



Traffic Study

Burkhalter Residential Development
Revised Study
Bulloch County, GA

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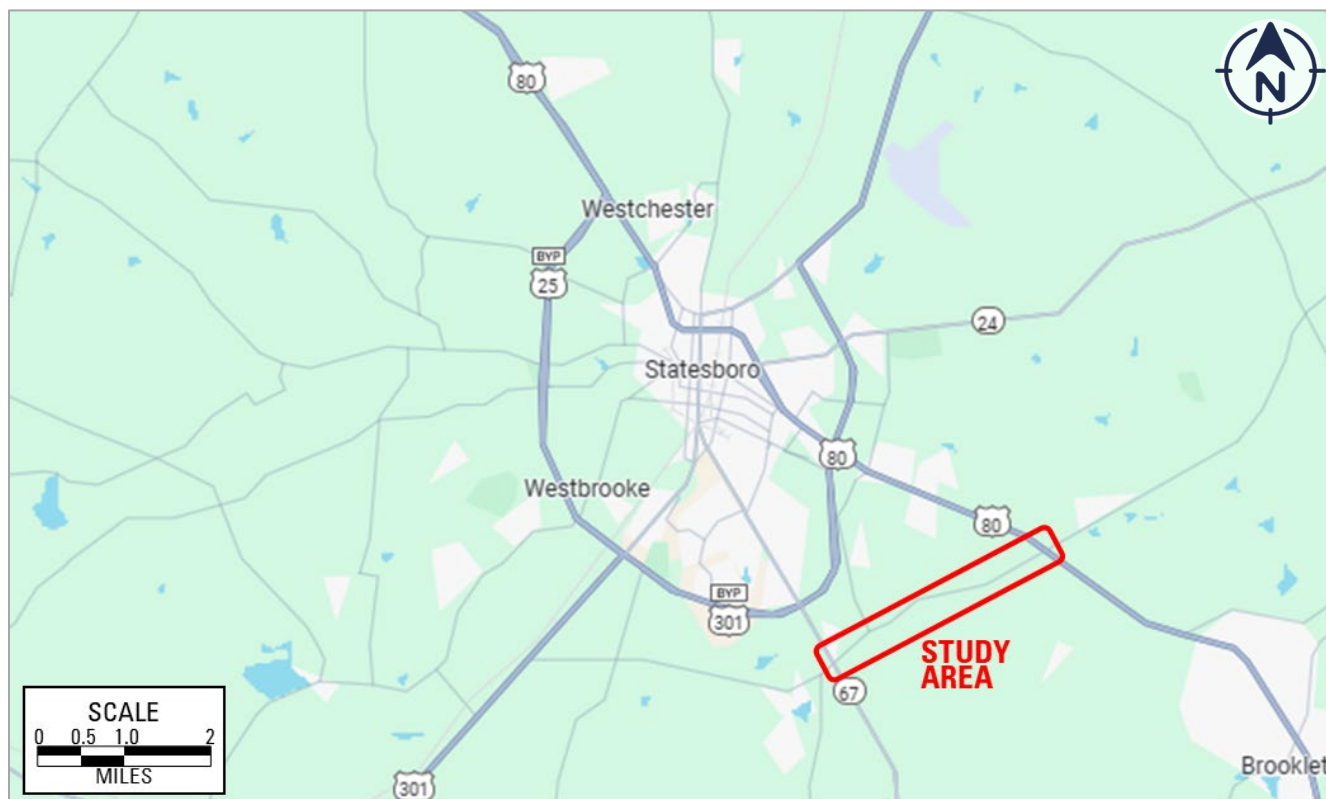
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1 Introduction

The purpose of this study is to evaluate the traffic-related impact of a proposed residential development on Burkhalter Road in Bulloch County. The study area is shown on the map below in Figure 1.

Figure 1: Project Location Map



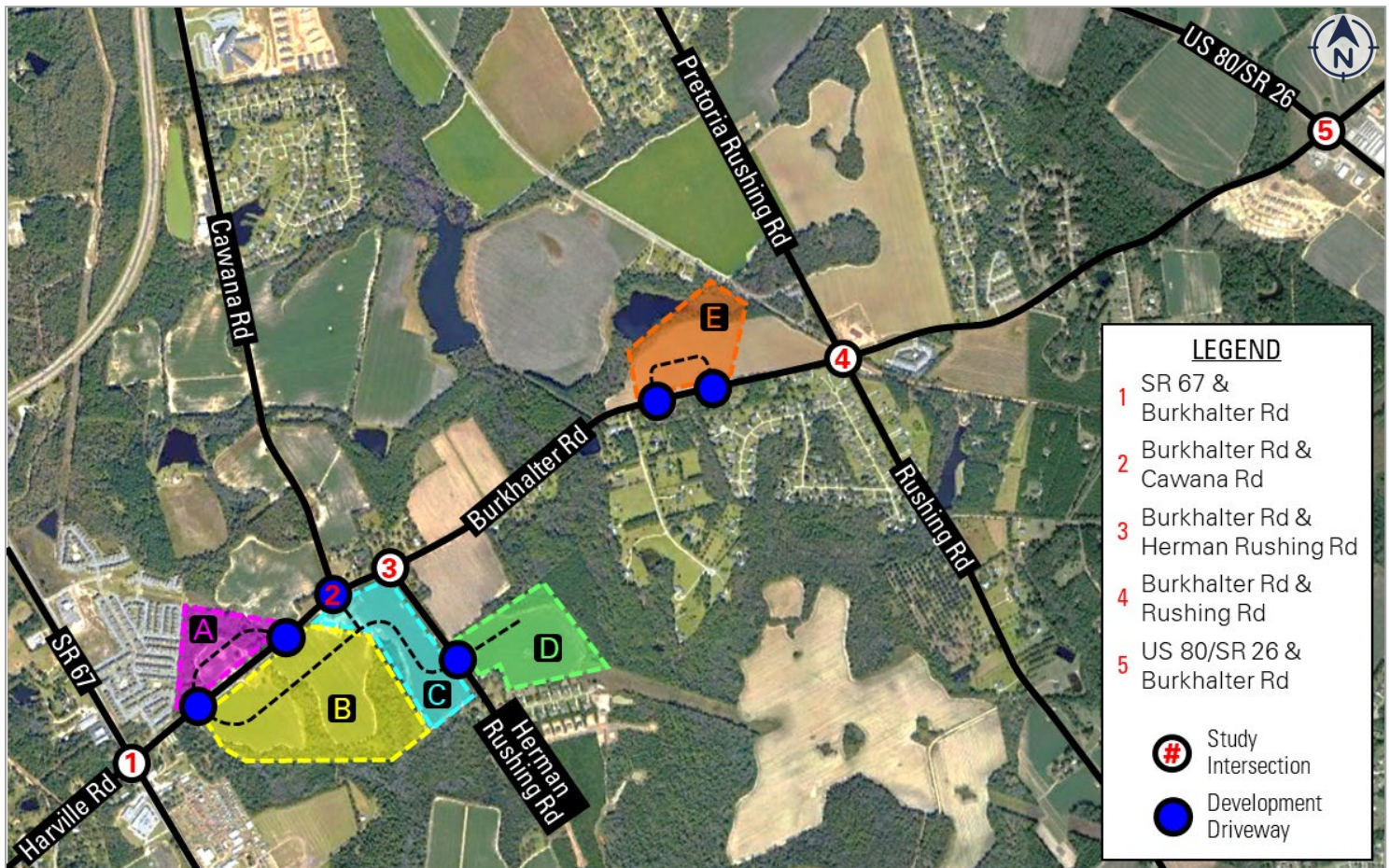
Proposed Development

The development is comprised of three different residential land uses across five components that are located on either side of Burkhalter Road. The development will be accessed by six new driveways: five on Burkhalter Road and one on Herman Rushing Road. The development, as well as the existing intersections which will be included in this study, are shown below in Figure 2. The site plans are included in Appendix A.

The components of the development are planned as follows:

- Section A: 250 Multi-Family Attached Apartment Units
- Section B: 185 Single-Family Detached Homes
- Section C: 214 Attached Townhomes
- Section D: 200 Attached Townhomes
- Section E: 192 Attached Townhomes

Figure 2: Study Area Details



2 Existing Conditions

An inventory of existing conditions was completed for the study area. The inventory includes traffic control measures, intersection geometry, and peak hour traffic volumes.

Roadway Details

Roadway details such as typical sections and functional classifications are shown graphically on the following page in Figure 3.

Traffic Control and Intersection Geometry

The traffic control and intersection geometry for the study intersections are shown graphically on Page 5 in Figure 4.

Traffic Volumes

Existing traffic volumes for Intersections 1-4 were obtained via Turning Movement Counts (TMC's) on Wednesday, April 17, 2024. Data was recorded for a total of four hours during the AM and PM peak periods. Traffic volumes for Intersection 5 were obtained from a traffic study completed in October 2023 by Heath & Lineback. The existing peak hour traffic volumes at the study intersections are shown in Figure 5 on Page 6. The TMC reports and traffic volumes obtained from the Heath & Lineback study are provided in Appendix B.

