s)	23.0					20.0	23.0	20.0
Total Split (s)	30.0					60.0	60.0	30.0
Total Split (%)	33.3%					66.7%	67%	33%
Maximum Green (s)	23.0					56.0	53.0	26.0
Yellow Time (s)	4.0					3.5	4.0	3.5
All-Red Time (s)	3.0					0.5	3.0	0.5
Lost Time Adjust (s)	0.0					0.0		
Total Lost Time (s)	7.0					4.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)	3.0					3.0	3.0	3.0
Recall Mode	None					None	None	None
Walk Time (s)	5.0						5.0	5.0
Flash Dont Walk (s)	11.0						11.0	11.0
Pedestrian Calls (#/hr)	0						0	0
Act Effct Green (s)	7.1					18.7		
Actuated g/C Ratio	0.23					0.59		
v/c Ratio	0.14					0.18		
Control Delay	3.5					0.3		
Queue Delay	0.0					0.0		
Total Delay	3.5					0.3		
LOS	A					A		
Approach Delay	3.5					0.3		
Approach LOS	A					A		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 31.5			
Natural Cycle: 50			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.32			
Intersection Signal Delay: 1.4		Intersection LOS: A	
Intersection Capacity Utilization 29.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 407: SR347 NBR Offramp & Riggs Rd EB

Lane Group	EBT	NER
Lane Group Flow (vph)	104	216
v/c Ratio	0.14	0.18
Control Delay	3.5	0.3
Queue Delay	0.0	0.0
Total Delay	3.5	0.3
Queue Length 50th (ft)	1	0
Queue Length 95th (ft)	3	0
Internal Link Dist (ft)	181	
Turn Bay Length (ft)		
Base Capacity (vph)	2355	1565
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.04	0.14

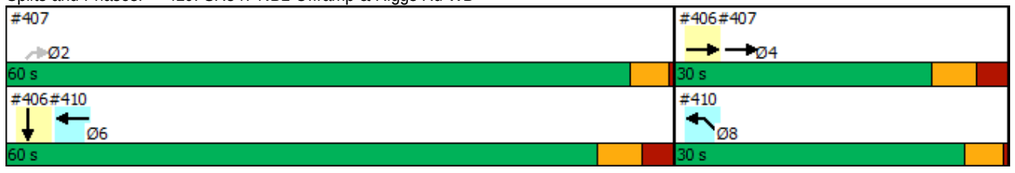
Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NWL	NWR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	0	510	156	0		
Future Volume (vph)	0	0	0	510	156	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00		
Frt								
Flt Protected					0.950			
Satd. Flow (prot)	0	0	0	3406	1719	0		
Flt Permitted					0.950			
Satd. Flow (perm)	0	0	0	3406	1719	0		
Right Turn on Red		Yes			Yes	Yes		
Satd. Flow (RTOR)					313			
Link Speed (mph)	45			45	45			
Link Distance (ft)	268			263	331			
Travel Time (s)	4.1			4.0	5.0			
Peak Hour Factor	0.92	0.92	0.90	0.90	0.85	0.85		
Heavy Vehicles (%)	0%	0%	6%	6%	5%	5%		
Adj. Flow (vph)	0	0	0	567	184	0		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	0	567	184	0		
Enter Blocked Intersection	No	No	No	No	Yes	No		
Lane Alignment	Left	Right	Left	Left	Left	Right		
Median Width(ft)	0			0	12			
Link Offset(ft)	12			-12	0			
Crosswalk Width(ft)	0			0	16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)		9	15		15	9		
Number of Detectors				1	1			
Detector Template				Pres	Pres			
Leading Detector (ft)				50	50			
Trailing Detector (ft)				0	0			
Detector 1 Position(ft)				0	0			
Detector 1 Size(ft)				50	50			
Detector 1 Type				Cl+Ex	Cl+Ex			
Detector 1 Channel								
Detector 1 Extend (s)				0.0	0.0			
Detector 1 Queue (s)				0.0	0.0			
Detector 1 Delay (s)				0.0	0.0			
Turn Type				NA	Prot			
Protected Phases				6	8		2	4
Permitted Phases								
Detector Phase				6	8			
Switch Phase								
Minimum Initial (s)				4.0	4.0		4.0	4.0
Minimum Split (s)				23.0	20.0		20.0	23.0
Total Split (s)				60.0	30.0		60.0	30.0
Total Split (%)				66.7%	33.3%		67%	33%
Maximum Green (s)				53.0	26.0		56.0	23.0