Figure 3: Existing Roadway Details

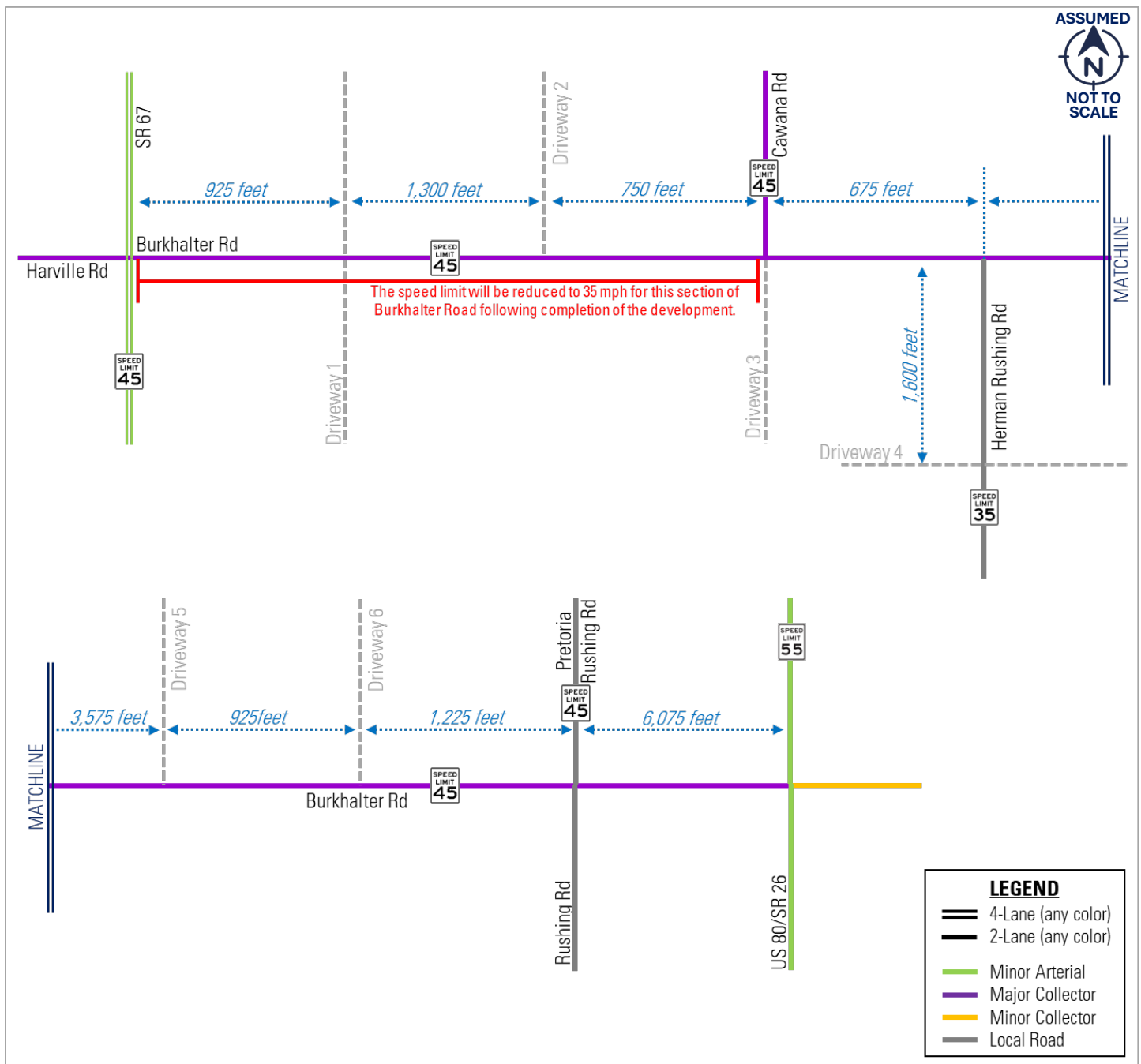


Figure 4: Existing Traffic Control and Intersection Geometry

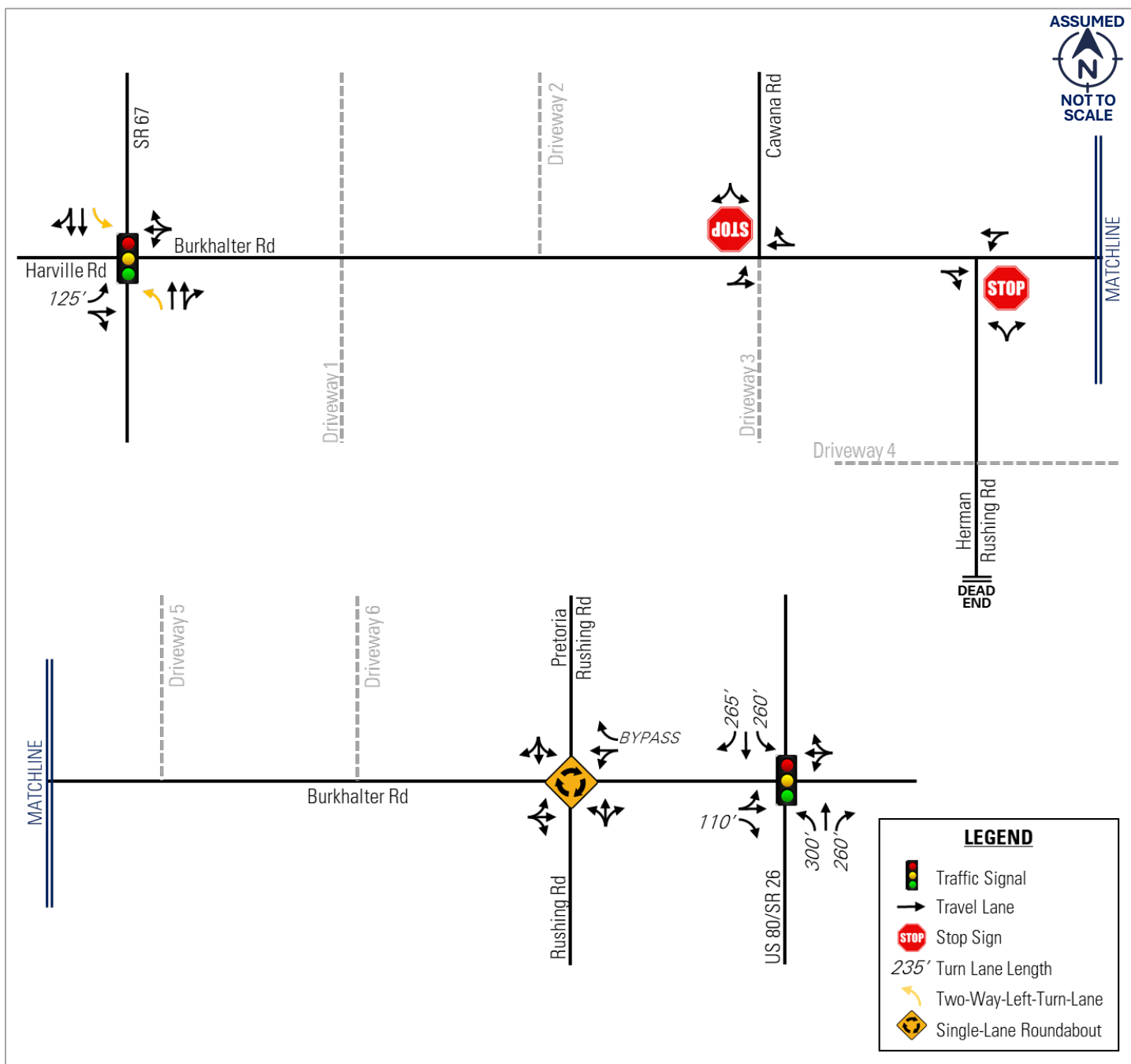
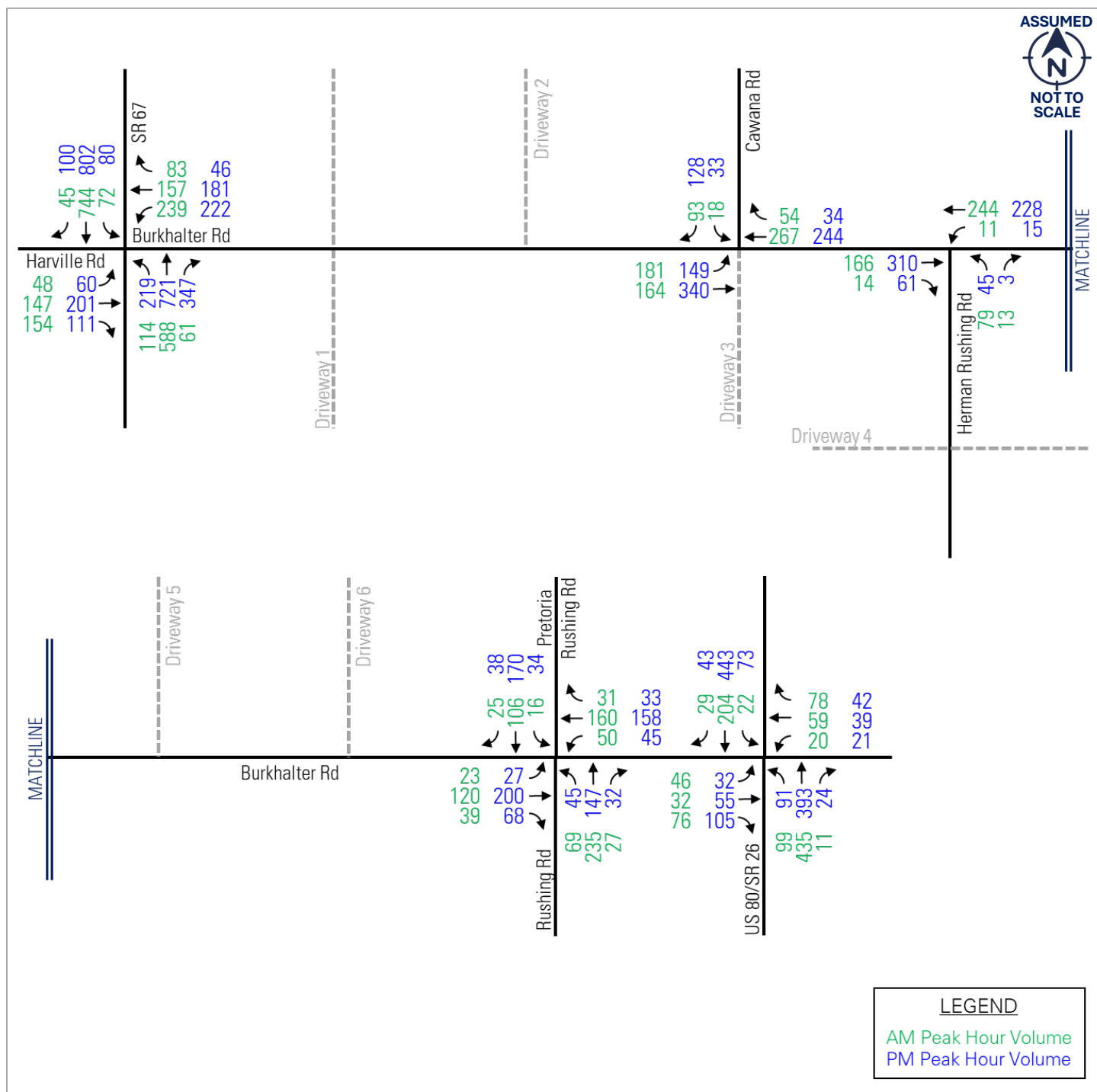


Figure 5: Existing Traffic Volumes



3 Projected Conditions

Projected conditions, which represent the study area after the proposed development is complete and fully occupied, were developed through the traditional three-step process of trip generation, trip distribution, and traffic assignment.

Trip Generation

The trips expected to be generated by the development were estimated using trip rates from the ITE publication *Trip Generation, 11th Edition*. The trip generation is summarized below in Table 1. A detailed table of the trip generation is provided in Appendix C.

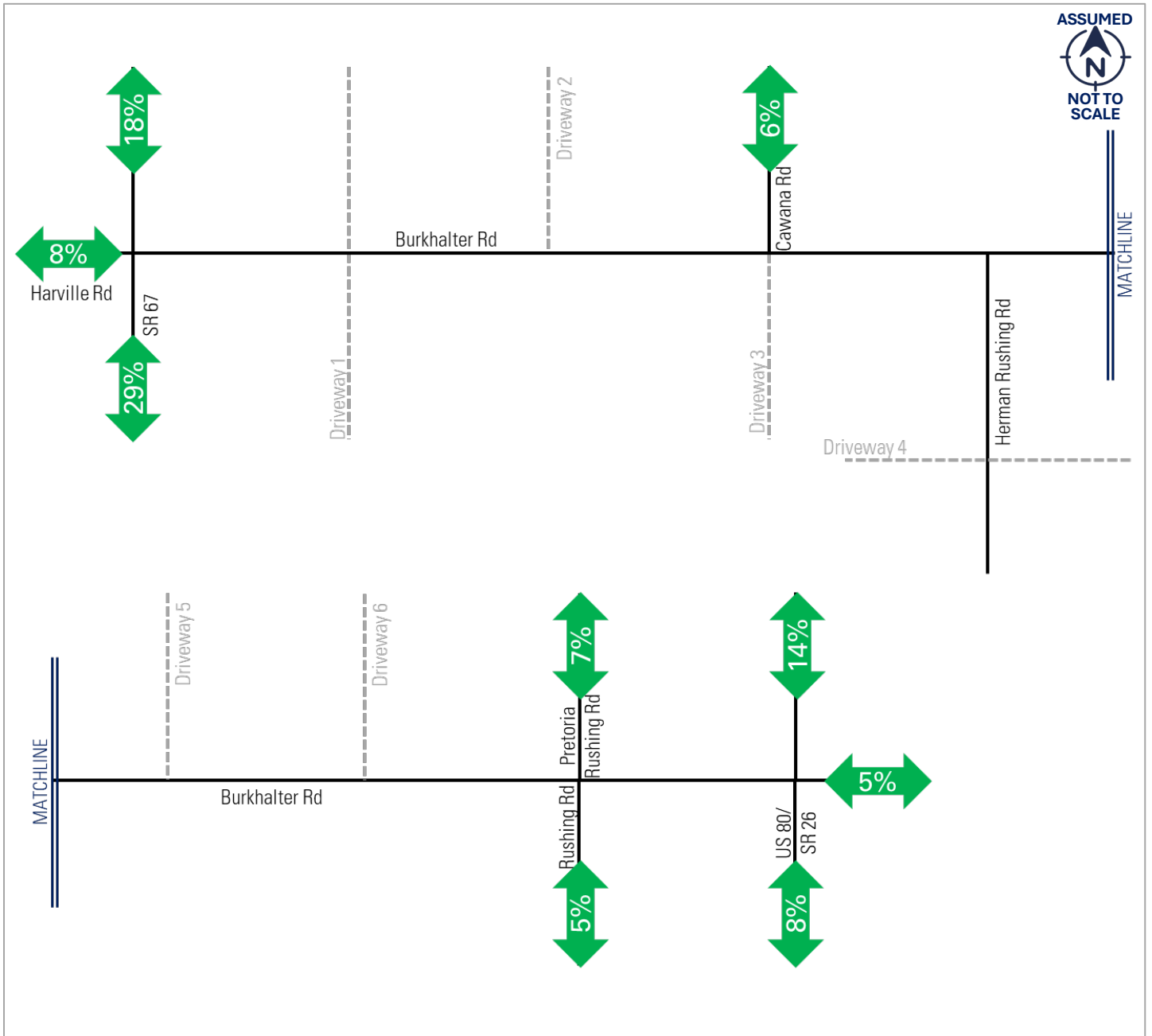
Table 1: Trip Generation Summary

Section	Land Use Code	Land Use	Size	Daily			AM Peak Hour			PM Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
A	220	Attached Apartments	250 Units	843	842	1685	24	76	100	81	47	128
B	210	Detached Houses	185 Units	873	872	1745	32	98	130	110	64	174
C	215	Attached Townhomes	214 Units	771	770	1541	26	77	103	72	50	122
D	215	Attached Townhomes	200 Units	720	720	1440	24	72	96	67	47	114
E	215	Attached Townhomes	192 Units	691	691	1382	23	69	92	64	45	109
Total Trips Added to Roadway				3898	3895	7793	129	392	521	394	253	647

Trip Distribution

The distribution by which to assign new and pass-by trips to the surrounding roadway network was developed based on the distribution of existing traffic exiting the study area during the AM peak hour. The distribution is shown on the following page in Figure 6.

Figure 6: Trip Distribution Pattern



Traffic Assignment

In addition to the traffic distribution pattern, the below assumptions were made, based on the layout of the site, regarding driveway utilization in order to assign trips to their respective driveways. The assignment of new trips, based on the below assumptions and the distribution shown on the previous page, are shown below in Table 2 and shown graphically on the following page in Figure 7.

Section A

- Of trips to/from west of the site, 80% will enter/exit via Driveway 1 and 20% will enter/exit via Driveway 2.
- Of trips to/from Cawana Road or east of the site, 80% will enter/exit via Driveway 2 and 20% will enter/exit via Driveway 1.