Lane Group	EBT	EBR	WBL	WBT	NWL	NWR	Ø2	Ø4
Yellow Time (s)				4.0	3.5		3.5	4.0
All-Red Time (s)				3.0	0.5		0.5	3.0
Lost Time Adjust (s)				0.0	0.0			
Total Lost Time (s)				7.0	4.0			
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)				3.0	3.0		3.0	3.0
Recall Mode				None	None		None	None
Walk Time (s)				5.0	5.0			5.0
Flash Dont Walk (s)				11.0	11.0			11.0
Pedestrian Calls (#/hr)				0	0			0
Act Effct Green (s)				16.6	9.2			
Actuated g/C Ratio				0.53	0.29			
v/c Ratio				0.32	0.25			
Control Delay				2.4	1.3			
Queue Delay				0.0	0.0			
Total Delay				2.4	1.3			
LOS				A	A			
Approach Delay				2.4	1.3			
Approach LOS				A	A			

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 31.5	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.32	
Intersection Signal Delay: 2.2	Intersection LOS: A
Intersection Capacity Utilization 39.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 410: SR347 NBL Offramp & Riggs Rd WB



Lane Group	WBT	NWL
Lane Group Flow (vph)	567	184
v/c Ratio	0.32	0.25
Control Delay	2.4	1.3
Queue Delay	0.0	0.0
Total Delay	2.4	1.3
Queue Length 50th (ft)	8	0
Queue Length 95th (ft)	12	4
Internal Link Dist (ft)	183	251
Turn Bay Length (ft)		
Base Capacity (vph)	3406	1427
Starvation Cap Reductn	24	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.17	0.13

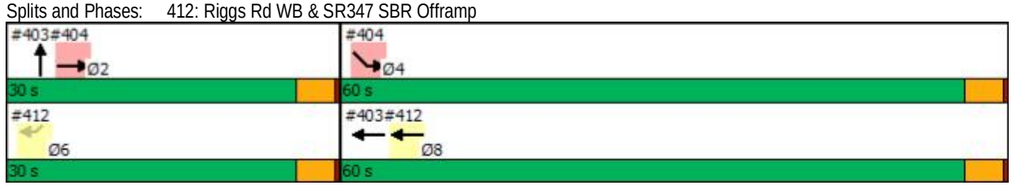
Intersection Summary

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	Ø2	Ø4
Lane Configurations								
Traffic Volume (vph)	0	0	204	0	0	14		
Future Volume (vph)	0	0	204	0	0	14		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00		
Frt						0.865		
Flt Protected								
Satd. Flow (prot)	0	0	3438	0	0	1565		
Flt Permitted								
Satd. Flow (perm)	0	0	3438	0	0	1565		
Right Turn on Red				Yes		Yes		
Satd. Flow (RTOR)						666		
Link Speed (mph)		45	45		45			
Link Distance (ft)		393	275		549			
Travel Time (s)		6.0	4.2		8.3			
Peak Hour Factor	0.92	0.92	0.85	0.85	0.80	0.80		
Heavy Vehicles (%)	2%	2%	5%	5%	5%	5%		
Adj. Flow (vph)	0	0	240	0	0	18		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	0	240	0	0	18		
Enter Blocked Intersection	No	No	No	No	No	No		
Lane Alignment	Left	Left	Left	Right	Left	Right		
Median Width(ft)		0	0		0			
Link Offset(ft)		0	0		0			
Crosswalk Width(ft)		16	16		16			
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Turning Speed (mph)	15			9	15	9		
Number of Detectors			2			1		
Detector Template			Thru			Right		
Leading Detector (ft)			100			20		
Trailing Detector (ft)			0			0		
Detector 1 Position(ft)			0			0		
Detector 1 Size(ft)			6			20		
Detector 1 Type			Cl+Ex			Cl+Ex		
Detector 1 Channel								
Detector 1 Extend (s)			0.0			0.0		
Detector 1 Queue (s)			0.0			0.0		
Detector 1 Delay (s)			0.0			0.0		
Detector 2 Position(ft)			94					
Detector 2 Size(ft)			6					
Detector 2 Type			Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)			0.0					
Turn Type			NA			Perm		
Protected Phases			8				2	4
Permitted Phases						6		
Detector Phase			8			6		
Switch Phase								

Lane Group	EBL	EBT	WBT	WBR	SWL	SWR	Ø2	Ø4
Minimum Initial (s)			4.0			4.0	4.0	4.0
Minimum Split (s)			20.0			20.0	20.0	20.0
Total Split (s)			60.0			30.0	30.0	60.0
Total Split (%)			66.7%			33.3%	33%	67%
Maximum Green (s)			56.0			26.0	26.0	56.0
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		
Total Lost Time (s)			4.0			4.0		
Lead/Lag								
Lead-Lag Optimize?								
Vehicle Extension (s)			3.0			3.0	3.0	3.0
Recall Mode			None			None	None	None
Walk Time (s)			5.0				5.0	5.0
Flash Dont Walk (s)			11.0				11.0	11.0
Pedestrian Calls (#/hr)			0				0	0
Act Effct Green (s)			7.5			6.7		
Actuated g/C Ratio			0.36			0.33		
v/c Ratio			0.19			0.02		
Control Delay			2.8			0.1		
Queue Delay			0.0			0.0		
Total Delay			2.8			0.1		
LOS			A			A		
Approach Delay			2.8			0.1		
Approach LOS			A			A		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 20.6			
Natural Cycle: 40			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.19			
Intersection Signal Delay: 2.6		Intersection LOS: A	
Intersection Capacity Utilization 16.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 412: Riggs Rd WB & SR347 SBR Offramp



Lane Group	WBT	SWR
Lane Group Flow (vph)	240	18
v/c Ratio	0.19	0.02
Control Delay	2.8	0.1
Queue Delay	0.0	0.0
Total Delay	2.8	0.1
Queue Length 50th (ft)	3	0
Queue Length 95th (ft)	6	0
Internal Link Dist (ft)	195	
Turn Bay Length (ft)		
Base Capacity (vph)	3438	1565
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.07	0.01

Intersection Summary

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	SR 347	344	0	23.00	2	28.00	2	168.00	135.50	10.50
2	Riggs Rd	90	0	24.70	2	28.00	2	56.15	135.60	15.50
3	SR 347	198	0	23.00	2	28.00	2	124.00	230.00	14.00
4	Riggs Rd	270	0	24.50	2	28.00	2	92.30	153.80	14.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	SR 347	164.00	33.00	2	24.00	1	12.00	1
2	Riggs Rd	164.00	33.00	2	30.80	2	24.70	2
3	SR 347	164.00	33.00	2	16.50	1	14.60	1
4	Riggs Rd	164.00	33.00	2	27.70	2	23.80	2

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	SR 347	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0
2	Riggs Rd	0	1.000	0	1.000	20.00	3689	0	24.70	3689	0
3	SR 347	0	1.000	0	1.000	20.00	3435	0	14.60	2181	0
4	Riggs Rd	0	1.000	0	1.000	20.00	3659	0	23.80	3555	0

2050 AM Peak
50% Confidence Level
Daylight conditions

West Roundabout (SB Ramps)

Project: SR 347 -Riggs
Scheme: Layout 1
Rodel-Win1 - Full Geometry

Operational Results

2050 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	SR 347	None	36		432		0	2174		0.0166	
2	Riggs Rd	None	210		197		271	2075		0.1012	
3	SR 347	None	0		0		340	0		0.0000	
4	Riggs Rd	None	432		0		67	2459		0.1757	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	SR 347	None	1.72		1.72	0.06		A		A
2	Riggs Rd	None	2.44		2.44	0.46		A		A
3	SR 347	None	0.00		0.00	0.00		A		A
4	Riggs Rd	None	2.97		2.97	1.14		A		A

Global Results

Performance and Accidents

2050 AM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	678		678
Capacity	veh/hr	6708		6708
Average Delay	sec/veh	2.74		2.74
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	0.52		0.52

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	SR 347	344	0	23.00	2	28.00	2	168.00	135.50	10.50
2	Riggs Rd	90	0	24.70	2	28.00	2	56.15	135.60	15.50
3	SR 347	198	0	23.00	2	28.00	2	124.00	230.00	14.00
4	Riggs Rd	270	0	24.50	2	28.00	2	92.30	153.80	14.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	SR 347	164.00	33.00	2	24.00	1	12.00	1
2	Riggs Rd	164.00	33.00	2	30.80	2	24.70	2
3	SR 347	164.00	33.00	2	16.50	1	14.60	1
4	Riggs Rd	164.00	33.00	2	27.70	2	23.80	2