Section B

- All trips to/from west of the site will enter/exit via Driveway 1.
- Of trips to/from Cawana Road or east of the site, 80% will enter/exit via Driveway 3 and 20% will enter/exit via Driveway 1.

Section C

- Of trips to/from west of the site or Cawana Road, 80% will enter/exit via Driveway 3 and 20% will enter/exit via Driveway 4.
- Of trips to/from east of the site, 50% will enter/exit via Driveway 3 and 50% will enter/exit via Driveway 4.

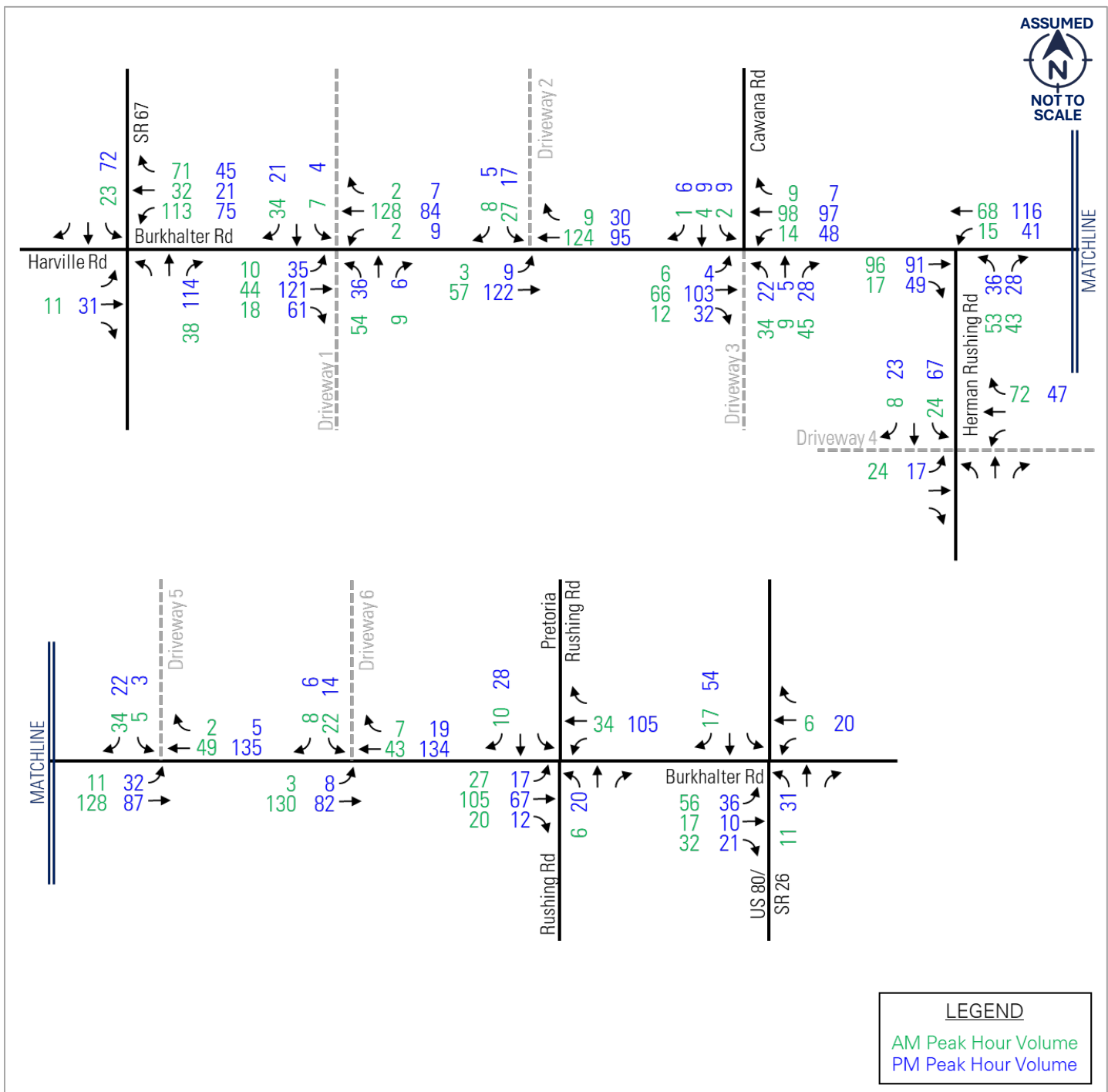
Section E

- Of trips to/from west of the site or Cawana Road, 80% will enter/exit via Driveway 5 and 20% will enter/exit via Driveway 6.
- Of trips to/from east of the site, 80% will enter/exit via Driveway 6 and 20% will enter/exit via Driveway 5.

Table 2: Traffic Assignment – Burkhalter Development

Direction To/From	Distribution	Daily			AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
West, Harville Rd	8%	702	702	1404	23	71	94	72	45	117
North, SR 67	18%	1130	1129	2259	38	113	151	114	75	189
South, SR 67	29%	312	312	624	11	32	43	31	21	52
North, Cawana Rd	6%	233	233	466	7	24	31	24	16	40
North, Pretoria Rushing Rd	7%	272	272	544	10	27	37	28	17	45
South, Rushing Rd	5%	196	196	392	6	20	26	20	12	32
North, US 80/SR 26	14%	546	546	1092	17	56	73	54	36	90
South, US 80/SR 26	8%	312	312	624	11	32	43	31	21	52
East, Burkhalter Rd	5%	195	193	388	6	17	23	20	10	30
Total		3898	3895	7793	129	392	521	394	253	647

Figure 7: Traffic Assignment – Burkhalter Development



Other Developments

A separate set of traffic volumes was developed to account for the traffic from other planned developments in the vicinity of the Burkhalter development. These other developments include those listed below, with the relevant data from each study provided in Appendix D.

- Hollingsworth Tract – Completed by Maldino & Wilburn, September 2023; north of the Burkhalter site on Cawana Road
- Jackson Tract – Completed by Heath & Lineback, October 2023; east of the Burkhalter site on Burkhalter Road
- Rushing Tract – Completed by Maldino & Wilburn, June 2023; south of the Burkhalter site on SR 67
- Rushing Property – Completed by Maldino & Wilburn, February 2022; south of the Burkhalter site on SR 67

The assignment of traffic volumes from these other developments was done based on the distribution of existing traffic within the Burkhalter site study area. The combination of the generated volumes for all other developments is shown on the following page in Figure 8.

Total Projected Volumes

Two sets of total projected volumes were developed, one including traffic from the other developments and one not including traffic from the other developments, to distinguish between the impact of the proposed Burkhalter development and the impact of the other developments. The total projected volumes, not including other development traffic, found by combining the existing volumes in Figure 5 with the Burkhalter development traffic assignment in Figure 7, are shown on Page 13 in Figure 9. The total projected volumes, including other development traffic, found by combining the first set of projected volumes in Figure 9 with the other development traffic in Figure 8, are shown on Page 14 in Figure 10.