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	SR 347	0	1.000	0	1.000	20.00	3435	0	12.00	1792	0
2	Riggs Rd	0	1.000	0	1.000	20.00	3689	0	24.70	3689	0
3	SR 347	0	1.000	0	1.000	20.00	3435	0	14.60	2181	0
4	Riggs Rd	0	1.000	0	1.000	20.00	3659	0	23.80	3555	0

Operational Results

2050 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	SR 347	None	20		666		0	1985		0.0101	
2	Riggs Rd	None	432		468		218	1882		0.2295	
3	SR 347	None	0		0		750	0		0.0000	
4	Riggs Rd	None	666		0		150	2459		0.2708	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	SR 347	None	2.35		2.35	0.05		A		A
2	Riggs Rd	None	3.22		3.22	1.28		A		A
3	SR 347	None	0.00		0.00	0.00		A		A
4	Riggs Rd	None	2.65		2.65	1.48		A		A

2050 PM Peak
50% Confidence Level
Daylight conditions

West Roundabout (SB Ramps)

Project: SR 347 -Riggs
Scheme: Layout 1
Rodel-Win1 - Full Geometry

Global Results

Performance and Accidents

2050 PM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1118		1118
Capacity	veh/hr	6326		6326
Average Delay	sec/veh	2.86		2.86
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	0.89		0.89

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	SR 347	344	0	24.00	2	28.00	2	131.40	135.50	14.00
2	Riggs Rd	90	0	24.50	2	28.00	2	75.90	175.50	13.00
3	SR 347	198	0	28.00	2	28.00	2	92.80	235.50	14.00
4	Riggs Rd	270	0	24.20	2	28.00	2	74.90	105.00	12.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	SR 347	180.20	29.50	2	18.70	1	17.50	1
2	Riggs Rd	180.20	21.90	1	30.00	2	23.70	2
3	SR 347	180.20	30.00	2	16.50	1	14.60	1
4	Riggs Rd	180.20	21.90	1	32.40	2	24.70	2

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	SR 347	0	1.000	0	1.000	20.00	3584	0	17.50	2614	0
2	Riggs Rd	0	1.000	0	1.000	20.00	3659	0	23.70	3540	0
3	SR 347	0	1.000	0	1.000	20.00	4182	0	14.60	2181	0
4	Riggs Rd	0	1.000	0	1.000	20.00	3614	0	24.70	3689	0

2050 AM Peak
50% Confidence Level
Daylight conditions

East Roundabout (NB Ramps)

Project: SR 347 -Riggs
Scheme: Layout 1
Rodel-Win1 - Full Geometry

Operational Results

2050 AM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	SR 347	None	0		0		20	0		0.0000	
2	Riggs Rd	None	67		0		432	2249		0.0298	
3	SR 347	None	424		67		0	2502		0.1694	
4	Riggs Rd	None	253		199		292	2235		0.1132	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	SR 347	None	0.00		0.00	0.00		A		A
2	Riggs Rd	None	2.01		2.01	0.13		A		A
3	SR 347	None	2.81		2.81	1.07		A		A
4	Riggs Rd	None	1.69		1.69	0.39		A		A

Global Results

Performance and Accidents

2050 AM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	744		744
Capacity	veh/hr	6987		6987
Average Delay	sec/veh	2.36		2.36
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	0.49		0.49

Operational Data

Main Geometry (ft)

Approach and Entry Geometry

Leg	Leg Names	Approach Bearing (deg)	Grade Separation G	Half Width V	Approach Lanes n	Entry Width E	Entry Lanes n	Flare Length L'	Entry Radius R	Entry Angle Phi
1	SR 347	344	0	24.00	2	28.00	2	131.40	135.50	14.00
2	Riggs Rd	90	0	24.50	2	28.00	2	75.90	175.50	13.00
3	SR 347	198	0	28.00	2	28.00	2	92.80	235.50	14.00
4	Riggs Rd	270	0	24.20	2	28.00	2	74.90	105.00	12.00

Circulating and Exit Geometry

Leg	Leg Names	Inscribed Diameter D	Circulating Width C	Circulating Lanes nc	Exit Width Ex	Exit Lanes nex	Exit Half Width Vx	Exit Half Width Lanes nvx
1	SR 347	180.20	29.50	2	18.70	1	17.50	1
2	Riggs Rd	180.20	21.90	1	30.00	2	23.70	2
3	SR 347	180.20	30.00	2	16.50	1	14.60	1
4	Riggs Rd	180.20	21.90	1	32.40	2	24.70	2

Capacity Modifiers and Capacity Calibration (veh/hr)