Figure 8: Traffic Assignment – Other Developments

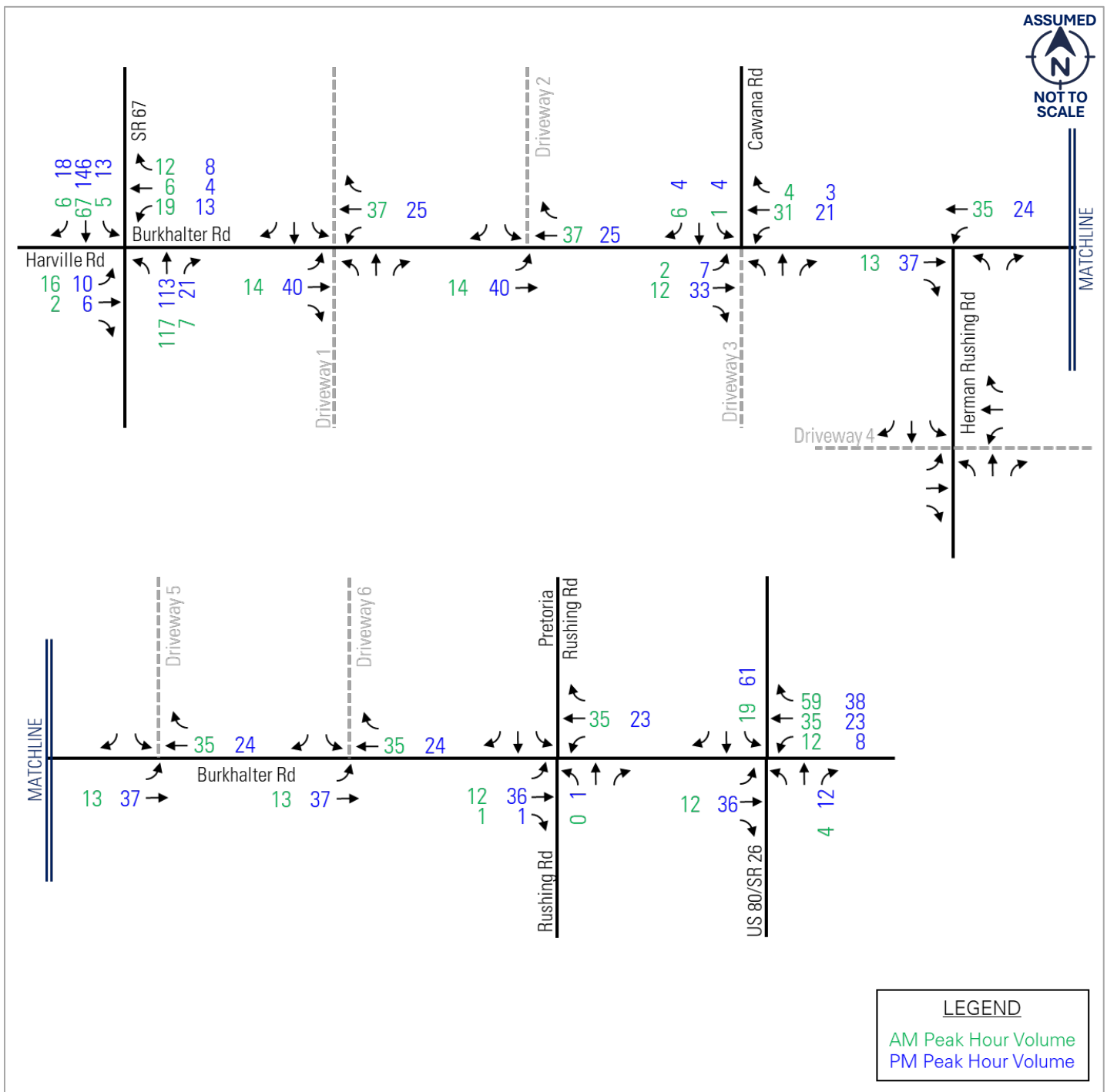


Figure 9: Total Projected Volumes – Without Other Developments

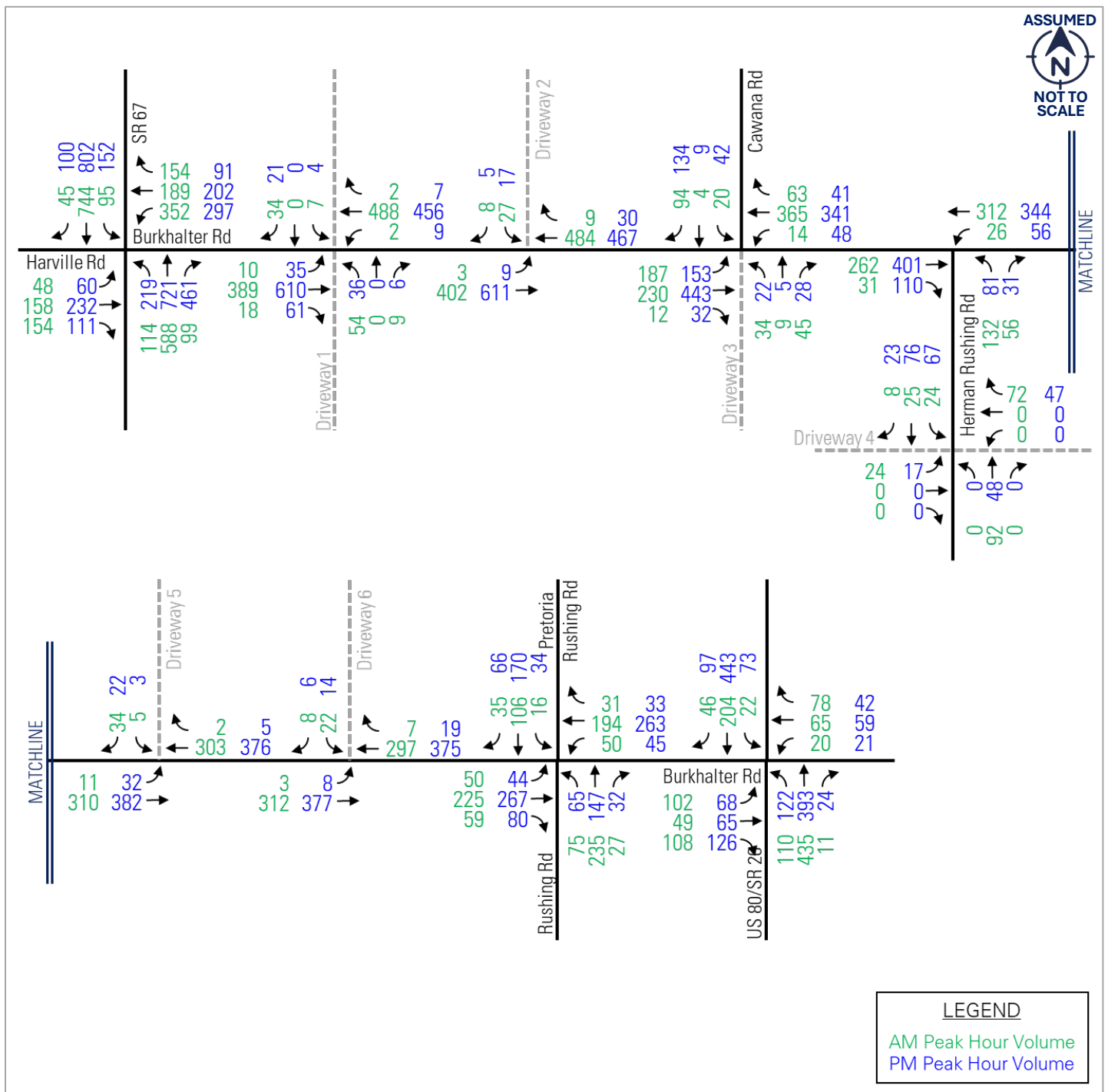
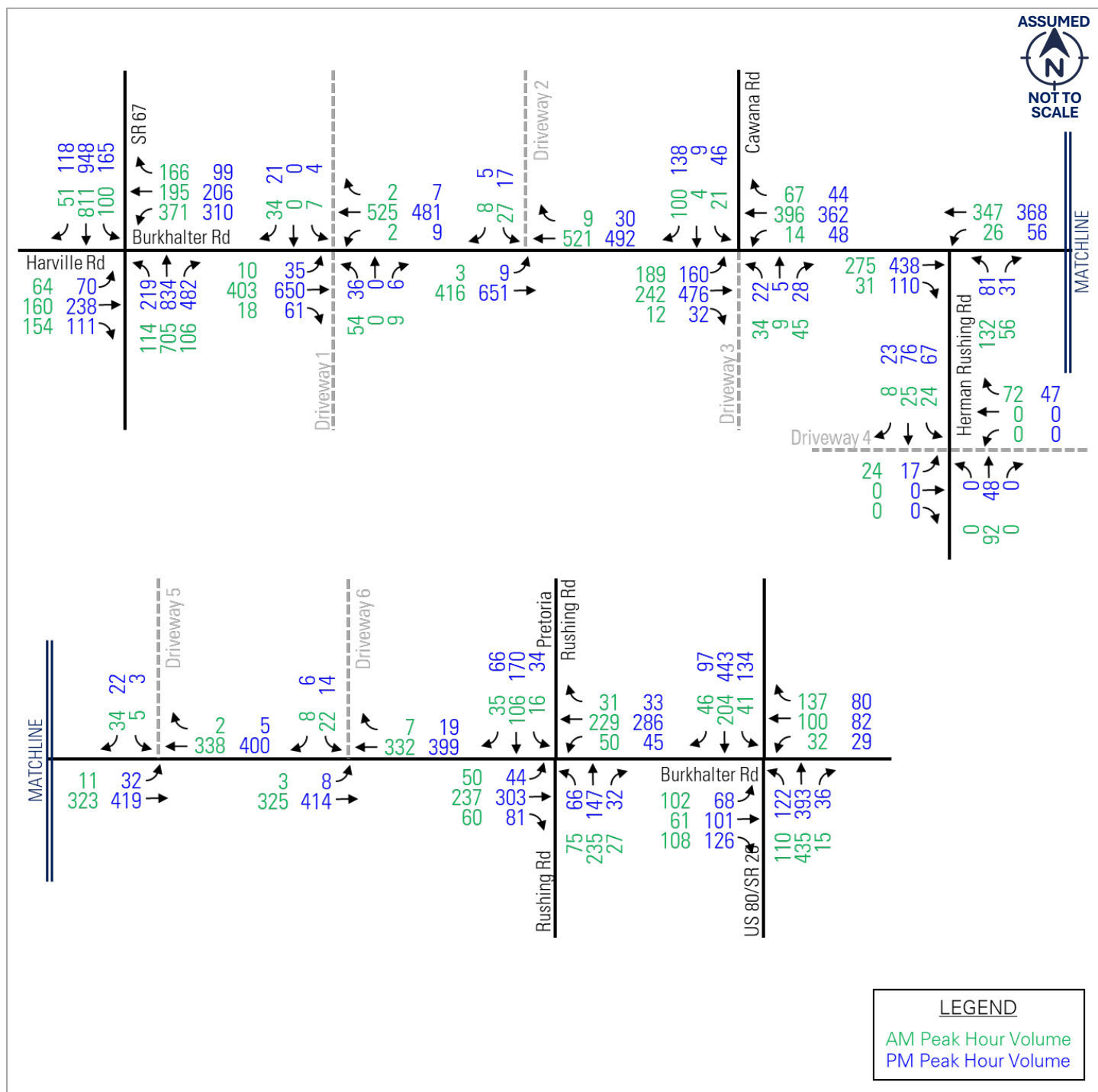


Figure 10: Total Projected Volumes – With Other Developments



Auxiliary Turn Lane Requirements

The need for turn lanes on Burkhalter Road and on Herman Rushing Road at the proposed development driveways was evaluated based on guidance from the GDOT publication *Regulations for Driveway & Encroachment Control*.

Burkhalter Road is a two-lane road with a current posted speed limit of 45 miles per hour. However, the speed limit on Burkhalter Road will be reduced to 35 miles per hour following completion of the development. The daily volume on Burkhalter Road, obtained from GDOT count station 031-0156 for the most recent available count, was 5,270. It is likely that the daily volume on Burkhalter Road will exceed 6,000 following the completion of the Burkhalter development.

Herman Rushing Road is a two-lane road with a posted speed limit of 35 miles per hour. No data is available regarding the daily volume experienced on Herman Rushing Road. Based on the peak hour volumes, it is unlikely that the daily volumes on Herman Rushing Road will exceed 6,000 following the completion of the Burkhalter development.

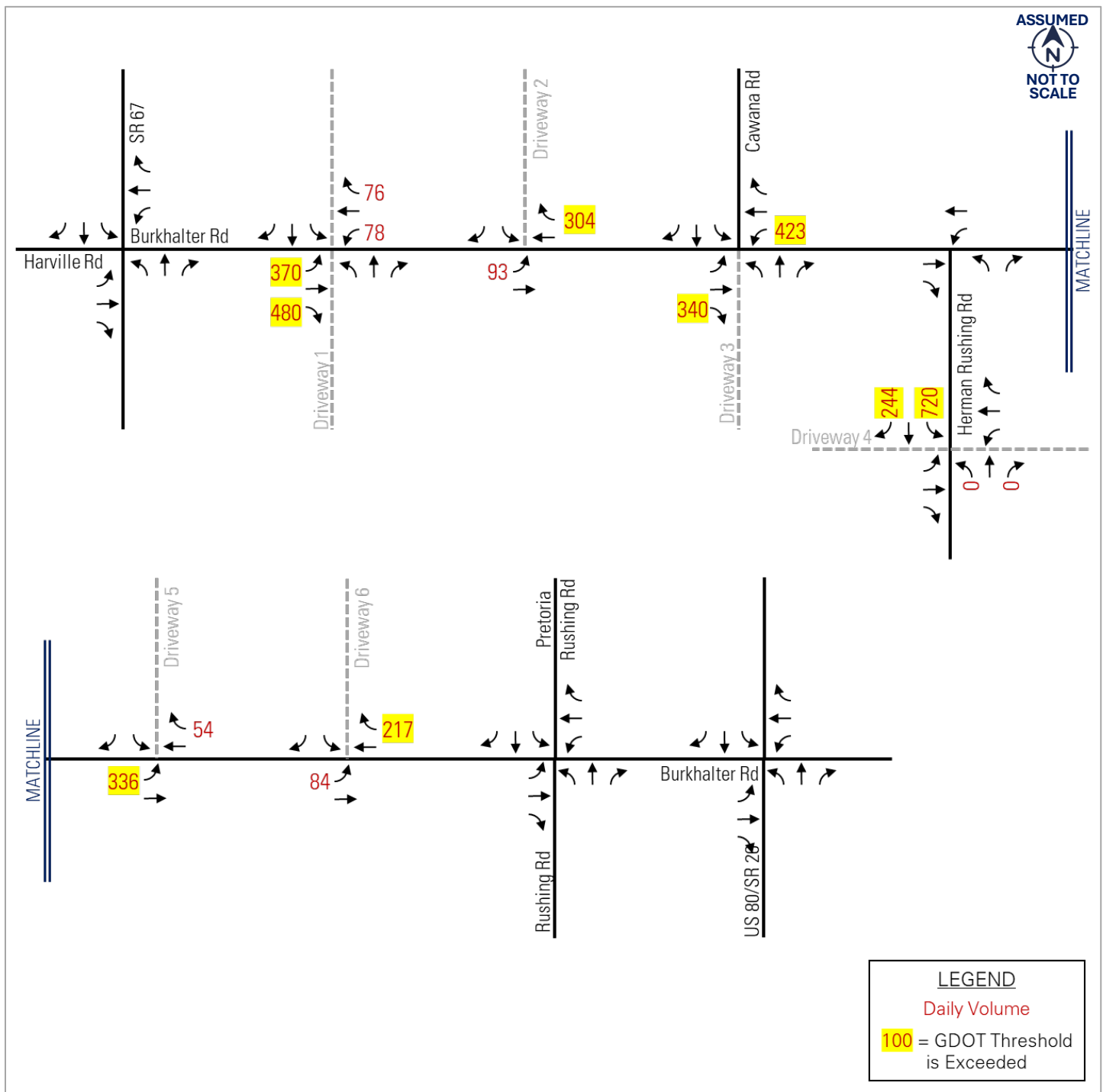
The volume thresholds which necessitate installation of auxiliary turn lanes are shown below in Figure 11. Thresholds for Burkhalter Road west of Herman Rushing Road are shown in red, for Burkhalter Road east of Herman Rushing Road in blue, and for Herman Rushing Road in green. The estimated daily turn volumes, shown on the following page in Figure 12, were found by applying the distribution percentages to the daily entering generated trips. These daily turn volumes were compared to GDOT turn lane thresholds to determine need for auxiliary turn lanes.

Figure 11: GDOT Turn Lane Volume Thresholds

For Right Turns:				
Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	AADT		AADT	
	< 6,000	>=6,000	<10,000	>=10,000
35 MPH or Less	200 RTV a day	100 RTV a day	200 RTV a day	100 RTV a day
40 to 50 MPH	150 RTV a day	75 RTV a day	150 RTV a day	75 RTV a day
55 to 60 MPH	100 RTV a day	50 RTV a day	100 RTV a day	50 RTV a day
>= 65 MPH	Always	Always	Always	Always

For Left Turns:				
Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	ADT		ADT	
	<6,000	>=6,000	<10,000	>=10,000
35 MPH or Less	300 LTV a day	200 LTV a day	400 LTV a day	300 LTV a day
40 to 50 MPH	250 LTV a day	175 LTV a day	325 LTV a day	250 LTV a day
>= 55 MPH	200 LTV a day	150 LTV a day	250 LTV a day	200 LTV a day

Figure 12: Daily Entering Volumes into Burkhalter Development



Below is a list of the turn lanes warranted, based on GDOT thresholds, and the minimum full-width storage/taper lengths for each.

- Driveway 1: eastbound left (160 feet/50 feet) and eastbound right (100 feet/50 feet)
- Driveway 2: westbound right (100 feet/50 feet)
- Driveway 3: eastbound right (100 feet/50 feet) and westbound left (160 feet/50 feet)
- Driveway 4: southbound left (160 feet/50 feet) and southbound right (100 feet/50 feet)
- Driveway 5: eastbound left (235 feet/100 feet)
- Driveway 6: westbound right (175 feet/100 feet)

At three of the above locations, left-turn lanes are warranted on one approach but not on the opposite approach. At these locations, the approach opposite to that with the warranted left-turn lane would need to be modified with a taper to maintain alignment of thru lanes. At two of these locations, listed below, this taper should be used to provide a left-turn lane on the opposite approach to accommodate left turns. The minimum full-width storage/taper lengths are shown for each.

- Driveway 1: westbound left (50 feet/50 feet)
- Cawana Road/Driveway 3: eastbound left (50 feet/50 feet)

The third location, Driveway 4, is not expected to see northbound left turns, therefore it is not suggested a northbound left-turn lane be provided.

4 Capacity Analysis

Capacity analysis was conducted using *Synchro II* software by Trafficware for signalized and stop-control intersections and using *Sidra 7* software for the roundabout intersection. The results of capacity analysis are reported in terms of Level of Service (LOS), which is a function of average delay per vehicle, in seconds. The Level of Service Scales according to the *Highway Capacity Manual* (HCM) are shown below in Table 3. LOS 'E' is generally considered the limit of acceptable operations.