Leg	Leg Names	Entry Capacity		Entry Calibration		Approach Road			Exit Road		
		Capacity + or -	XWalk Factor	Intercept + or -	Slope Factor	V (ft)	Default Capacity	Calib Capacity	V (ft)	Default Capacity	Calib Capacity
1	SR 347	0	1.000	0	1.000	20.00	3584	0	17.50	2614	0
2	Riggs Rd	0	1.000	0	1.000	20.00	3659	0	23.70	3540	0
3	SR 347	0	1.000	0	1.000	20.00	4182	0	14.60	2181	0
4	Riggs Rd	0	1.000	0	1.000	20.00	3614	0	24.70	3689	0

Operational Results

2050 PM Peak - 60 minutes

Flows and Capacity

Leg	Leg Names	Bypass Type	Flows (veh/hr)					Capacity (veh/hr)			
			Arrival Flow		Opposing Flow		Exit Flow	Capacity		Average VCR	
			Entry	Bypass	Entry	Bypass		Entry	Bypass	Entry	Bypass
1	SR 347	None	0		0		73	0		0.0000	
2	Riggs Rd	None	150		0		666	2249		0.0667	
3	SR 347	None	340		150		0	2434		0.1397	
4	Riggs Rd	None	521		218		272	2213		0.2354	

Delays, Queues and Level of Service

Leg	Leg Names	Bypass Type	Average Delay (sec)			95% Queue (veh)		Level of Service		
			Entry	Bypass	Leg	Entry	Bypass	Entry	Bypass	Leg
1	SR 347	None	0.00		0.00	0.00		A		A
2	Riggs Rd	None	2.58		2.58	0.34		A		A
3	SR 347	None	2.96		2.96	0.90		A		A
4	Riggs Rd	None	1.99		1.99	0.97		A		A

2050 PM Peak
50% Confidence Level
Daylight conditions

East Roundabout (NB Ramps)

Project: SR 347 -Riggs
Scheme: Layout 1
Rodel-Win1 - Full Geometry

Global Results

Performance and Accidents

2050 PM Peak Global Performance

Parameter	Units	Entries	Bypasses	Total
Arrive Flows	veh/hr	1011		1011
Capacity	veh/hr	6897		6897
Average Delay	sec/veh	2.41		2.41
L.O.S. (Signal)	A – F	A		A
L.O.S. (Unsig)	A – F	A		A
Total Delay	veh.hrs	0.68		0.68

Appendix 4. HCS Output Reports (2050 Build)

HCS7 Basic Freeway Report

Project Information

Analyst	JPW	Date	9/13/2022
Agency	ADOT	Analysis Year	2050
Jurisdiction	GRIC	Time Period Analyzed	AM Peak
Project Description	SR 347/Riggs Rd DCR - 2050 Build NB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	0.33
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	74.1
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3756	Heavy Vehicle Adjustment Factor (f_{HV})	0.952
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1461
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.61
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	72.1
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	20.3
Total Ramp Density Adjustment	1.3	Level of Service (LOS)	C
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	74.1		

Design Analysis Table

Number of Lanes, ln	2	3	4	5
Density, pc/mi/ln	37.0	20.3	14.8	11.8
LOS	E	C	B	B

HCS7 Freeway Diverge Report

Project Information

Analyst	JPW	Date	1/30/2023
Agency	ADOT	Analysis Year	2050
Jurisdiction	GRIC	Time Period Analyzed	AM Peak
Project Description	SR 347/Riggs Rd DCR - 2050 Build NB	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	75.4	35.0
Segment Length (L) / Deceleration Length (L_A),ft	1500	600
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i)	3756	425
Peak Hour Factor (PHF)	0.90	0.90
Total Trucks, %	5.00	5.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.952	0.952
Flow Rate (vi),pc/h	4384	496
Capacity (c), pc/h	7200	2000
Volume-to-Capacity Ratio (v/c)	0.61	0.25

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Number of Outer Lanes on Freeway (N_O)	1
Distance to Upstream Ramp (L_{UP}), ft	-	Speed Index (D_S)	0.473
Downstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	1446
Distance to Downstream Ramp (L_{DOWN}), ft	-	Off-Ramp Influence Area Speed (S_R), mi/h	59.6
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FD})	0.628	Outer Lanes Freeway Speed (S_O), mi/h	81.0
Flow in Lanes 1 and 2 (v_{12}), pc/h	2938	Ramp Junction Speed (S), mi/h	65.3
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	-	Average Density (D), pc/mi/ln	22.4
Level of Service (LOS)	C	Density in Ramp Influence Area (D_R), pc/mi/ln	24.1

Design Analysis Table								
Freeway Lanes, ln	2	2	3	3	4	4	5	5
Ramp Lanes, ln	1	2	1	2	1	2	1	2
Density, pc/mi/ln	36.8	36.8	22.4	21.9	15.9	15.4	12.7	12.3
LOS	E	D	C	B	B	A	B	A

HCS7 Freeway Merge Report

Project Information			
Analyst	JPW	Date	9/13/2022
Agency	ADOT	Analysis Year	2050
Jurisdiction	GRIC	Time Period Analyzed	AM Peak
Project Description	SR 347/Riggs Rd DCR - 2050 Build NB	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	75.4	35.0
Segment Length (L) / Acceleration Length (LA),ft	1500	1300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	3756	21
Peak Hour Factor (PHF)	0.90	0.80
Total Trucks, %	5.00	11.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.952	0.901
Flow Rate (vi),pc/h	4384	29
Capacity (c), pc/h	7200	2000
Volume-to-Capacity Ratio (v/c)	0.61	0.01

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.289
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1692
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	65.7
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.614	Outer Lanes Freeway Speed (SO), mi/h	71.1
Flow in Lanes 1 and 2 (v12), pc/h	2692	Ramp Junction Speed (S), mi/h	67.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	2721	Average Density (D), pc/mi/ln	21.7
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	18.6

Design Analysis Table								
Freeway Lanes, ln	2	2	3	3	4	4	5	5
Ramp Lanes, ln	1	2	1	2	1	2	1	2
Density, pc/mi/ln	38.7	38.4	21.7	21.6	15.7	15.7	12.5	12.4
LOS	D	D	B	B	B	A	A	A

HCS7 Basic Freeway Report

Project Information

Analyst	JPW	Date	9/13/2022
Agency	ADOT	Analysis Year	2050
Jurisdiction	GRIC	Time Period Analyzed	AM Peak
Project Description	SR 347/Riggs Rd DCR - 2050 Build SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	0.33
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	74.1
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1383	Heavy Vehicle Adjustment Factor (f_{HV})	0.952
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	538
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.22
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	74.1
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	7.3
Total Ramp Density Adjustment	1.3	Level of Service (LOS)	A
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	74.1		

Design Analysis Table

Number of Lanes, ln	2	3	4	5
Density, pc/mi/ln	10.9	7.3	5.5	4.4
LOS	A	A	A	A

HCS7 Freeway Diverge Report

Project Information			
Analyst	JPW	Date	1/30/2023
Agency	ADOT	Analysis Year	2050
Jurisdiction	GRIC	Time Period Analyzed	AM Peak
Project Description	SR 347/Riggs Rd DCR - 2050 Build SB	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	75.4	35.0
Segment Length (L) / Deceleration Length (LA),ft	1500	600
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	1383	36
Peak Hour Factor (PHF)	0.90	0.80
Total Trucks, %	5.00	5.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.952	0.952
Flow Rate (vi),pc/h	1614	47
Capacity (c), pc/h	7200	2000
Volume-to-Capacity Ratio (v/c)	0.22	0.02

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.432
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	443
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	61.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.717	Outer Lanes Freeway Speed (SO), mi/h	82.7
Flow in Lanes 1 and 2 (v12), pc/h	1171	Ramp Junction Speed (S), mi/h	65.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	8.2
Level of Service (LOS)	A	Density in Ramp Influence Area (DR), pc/mi/ln	8.9

Design Analysis Table								
Freeway Lanes, ln	2	2	3	3	4	4	5	5
Ramp Lanes, ln	1	2	1	2	1	2	1	2
Density, pc/mi/ln	13.2	13.2	8.2	7.8	5.7	5.6	4.5	4.5
LOS	B	A	A	A	A	A	A	A

HCS7 Freeway Merge Report

Project Information			
Analyst	JPW	Date	9/13/2022
Agency	ADOT	Analysis Year	2050
Jurisdiction	GRIC	Time Period Analyzed	AM Peak
Project Description	SR 347/Riggs Rd DCR - 2050 Build SB	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	75.4	35.0
Segment Length (L) / Acceleration Length (LA),ft	1500	1300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	1383	341
Peak Hour Factor (PHF)	0.90	0.90
Total Trucks, %	5.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.952	0.926
Flow Rate (vi),pc/h	1614	409
Capacity (c), pc/h	7200	2000
Volume-to-Capacity Ratio (v/c)	0.28	0.20