Table 3: HCM Level of Service Scales

Level Of Service	Average Delay Per Vehicle (Seconds)	
	Stop Control/Roundabout	Signal Control
A	≤10.0	≤10.0
B	10.1 to 15.0	10.1 to 20.0
C	15.1 to 25.0	20.1 to 35.0
D	25.1 to 35.0	35.1 to 55.0
E	35.1 to 50.0	55.1 to 80.0
F	>50.0	>80.0

Capacity analysis was conducted for the study intersections under Existing Conditions, Projected Conditions without the other developments, and Projected Conditions with the other developments. For both sets of projected conditions, new driveway intersections were evaluated with the turn lanes recommended to be installed in the previous section and with one shared lane exiting each driveway.

The results are shown below in Table 4 for signalized intersections and on the following page in Table 5 for unsignalized intersections. Results for signalized intersections are presented as an average of all movements at the intersection, while results for unsignalized intersections are presented per approach. Capacity analysis reports are provided in Appendix E for Existing Conditions, Appendix F for Projected Conditions without the other developments, and Appendix G for Projected Conditions with the other developments.

Table 4: Capacity Analysis Results – Signalized Intersections

Intersection	AM Peak Hour			PM Peak Hour		
	Existing	Projected W/O Other	Projected W/ Other	Existing	Projected W/O Other	Projected W/ Other
1 SR 67 & Burkhalter Rd/ Harville Rd	E (69.5)	F (143.8)	F (176.1)	F (87.8)	F (164.7)	F (202.8)
5 US 80/SR 26 & Burkhalter Rd	A (8.7)	A (9.3)	B (10.6)	A (8.4)	A (9.1)	B (10.6)

The intersection of SR 67 & Burkhalter Road/Harville Road currently operates at level of service ‘F’ and is expected to continue to do so with increasing delay following completion of the Burkhalter and other developments. The intersection of US 80/SR 26 and Burkhalter Road currently operates at LOS ‘A’ and is expected to continue to do so following completion of the development, but is expected to degrade to LOS ‘B’ following completion of the other developments.

Table 5: Capacity Analysis Results – Unsignalized Intersections

Intersection	Movement	AM Peak Hour			PM Peak Hour		
		Existing	Projected W/O Other	Projected W/ Other	Existing	Projected W/O Other	Projected W/ Other
2 Burkhalter Rd & Cawana Rd/ Driveway 3	EB	A (4.6)	A (4.1)	A (4.1)	A (2.6)	A (2.2)	A (2.2)
	WB	A (0.0)	A (0.2)	A (0.2)	A (0.0)	A (1.0)	A (0.9)
	NB	-	F (52.6)	F (66.4)	-	F (55.7)	F (71.2)
	SB	B (14.2)	C (24.3)	D (28.2)	C (17.8)	F (96.3)	F (161.3)
3 Burkhalter Rd & Herman Rushing Rd	EB	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
	WB	A (0.6)	A (1.1)	A (1.0)	A (0.6)	A (1.5)	A (1.5)
	NB	B (13.4)	D (25.3)	D (28.5)	B (14.6)	D (29.6)	D (34.5)
4 Burkhalter Rd & Pretoria Rushing Rd/ Rushing Rd	EB	A (6.1)	A (9.0)	A (9.3)	A (8.0)	B (10.2)	B (11.2)
	WB	A (9.1)	B (10.9)	B (12.0)	A (6.9)	A (9.5)	B (10.1)
	NB	A (6.8)	A (8.9)	A (9.1)	A (5.7)	A (6.8)	A (7.2)
	SB	A (6.4)	A (6.9)	A (7.3)	A (6.8)	A (9.1)	A (9.6)
10 Burkhalter Rd & Driveway 1	EB	-	A (0.2)	A (0.2)	-	A (0.4)	A (0.4)
	WB	-	A (0.0)	A (0.0)	-	A (0.2)	A (0.2)
	NB	-	D (27.6)	D (30.4)	-	E (39.5)	E (45.6)
	SB	-	B (14.2)	B (14.9)	-	C (15.4)	C (16.3)
20 Burkhalter Rd & Driveway 2	EB	-	A (0.1)	A (0.1)	-	A (0.1)	A (0.1)
	WB	-	A (0.0)	A (0.0)	-	A (0.0)	A (0.0)
	SB	-	C (17.9)	C (19.1)	-	C (21.7)	C (23.6)
40 Herman Rushing Rd & Driveway 4	EB	-	B (10.6)	B (10.6)	-	B (11.3)	B (11.3)
	WB	-	A (9.1)	A (9.1)	-	A (8.7)	A (8.7)
	NB	-	A (0.0)	A (0.0)	-	A (0.0)	A (0.0)
	SB	-	A (3.1)	A (3.1)	-	A (3.0)	A (3.0)
50 Burkhalter Rd & Driveway 5	EB	-	A (0.3)	A (0.3)	-	A (0.6)	A (0.6)
	WB	-	A (0.0)	A (0.0)	-	A (0.0)	A (0.0)
	SB	-	B (10.9)	B (11.3)	-	B (11.7)	B (12.0)
60 Burkhalter Rd & Driveway 6	EB	-	A (0.1)	A (0.1)	-	A (0.2)	A (0.2)
	WB	-	A (0.0)	A (0.0)	-	A (0.0)	A (0.0)
	SB	-	B (13.2)	B (13.8)	-	B (14.8)	B (15.6)

Capacity analysis results indicate the intersection of Burkhalter Road and Cawana Road currently operates at LOS ‘C’ or better. Following the completion of the Burkhalter development, this intersection is expected to degrade to LOS ‘F’, with a further increase in delay following completion of the other developments. All other unsignalized intersections currently operate acceptably and are expected to continue to do so following the completion of the Burkhalter and other developments.

5 Mitigations

The intersection of SR 67 and Burkhalter Road/Harville Road was identified in the previous section as experiencing unacceptable levels of service under existing conditions. The unsignalized intersection of Burkhalter Road and Cawana Road/Driveway 3 was identified as experiencing unacceptable levels of service following the completion of the Burkhalter and other developments. This section discusses potential mitigations for these impacts. Mitigations were evaluated under Projected Conditions with the other developments to simulate worst-case conditions.

SR 67 & Burkhalter Road/Harville Road

For the intersection of SR 67 and Burkhalter Road/Harville Road, four options for modification to the existing signal were evaluated. The options are cumulative, with the first being the most minimal and with additional modifications included in each following option. These options are described below and the capacity analysis results for each are shown below in Table 6. Capacity analysis reports for mitigations at SR 67 and Burkhalter Road/Harville Road are provided in Appendix H.

- **Option 1:** Installation of a westbound dedicated left-turn lane on Burkhalter Road and conversion of westbound approach to permitted-protected left-turn phasing
- **Option 2:** Option 1 + installation of a westbound right-turn lane on Burkhalter Road
- **Option 3:** Options 1 and 2 + installation of an eastbound right-turn lane on Harville Road
- **Option 4:** Options 1, 2, and 3 + installation of northbound and southbound right-turn lanes on SR 67

Table 6: Capacity Analysis Results – Mitigations at SR 67 & Burkhalter Road

Intersection	AM Peak Hour					PM Peak Hour				
	No Mitigation	1	2	3	4	No Mitigation	1	2	3	4
1 SR 67 & Burkhalter Rd	F (176.1)	E (69.5)	E (66.5)	D (40.0)	D (39.4)	F (202.8)	F (90.9)	F (89.0)	E (61.9)	D (40.9)

Capacity analysis results indicate Option 1 or Option 2 would not result in improvement from LOS 'F'. Option 3 would yield LOS 'D' and LOS 'E' in the AM and PM peak hours, respectively, and Option 4 would yield LOS 'D' in both peak hours.

Burkhalter Road & Cawana Road/Driveway 3

For the intersection of Burkhalter Road and Cawana Road/Driveway 3, two mitigation options were evaluated. These options are described below and the capacity analysis results for each are shown below in Table 7. Capacity analysis reports for mitigations at Burkhalter Road and Cawana Road/Driveway 3 are provided in Appendix I.

- **Turn Lanes:** Installation of a southbound dedicated right-turn lane on Cawana Road and a northbound dedicated right-turn lane out of Driveway 3
- **Roundabout:** Installation of a single-lane roundabout (This option was already being considered by the County as an improvement to the intersection, independent of the Burkhalter development.)

Table 7: Capacity Analysis Results – Mitigations at Burkhalter Road & Cawana Road/Driveway 3

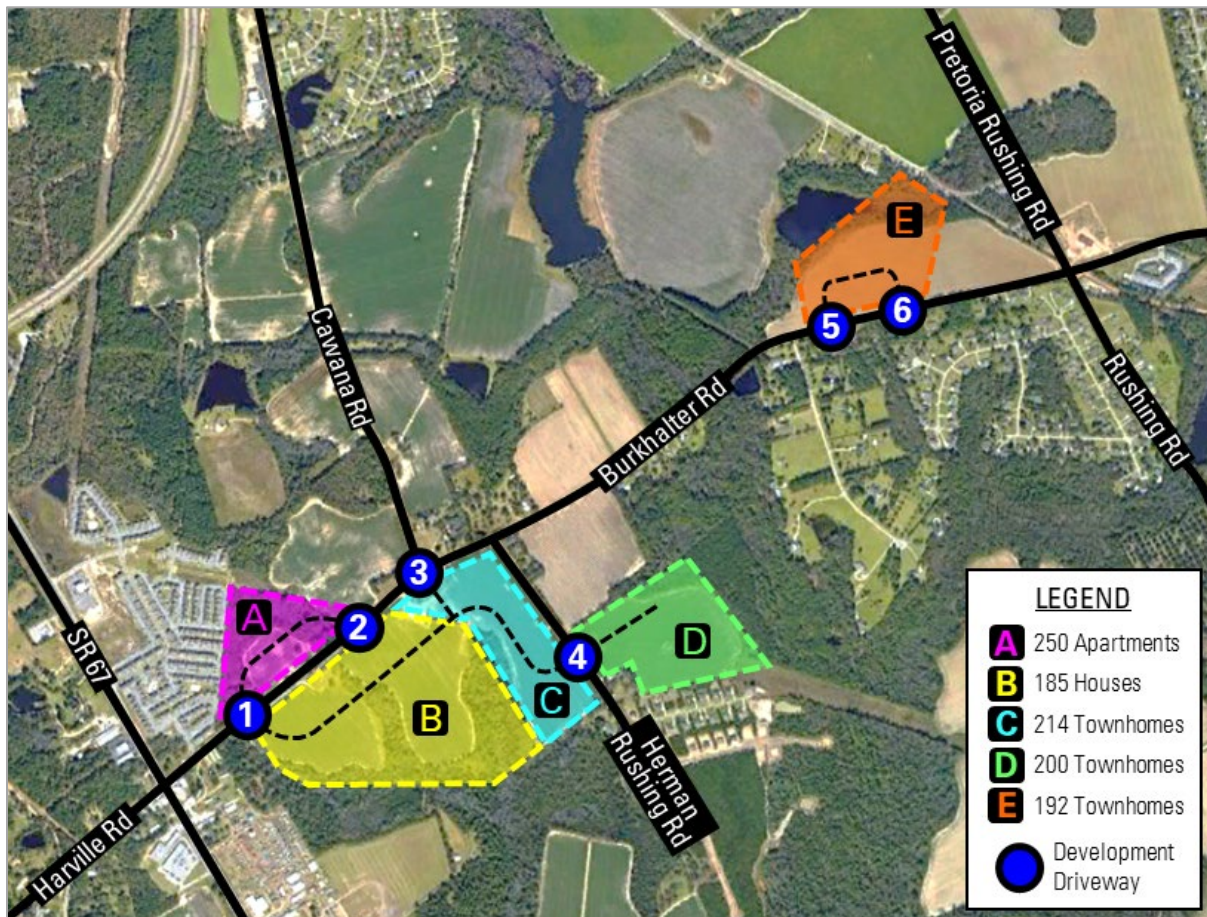
Intersection	Movement	AM Peak Hour			PM Peak Hour		
		No Mitigation	Turn Lanes	Roundabout	No Mitigation	Turn Lanes	Roundabout
2 Burkhalter Rd & Cawana Rd/ Driveway 3	EB	A (4.1)	A (4.1)	A (6.7)	A (2.2)	A (2.2)	B (11.2)
	WB	A (0.2)	A (0.2)	B (10.7)	A (0.9)	A (0.9)	A (8.3)
	NB	F (74.5)	F (54.1)	A (5.8)	F (79.9)	F (61.3)	A (7.2)
	SB	D (29.7)	C (20.2)	A (6.7)	F (192.3)	F (56.8)	A (7.4)

Capacity analysis results indicate the Turn Lanes option yields minimal improvement, while the Roundabout option yields LOS 'A' during both peak hours.

6 Summary

A summary of the evaluation of the traffic-related impact of the proposed development on Burkhalter Road in Bulloch County is as follows:

- The proposed development is comprised of three different residential land uses across five components (shown in the below figure) that are located on either side of Burkhalter Road. The development will be accessed by six new driveways: five on Burkhalter Road and one on Herman Rushing Road.