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.246
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	623
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	67.2
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.614	Outer Lanes Freeway Speed (SO), mi/h	75.0
Flow in Lanes 1 and 2 (v12), pc/h	991	Ramp Junction Speed (S), mi/h	69.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	1400	Average Density (D), pc/mi/ln	9.7
Level of Service (LOS)	A	Density in Ramp Influence Area (DR), pc/mi/ln	8.1

Design Analysis Table								
Freeway Lanes, ln	2	2	3	3	4	4	5	5
Ramp Lanes, ln	1	2	1	2	1	2	1	2
Density, pc/mi/ln	15.2	15.1	9.7	9.6	7.3	7.1	5.8	5.7
LOS	B	B	A	A	A	A	A	A

HCS7 Basic Freeway Report

Project Information			
Analyst	JPW	Date	9/13/2022
Agency	ADOT	Analysis Year	2050
Jurisdiction	GRIC	Time Period Analyzed	PM Peak
Project Description	SR 347/Riggs Rd DCR - 2050 Build NB	Unit	United States Customary

Geometric Data			
Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	0.33
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	74.1
Right-Side Lateral Clearance, ft	10		

Adjustment Factors			
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity			
Demand Volume veh/h	1909	Heavy Vehicle Adjustment Factor (f_{HV})	0.952
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	743
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.31
Passenger Car Equivalent (E_T)	2.000		

Speed and Density			
Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	74.1
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	10.0
Total Ramp Density Adjustment	1.3	Level of Service (LOS)	A
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	74.1		

Design Analysis Table				
Number of Lanes, ln	2	3	4	5
Density, pc/mi/ln	15.1	10.0	7.5	6.0
LOS	B	A	A	A

HCS7 Freeway Diverge Report

Project Information			
Analyst	JPW	Date	1/30/2023
Agency	ADOT	Analysis Year	2050
Jurisdiction	GRIC	Time Period Analyzed	PM Peak
Project Description	SR 347/Riggs Rd DCR - 2050 Build NB	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	75.4	35.0
Segment Length (L) / Deceleration Length (L_A),ft	1500	600
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (V_i)	1909	341
Peak Hour Factor (PHF)	0.90	0.90
Total Trucks, %	5.00	5.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.952	0.952
Flow Rate (vi),pc/h	2228	398
Capacity (c), pc/h	7200	2000
Volume-to-Capacity Ratio (v/c)	0.31	0.20

Speed and Density			
Upstream Equilibrium Distance (L_{EQ}), ft	-	Number of Outer Lanes on Freeway (N_O)	1
Distance to Upstream Ramp (L_{UP}), ft	-	Speed Index (D_S)	0.464
Downstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	575
Distance to Downstream Ramp (L_{DOWN}), ft	-	Off-Ramp Influence Area Speed (S_R), mi/h	59.9
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FD})	0.686	Outer Lanes Freeway Speed (S_O), mi/h	82.7
Flow in Lanes 1 and 2 (v_{12}), pc/h	1653	Ramp Junction Speed (S), mi/h	64.5
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	-	Average Density (D), pc/mi/ln	11.5
Level of Service (LOS)	B	Density in Ramp Influence Area (D_R), pc/mi/ln	13.1

Design Analysis Table								
Freeway Lanes, ln	2	2	3	3	4	4	5	5
Ramp Lanes, ln	1	2	1	2	1	2	1	2
Density, pc/mi/ln	18.6	18.6	11.5	10.9	8.1	7.8	6.5	6.2
LOS	B	B	B	A	A	A	A	A

HCS7 Freeway Merge Report

Project Information			
Analyst	JPW	Date	9/13/2022
Agency	ADOT	Analysis Year	2050
Jurisdiction	GRIC	Time Period Analyzed	PM Peak
Project Description	SR 347/Riggs Rd DCR - 2050 Build NB	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	75.4	35.0
Segment Length (L) / Acceleration Length (LA),ft	1500	1300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	1909	74
Peak Hour Factor (PHF)	0.90	0.80
Total Trucks, %	5.00	11.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.952	0.901
Flow Rate (vi),pc/h	2228	103
Capacity (c), pc/h	7200	2000
Volume-to-Capacity Ratio (v/c)	0.32	0.05

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.247
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	860
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	67.2
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.614	Outer Lanes Freeway Speed (SO), mi/h	74.1
Flow in Lanes 1 and 2 (v12), pc/h	1368	Ramp Junction Speed (S), mi/h	69.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	1471	Average Density (D), pc/mi/ln	11.2
Level of Service (LOS)	A	Density in Ramp Influence Area (DR), pc/mi/ln	8.8

Design Analysis Table								
Freeway Lanes, ln	2	2	3	3	4	4	5	5
Ramp Lanes, ln	1	2	1	2	1	2	1	2
Density, pc/mi/ln	17.6	17.4	11.2	11.1	8.3	8.1	6.7	6.5
LOS	B	B	A	A	A	A	A	A

HCS7 Basic Freeway Report

Project Information

Analyst	JPW	Date	9/13/2022
Agency	ADOT	Analysis Year	2050
Jurisdiction	GRIC	Time Period Analyzed	PM Peak
Project Description	SR 347/Riggs Rd DCR - 2050 Build SB	Unit	United States Customary

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.4	Total Ramp Density (TRD), ramps/mi	0.33
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	74.1
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	3325	Heavy Vehicle Adjustment Factor (f_{HV})	0.952
Peak Hour Factor	0.90	Flow Rate (V_p), pc/h/ln	1294
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c_{adj}), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.54
Passenger Car Equivalent (E_T)	2.000		

Speed and Density

Lane Width Adjustment (f_{LW})	0.0	Average Speed (S), mi/h	73.4
Right-Side Lateral Clearance Adj. (f_{RLC})	0.0	Density (D), pc/mi/ln	17.6
Total Ramp Density Adjustment	1.3	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS_{adj}), mi/h	74.1		

Design Analysis Table

Number of Lanes, ln	2	3	4	5
Density, pc/mi/ln	29.8	17.6	13.1	10.5
LOS	D	B	B	A

HCS7 Freeway Diverge Report

Project Information			
Analyst	JPW	Date	1/30/2023
Agency	ADOT	Analysis Year	2050
Jurisdiction	GRIC	Time Period Analyzed	PM Peak
Project Description	SR 347/Riggs Rd DCR - 2050 Build SB	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	75.4	35.0
Segment Length (L) / Deceleration Length (LA),ft	1500	600
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	3325	21
Peak Hour Factor (PHF)	0.90	0.80
Total Trucks, %	5.00	5.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.952	0.952
Flow Rate (vi),pc/h	3881	28
Capacity (c), pc/h	7200	2000
Volume-to-Capacity Ratio (v/c)	0.54	0.01

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.431
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1302
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	61.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.662	Outer Lanes Freeway Speed (SO), mi/h	81.5
Flow in Lanes 1 and 2 (v12), pc/h	2579	Ramp Junction Speed (S), mi/h	66.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	19.4
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	21.0

Design Analysis Table								
Freeway Lanes, ln	2	2	3	3	4	4	5	5
Ramp Lanes, ln	1	2	1	2	1	2	1	2
Density, pc/mi/ln	31.8	31.8	19.4	19.1	13.6	13.5	10.9	10.8
LOS	D	C	C	B	B	A	B	A

HCS7 Freeway Merge Report

Project Information			
Analyst	JPW	Date	9/13/2022
Agency	ADOT	Analysis Year	2050
Jurisdiction	GRIC	Time Period Analyzed	PM Peak
Project Description	SR 347/Riggs Rd DCR - 2050 Build SB	Unit	United States Customary

Geometric Data		
	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	75.4	35.0
Segment Length (L) / Acceleration Length (LA),ft	1500	1300
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors		
Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity		
Demand Volume (Vi)	3325	751
Peak Hour Factor (PHF)	0.90	0.90
Total Trucks, %	5.00	8.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.952	0.926
Flow Rate (vi),pc/h	3881	901
Capacity (c), pc/h	7200	2000
Volume-to-Capacity Ratio (v/c)	0.66	0.45

Speed and Density			
Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.334
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1498
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	64.2
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.614	Outer Lanes Freeway Speed (SO), mi/h	71.8
Flow in Lanes 1 and 2 (v12), pc/h	2383	Ramp Junction Speed (S), mi/h	66.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	3284	Average Density (D), pc/mi/ln	24.0
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	22.6

Design Analysis Table								
Freeway Lanes, ln	2	2	3	3	4	4	5	5
Ramp Lanes, ln	1	2	1	2	1	2	1	2
Density, pc/mi/ln	45.8	45.4	24.0	23.7	17.3	17.2	13.7	13.6
LOS	D	D	C	C	B	B	B	B