- The total trips expected to be generated by the development are shown in the table below.

Daily			AM			PM		
Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
3898	3895	7,793	129	392	521	394	253	647

- Included in the study were the intersections listed below:
 1. SR 67 & Burkhalter Road
 2. Burkhalter Road & Cawana Road
 3. Burkhalter Road & Herman Rushing Road
 4. Burkhalter Road & Pretoria Rushing Road/Rushing Road
 5. US 80/SR 26 & Burkhalter Road
- Below is a list of the turn lanes that are warranted, based on GDOT thresholds, at the proposed driveways and the minimum full-width storage/taper lengths for each.
 - Driveway 1: eastbound left (160 feet/50 feet), eastbound right (100 feet/50 feet), and westbound left* (50 feet/50 feet)
 - Driveway 2: westbound right (100 feet/50 feet)
 - Cawana/Driveway 3: eastbound left* (50 feet/50 feet), eastbound right (100 feet/50 feet), and westbound left (160 feet/50 feet)
 - Driveway 4: southbound left (160 feet/50 feet) and southbound right (100 feet/50 feet)
 - Driveway 5: eastbound left (235 feet/100 feet)
 - Driveway 6: westbound right (175 feet/100 feet)

*These turn lanes are not warranted, but should be installed using the taper created to accommodate the warranted opposing left turn lanes.

- Traffic generated by other developments in the vicinity of the study area (Hollingsworth Tract, Jackson Tract, Rushing Tract, and Rushing Property) was included in the evaluation of traffic operations. Evaluation was done with and without these volumes to gauge the impact of the Burkhalter development on its own, compared to the impact of all developments together.
- The intersection of SR 67 and Burkhalter Road currently operates at LOS 'F' and will continue to do so with worsening delay following completion of the Burkhalter and other developments.
- The intersection of Burkhalter Road and Cawana Road currently operates with LOS 'C' on Cawana Road. With the Burkhalter development, the side-streets would operate at LOS 'F', and with the addition of the other developments, would continue to do so with increasing delay.
- All other study intersections currently operate acceptably and are expected to continue to do so after the Burkhalter and other background developments are completed.

- To address the poor operation at SR 67 and Burkhalter Road, the below options were evaluated. Option 4 restores the intersection to acceptable levels of service in both peak hours.
 1. Installation of a westbound left-turn lane on Burkhalter Road and conversion of westbound approach to permitted-protected left-turn phasing
 2. Option 1 + installation of a westbound right-turn lane on Burkhalter Road
 3. Options 1 and 2 + installation of an eastbound right-turn lane on Harville Road
 4. Options 1, 2, and 3 + installation of northbound and southbound right-turn lanes on SR 6
- To address the poor operation at Burkhalter Road and Cawana Road, two mitigation options were evaluated: 1) Installation of turn lanes and 2) Installation of a single-lane roundabout. The turn lane option yields minimal improvement, while the roundabout restores the intersection to LOS 'A'. (The roundabout option was already being considered by the County as an improvement to the intersection, independent of the Burkhalter development.)

Appendices

Site Plan	A
Traffic Data Reports	B
Trip Generation Details	C
Other Development Relevant Info.....	D
Capacity Analysis Reports – Existing Conditions.....	E
Capacity Analysis Reports – Projected Conditions without Other Developments	F
Capacity Analysis Reports – Projected Conditions with Other Developments	G
Capacity Analysis Reports – Mitigations at SR 67 & Burkhalter Road/Harville Road Mitigations	H
Capacity Analysis Reports – Mitigations at Burkhalter Road & Cawana Road/Driveway 3 Mitigations	I

Appendix A: Site Plan



BURKHALTER ROAD

MASTERPLAN EXHIBIT

DATE: JULY 31, 2024

SCALE: 1" = 200'

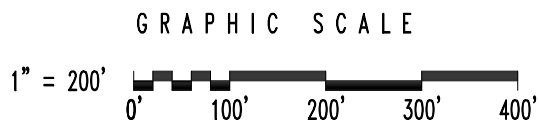
HUSSEY GAY BELL

— Established 1958 —

101 South College Street, Statesboro, GA 30458 / T:912.354.4626

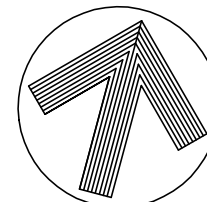


APPROXIMATE UNIT COUNT = 192
TOTAL AREA = 36.50 ACRES
5.26 DU/AC
PROPOSED ZONING: R-3
FEE SIMPLE TOWNHOMES



BURKHALTER TOWNHOMES
REZONING EXHIBIT
BULLOCH COUNTY, GEORGIA
DATE: JUNE 20, 2024 SCALE: 1" = 200'

HUSSEY GAY BELL
— Established 1958 —



REVISIONS:		
SHEET:		
01	OF	01

Appendix B:

Traffic Data Reports



ALL TRAFFIC DATA SERVICES

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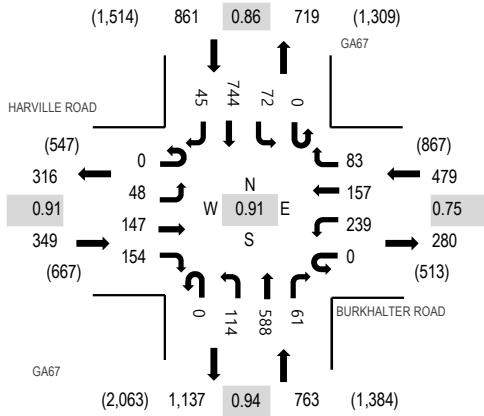
Location: 1 GA67 & BURKHALTER ROAD AM

Date: Wednesday, April 17, 2024

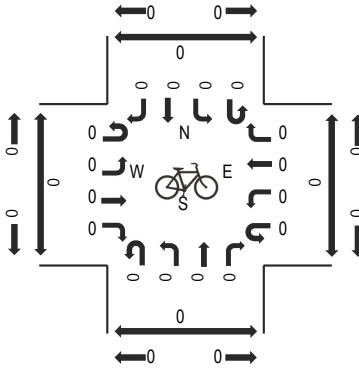
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

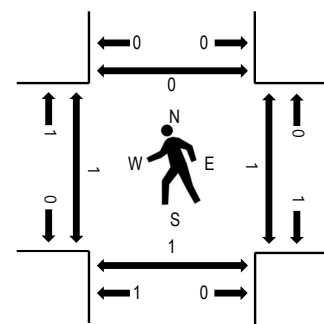
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HARVILLE ROAD Eastbound				BURKHALTER ROAD Westbound				GA67 Northbound				GA67 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	28	33	26	0	43	33	14	0	28	170	13	0	10	104	13	515	2,415	0	0	0	0
7:15 AM	0	13	40	33	0	40	34	17	0	30	165	17	0	9	150	13	561	2,452	1	0	0	0
7:30 AM	0	15	44	30	0	65	46	16	0	40	140	20	0	27	215	12	670	2,366	0	1	1	0
7:45 AM	0	11	34	55	0	73	55	32	0	27	141	10	0	20	204	7	669	2,218	0	0	0	0
8:00 AM	0	9	29	36	0	61	22	18	0	17	142	14	0	16	175	13	552	2,017	0	0	0	0
8:15 AM	0	7	25	35	0	51	27	8	0	14	105	23	0	12	157	11	475		0	0	0	0
8:30 AM	0	11	35	32	0	51	35	12	0	15	107	11	0	17	185	11	522		0	0	0	0
8:45 AM	0	9	39	38	0	78	25	11	0	15	108	12	0	3	126	4	468		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	1	0	0	0	0	17	2	0	1	15	1	39
Lights	0	47	139	151	0	236	147	81	0	112	557	57	0	70	717	42	2,356
Mediums	0	1	6	3	0	2	10	2	0	2	14	2	0	1	12	2	57
Total	0	48	147	154	0	239	157	83	0	114	588	61	0	72	744	45	2,452

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		3.4%				3.1%				4.8%				3.7%			3.9%
Heavy Vehicle %	0.0%	2.1%	5.4%	1.9%	0.0%	1.3%	6.4%	2.4%	0.0%	1.8%	5.3%	6.6%	0.0%	2.8%	3.6%	6.7%	3.9%
Peak Hour Factor		0.91				0.75				0.94				0.86			0.91
Peak Hour Factor	0.00	0.60	0.86	0.72	0.00	0.86	0.76	0.65	0.00	0.78	0.91	0.73	0.00	0.69	0.87	0.87	0.91



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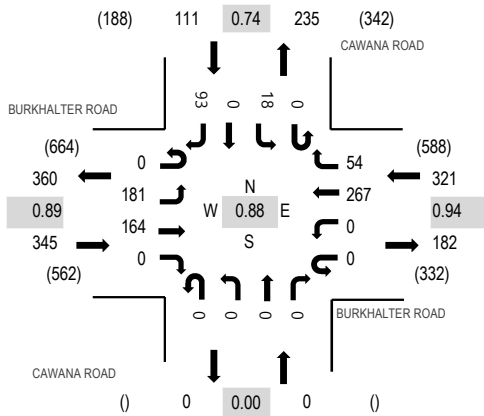
Location: 2 CAWANA ROAD & BURKHALTER ROAD AM

Date: Wednesday, April 17, 2024

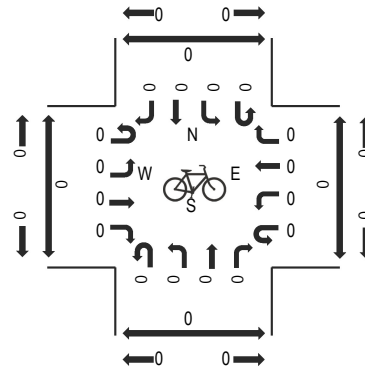
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

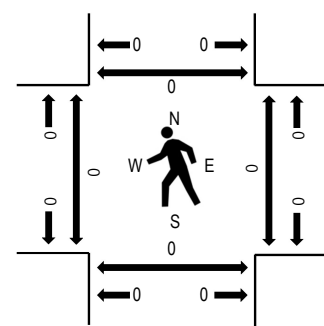
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BURKHALTER ROAD Eastbound				BURKHALTER ROAD Westbound				CAWANA ROAD Northbound				CAWANA ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	38	32	0	0	0	70	9	0	0	0	0	0	3	0	14	166	777	0	0	0	0
7:15 AM	0	45	41	0	0	0	62	15	0	0	0	0	0	4	0	21	188	761	0	0	0	0
7:30 AM	0	58	39	0	0	0	64	21	0	0	0	0	0	5	0	35	222	710	0	0	0	0
7:45 AM	0	40	52	0	0	0	71	9	0	0	0	0	0	6	0	23	201	626	0	0	0	0
8:00 AM	0	28	32	0	0	0	59	7	0	0	0	0	0	6	0	18	150	561	0	0	0	0
8:15 AM	0	21	38	0	0	0	59	5	0	0	0	0	0	1	0	13	137		0	0	0	0
8:30 AM	0	21	32	0	0	0	58	4	0	0	0	0	0	7	0	16	138		0	0	0	0
8:45 AM	0	15	30	0	0	0	69	6	0	0	0	0	0	4	0	12	136		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	2	1	0	0	0	0	0	0	0	0	4
Lights	0	175	159	0	0	0	259	52	0	0	0	0	0	18	0	89	752
Mediums	0	6	4	0	0	0	6	1	0	0	0	0	0	0	0	4	21
Total	0	181	164	0	0	0	267	54	0	0	0	0	0	18	0	93	777

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		3.2%				3.1%				0.0%				3.6%			3.2%
Heavy Vehicle %	0.0%	3.3%	3.0%	0.0%	0.0%	0.0%	3.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	3.2%
Peak Hour Factor		0.89				0.94				0.00				0.74			0.88
Peak Hour Factor	0.00	0.78	0.79	0.00	0.00	0.00	0.94	0.64	0.00	0.00	0.00	0.00	0.00	0.88	0.00	0.69	0.88



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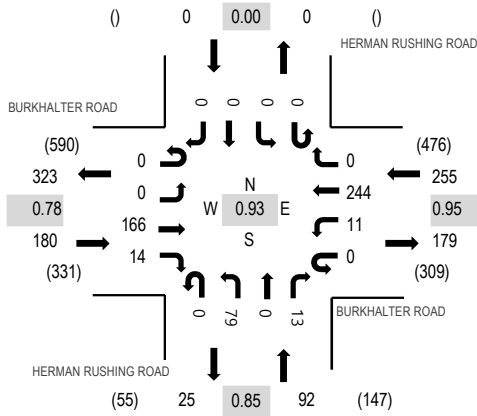
Location: 3 HERMAN RUSHING ROAD & BURKHALTER ROAD AM

Date: Wednesday, April 17, 2024

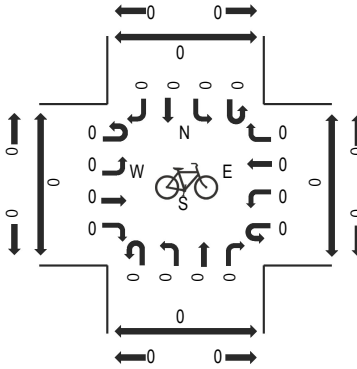
Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

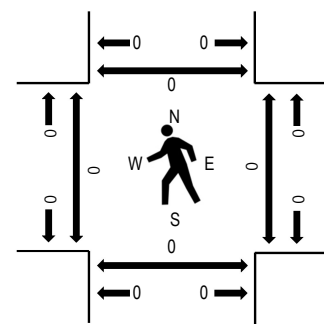
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BURKHALTER ROAD				BURKHALTER ROAD				HERMAN RUSHING ROAD				HERMAN RUSHING ROAD				Total	Rolling Hour	Pedestrian Crossings			
	Eastbound				Westbound				Northbound				Southbound						West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
7:00 AM	0	0	33	2	0	2	62	0	0	18	0	4	0	0	0	0	121	527	0	0	0	0
7:15 AM	0	0	41	4	0	2	57	0	0	21	0	5	0	0	0	0	130	515	0	0	0	0
7:30 AM	0	0	38	3	0	6	61	0	0	24	0	3	0	0	0	0	135	490	0	0	0	0
7:45 AM	0	0	54	5	0	1	64	0	0	16	0	1	0	0	0	0	141	460	0	0	0	0
8:00 AM	0	0	35	5	0	4	58	0	0	7	0	0	0	0	0	0	109	427	0	0	0	0
8:15 AM	0	0	33	5	0	2	49	0	0	15	0	1	0	0	0	0	105		0	0	0	0
8:30 AM	0	0	32	8	0	0	55	0	0	10	0	0	0	0	0	0	105		0	0	0	0
8:45 AM	0	0	28	5	0	1	52	0	0	21	0	1	0	0	0	0	108		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4
Lights	0	0	164	14	0	10	235	0	0	78	0	13	0	0	0	0	514
Mediums	0	0	1	0	0	1	6	0	0	1	0	0	0	0	0	0	9
Total	0	0	166	14	0	11	244	0	0	79	0	13	0	0	0	0	527

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.1%				3.9%				1.1%				0.0%			2.5%
Heavy Vehicle %	0.0%	0.0%	1.2%	0.0%	0.0%	9.1%	3.7%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%
Peak Hour Factor		0.78				0.95				0.85				0.00			0.93
Peak Hour Factor	0.00	0.00	0.78	0.72	0.00	0.54	0.95	0.00	0.00	0.82	0.00	0.65	0.00	0.00	0.00	0.00	0.93



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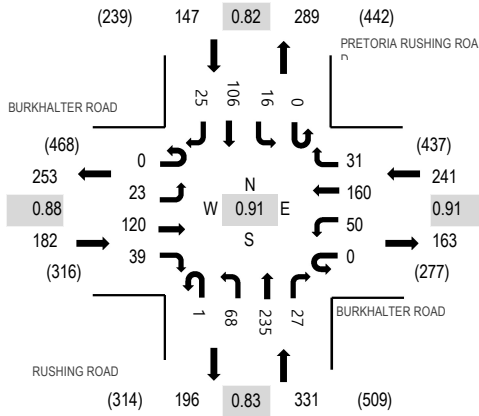
Location: 4 RUSHING ROAD & BURKHALTER ROAD AM

Date: Wednesday, April 17, 2024

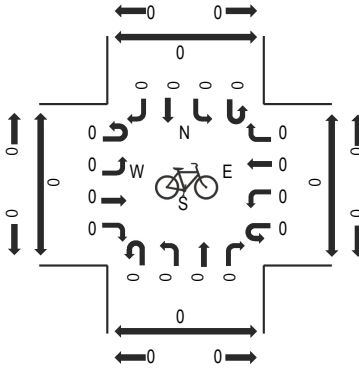
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

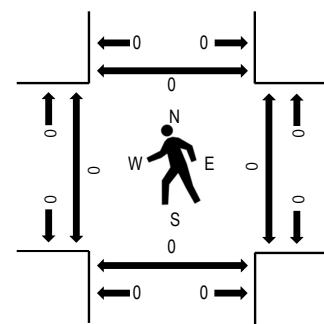
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BURKHALTER ROAD				BURKHALTER ROAD				RUSHING ROAD				PRETORIA RUSHING ROAD				Total	Rolling Hour	Pedestrian Crossings			
	Eastbound				Westbound				Northbound				Southbound						West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
7:00 AM	0	2	23	12	0	7	47	5	0	11	27	4	0	4	19	2	163	864	0	0	0	0
7:15 AM	0	10	29	10	0	9	43	5	0	14	34	6	0	4	35	6	205	901	0	0	0	0
7:30 AM	0	2	25	17	0	20	44	4	1	17	76	6	0	5	24	7	248	849	0	0	0	0
7:45 AM	0	5	38	9	0	17	34	13	0	21	65	7	0	5	28	6	248	750	0	0	0	0
8:00 AM	0	6	28	3	0	4	39	9	0	16	60	8	0	2	19	6	200	637	0	0	0	0
8:15 AM	0	6	20	4	1	7	34	4	0	13	35	5	0	1	21	2	153		0	0	0	0
8:30 AM	0	3	26	9	0	2	37	11	1	12	25	3	0	1	13	6	149		0	0	0	0
8:45 AM	0	3	19	7	0	2	37	2	0	7	30	5	0	2	14	7	135		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	1	2	0	0	1	0	0	0	0	0	0	5
Lights	0	23	115	39	0	49	153	30	1	65	230	26	0	15	102	24	872
Mediums	0	0	4	0	0	0	5	1	0	2	5	1	0	1	4	1	24
Total	0	23	120	39	0	50	160	31	1	68	235	27	0	16	106	25	901

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	2.7%				3.7%				2.7%				4.1%				3.2%
Heavy Vehicle %	0.0%	0.0%	4.2%	0.0%	0.0%	2.0%	4.4%	3.2%	0.0%	4.4%	2.1%	3.7%	0.0%	6.3%	3.8%	4.0%	3.2%
Peak Hour Factor	0.88				0.91				0.83				0.82				0.91
Peak Hour Factor	0.00	0.58	0.79	0.71	0.25	0.66	0.89	0.71	0.25	0.81	0.78	0.84	0.00	0.90	0.76	0.89	0.91



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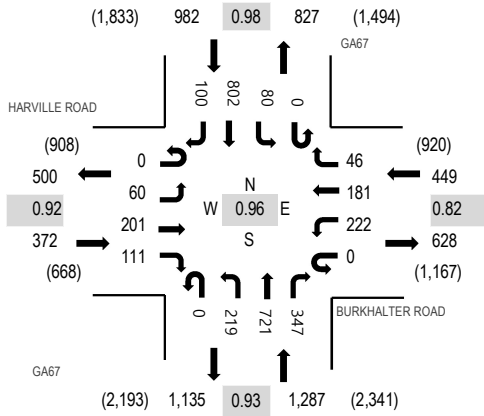
Location: 1 GA67 & BURKHALTER ROAD PM

Date: Wednesday, April 17, 2024

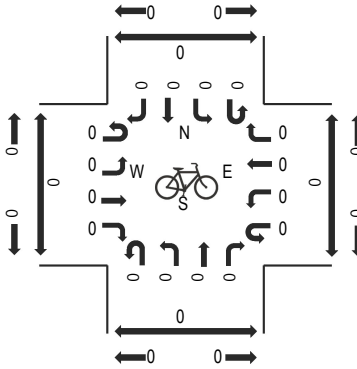
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

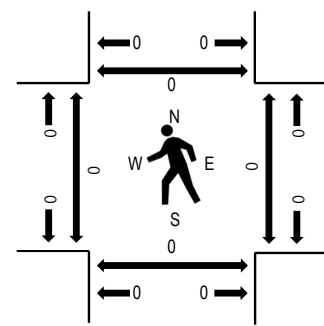
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HARVILLE ROAD Eastbound				BURKHALTER ROAD Westbound				GA67 Northbound				GA67 Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:30 PM	0	13	36	12	0	45	28	9	0	40	159	78	0	19	178	11	628	2,869	0	0	0	0
4:45 PM	0	16	38	22	0	60	30	16	0	48	143	76	0	29	189	4	671	3,039	0	0	0	0
5:00 PM	0	13	50	38	0	48	53	7	0	54	178	81	0	21	200	23	766	3,090	0	0	0	0
5:15 PM	0	16	56	21	0	62	45	11	0	54	207	86	0	14	203	29	804	3,029	0	0	0	0
5:30 PM	0	16	53	21	0	63	49	18	0	58	189	90	0	31	179	31	798	2,893	0	0	0	0
5:45 PM	0	15	42	31	0	49	34	10	0	53	147	90	0	14	220	17	722		0	0	0	0
6:00 PM	0	10	42	30	0	72	44	12	0	61	141	71	0	20	188	14	705		0	1	0	0
6:15 PM	0	12	41	24	0	77	63	15	0	45	121	71	0	18	161	20	668		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	1	0	0	1	5	0	0	0	8	0	16
Lights	0	60	199	110	0	221	175	46	0	217	713	347	0	78	787	99	3,052
Mediums	0	0	2	1	0	0	5	0	0	1	3	0	0	2	7	1	22
Total	0	60	201	111	0	222	181	46	0	219	721	347	0	80	802	100	3,090

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %	0.8%				1.6%				0.8%				1.8%				1.2%
Heavy Vehicle %	0.0%	0.0%	1.0%	0.9%	0.0%	0.5%	3.3%	0.0%	0.0%	0.9%	1.1%	0.0%	0.0%	2.5%	1.9%	1.0%	1.2%
Peak Hour Factor	0.92				0.82				0.93				0.98				0.96
Peak Hour Factor	0.00	0.95	0.90	0.73	0.00	0.85	0.75	0.76	0.00	0.93	0.87	0.96	0.00	0.77	0.91	0.81	0.96



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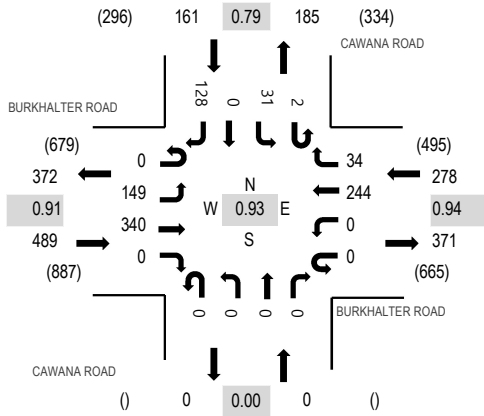
Location: 2 CAWANA ROAD & BURKHALTER ROAD PM

Date: Wednesday, April 17, 2024

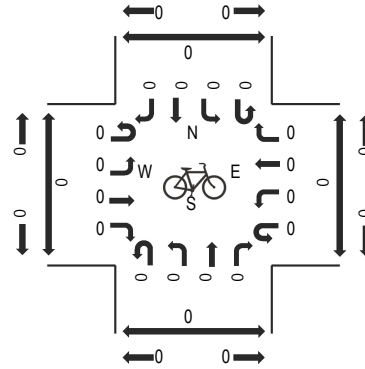
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

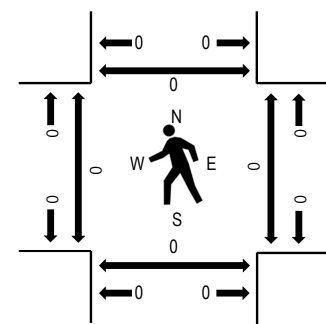
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BURKHALTER ROAD Eastbound				BURKHALTER ROAD Westbound				CAWANA ROAD Northbound				CAWANA ROAD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:30 PM	0	24	60	0	0	0	46	4	0	0	0	0	0	9	0	27	170	809	0	0	0	0
4:45 PM	0	22	64	0	0	0	46	8	0	0	0	0	0	3	0	23	166	877	0	0	0	0
5:00 PM	0	31	72	0	0	0	62	12	0	0	0	0	1	11	0	35	224	928	0	0	0	0
5:15 PM	0	41	94	0	0	0	56	7	0	0	0	0	0	8	0	43	249	910	0	0	0	0
5:30 PM	0	46	83	0	0	0	65	8	0	0	0	0	1	6	0	29	238	869	0	0	0	0
5:45 PM	0	31	91	0	0	0	61	7	0	0	0	0	0	6	0	21	217		0	0	0	0
6:00 PM	0	38	67	0	0	0	49	7	0	0	0	0	0	2	0	43	206		0	0	0	0
6:15 PM	0	39	84	0	0	0	50	7	0	0	0	0	0	5	0	23	208		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lights	0	147	335	0	0	0	241	34	0	0	0	0	2	31	0	127	917
Mediums	0	2	3	0	0	0	3	0	0	0	0	0	0	0	0	1	9
Total	0	149	340	0	0	0	244	34	0	0	0	0	2	31	0	128	928

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.4%				1.1%				0.0%				0.6%			1.2%
Heavy Vehicle %	0.0%	1.3%	1.5%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	1.2%
Peak Hour Factor		0.91				0.94				0.00				0.79			0.93
Peak Hour Factor	0.00	0.85	0.90	0.00	0.00	0.00	0.94	0.73	0.00	0.00	0.00	0.00	0.50	0.70	0.00	0.79	0.93



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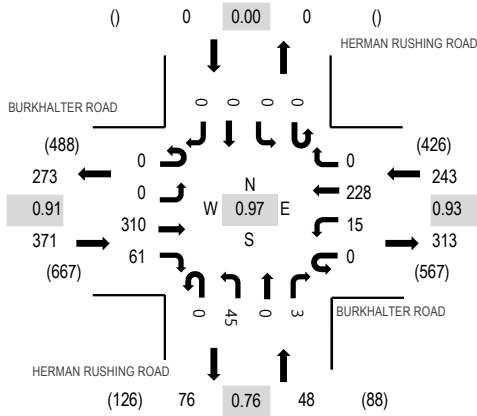
Location: 3 HERMAN RUSHING ROAD & BURKHALTER ROAD PM

Date: Wednesday, April 17, 2024

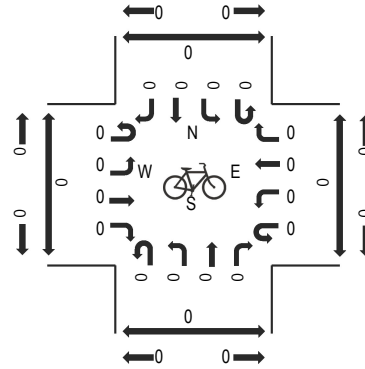
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:15 PM - 05:30 PM

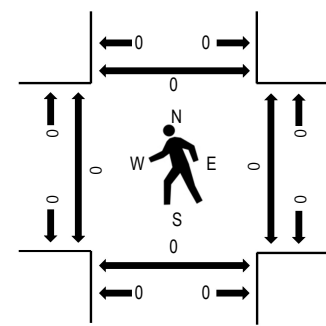
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BURKHALTER ROAD				BURKHALTER ROAD				HERMAN RUSHING ROAD				HERMAN RUSHING ROAD				Total	Rolling Hour	Pedestrian Crossings			
	Eastbound				Westbound				Northbound				Southbound						West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
4:30 PM	0	0	54	12	0	2	38	0	0	12	0	0	0	0	0	0	118	577	0	0	0	0
4:45 PM	0	0	55	15	0	0	44	0	0	11	0	2	0	0	0	0	127	625	0	0	0	0
5:00 PM	0	0	70	15	0	4	55	0	0	15	0	2	0	0	0	0	161	662	0	0	0	0
5:15 PM	0	0	80	22	0	4	55	0	0	9	0	1	0	0	0	0	171	624	0	0	0	0
5:30 PM	0	0	79	11	0	5	60	0	0	11	0	0	0	0	0	0	166	604	0	0	0	0
5:45 PM	0	0	81	13	0	2	58	0	0	10	0	0	0	0	0	0	164		0	0	0	0
6:00 PM	0	0	58	9	0	2	46	0	0	8	0	0	0	0	0	0	123		0	0	0	0
6:15 PM	0	0	84	9	0	1	50	0	0	6	0	1	0	0	0	0	151		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lights	0	0	305	61	0	15	225	0	0	45	0	3	0	0	0	0	654
Mediums	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	6
Total	0	0	310	61	0	15	228	0	0	45	0	3	0	0	0	0	662

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.3%				1.2%				0.0%				0.0%			1.2%
Heavy Vehicle %	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%
Peak Hour Factor		0.91				0.93				0.76				0.00			0.97
Peak Hour Factor	0.00	0.00	0.96	0.73	0.00	0.75	0.95	0.00	0.00	0.78	0.00	0.63	0.00	0.00	0.00	0.00	0.97



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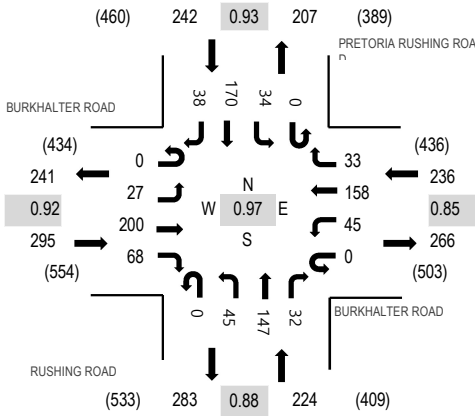
Location: 4 RUSHING ROAD & BURKHALTER ROAD PM

Date: Wednesday, April 17, 2024

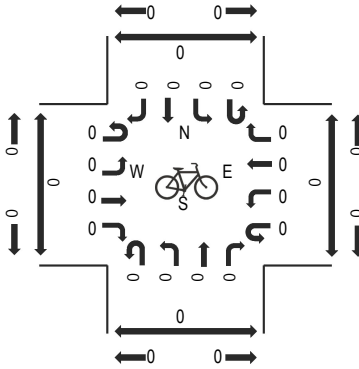
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:30 PM - 05:45 PM

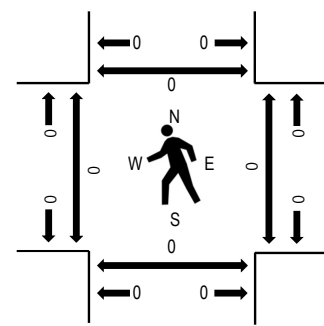
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BURKHALTER ROAD				BURKHALTER ROAD				RUSHING ROAD				PRETORIA RUSHING ROAD				Total	Rolling Hour	Pedestrian Crossings			
	Eastbound				Westbound				Northbound				Southbound						West	East	South	North
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right						
4:30 PM	1	8	33	12	0	11	22	6	0	8	26	8	0	8	43	5	191	901	0	0	0	0
4:45 PM	0	7	37	13	0	11	29	11	0	9	33	10	0	11	31	8	210	966	0	0	0	0
5:00 PM	0	3	44	14	0	10	43	15	0	13	41	9	0	8	43	9	252	997	0	0	0	0
5:15 PM	0	5	63	12	0	10	25	4	0	15	43	6	0	13	40	12	248	960	0	0	0	0
5:30 PM	0	13	49	20	0	13	49	8	0	12	27	7	0	6	40	12	256	958	0	0	0	0
5:45 PM	0	6	44	22	0	12	41	6	0	5	36	10	0	7	47	5	241		0	0	0	0
6:00 PM	0	9	43	15	1	9	39	4	2	6	25	7	0	8	40	7	215		0	0	0	0
6:15 PM	0	11	50	20	0	5	42	10	0	8	32	11	0	10	38	9	246		0	0	0	0

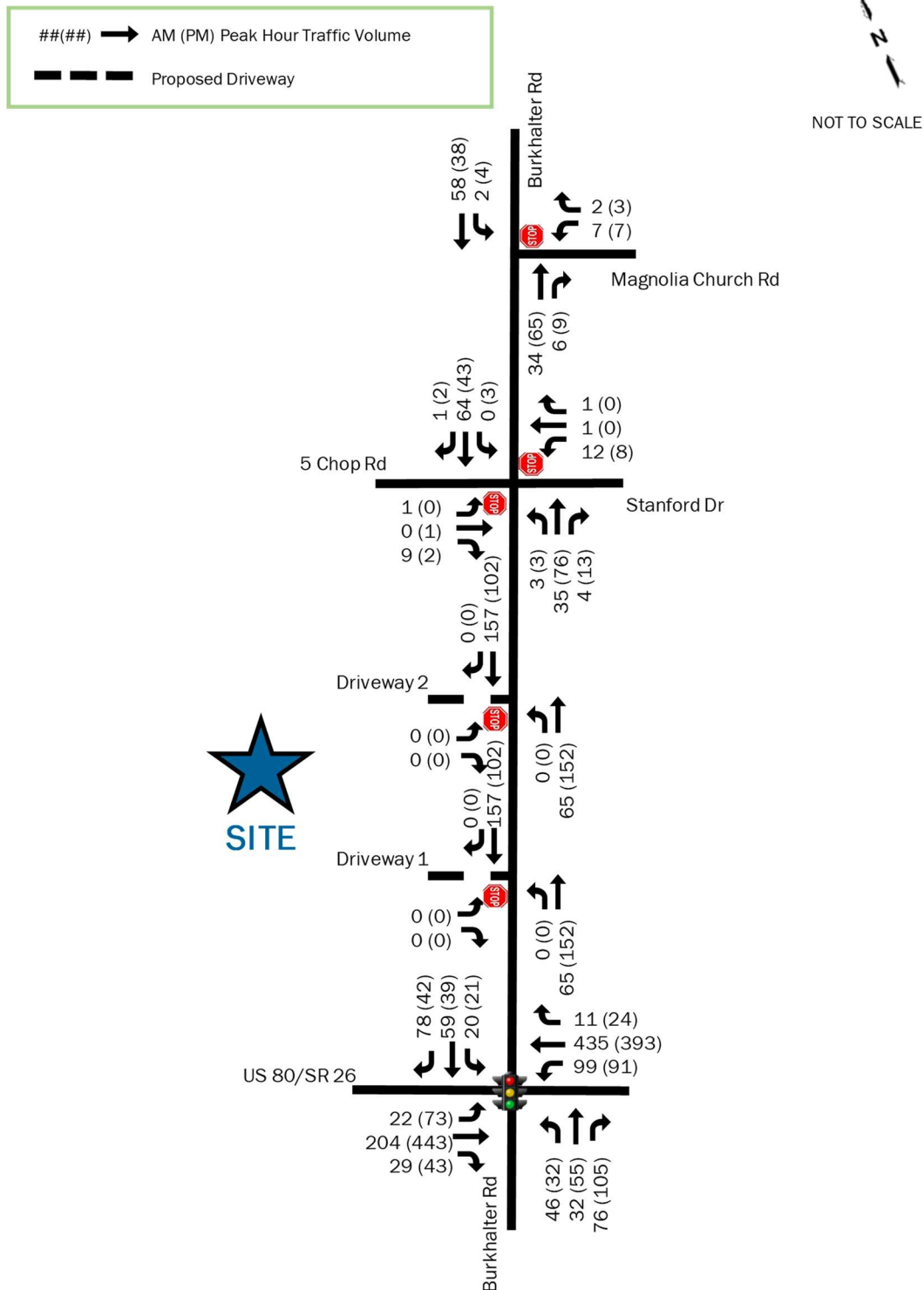
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lights	0	27	196	68	0	45	157	33	0	44	147	32	0	34	170	38	991
Mediums	0	0	2	0	0	0	1	0	0	1	0	0	0	0	0	0	4
Total	0	27	200	68	0	45	158	33	0	45	147	32	0	34	170	38	997

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.4%				0.4%				0.4%				0.0%			0.6%
Heavy Vehicle %	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%
Peak Hour Factor		0.92				0.85				0.88				0.93			0.97
Peak Hour Factor	0.25	0.75	0.79	0.88	0.25	0.87	0.87	0.63	0.25	0.82	0.85	0.80	0.00	0.77	0.90	0.85	0.97

Figure 3. Existing Traffic Volumes



Appendix C:

Trip Generation Details

Land Use	Size	Trip Generation									
			Daily			AM			PM		
			Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
220 (Apartments) A	250	Rate	0.5	0.5	6.74	0.24	0.76	0.4	0.63	0.37	0.51
		Trips	843	842	1685	24	76	100	81	47	128
210 (Houses) B	185	Rate	0.5	0.5	9.43	0.25	0.75	0.7	0.63	0.37	0.94
		Trips	873	872	1745	32	98	130	110	64	174
215 (Townhomes) C	214	Rate	0.5	0.5	7.2	0.25	0.75	0.48	0.59	0.41	0.57
		Trips	771	770	1541	26	77	103	72	50	122
215 (Townhomes) D	200	Rate	0.5	0.5	7.2	0.25	0.75	0.48	0.59	0.41	0.57
		Trips	720	720	1440	24	72	96	67	47	114
215 (Townhomes) E	192	Rate	0.5	0.5	7.2	0.25	0.75	0.48	0.59	0.41	0.57
		Trips	691	691	1382	23	69	92	64	45	109
Total			3898	3895	7793	129	392	521	394	253	647
Trip Assignment											
Land Use	Direction of Origin/Destination	Size	Daily			AM			PM		
			Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
220 (Apartments) A	North, 67	0.18	152	152	304	4	14	18	15	8	23
	South, 67	0.29	244	244	488	7	22	29	23	14	37
	West, Burkhalter	0.08	67	67	134	2	6	8	6	4	10
	North, Cawana	0.06	51	51	102	1	5	6	5	3	8
	North, Rushing	0.07	59	59	118	2	5	7	6	3	9
	South, Rushing	0.05	42	42	84	1	4	5	4	2	6
	North, US 80	0.14	118	118	236	3	11	14	11	7	18
	South, US 80	0.08	67	67	134	2	6	8	6	4	10
	East, Burkhalter	0.05	43	42	85	2	3	5	5	2	7
Total			843	842	1685	24	76	100	81	47	128
210 (Houses) B	North, 67	0.18	157	157	314	6	18	24	20	12	32
	South, 67	0.29	253	253	506	9	28	37	32	19	51
	West, Burkhalter	0.08	70	70	140	3	8	11	9	5	14
	North, Cawana	0.06	52	52	104	2	6	8	7	4	11
	North, Rushing	0.07	61	61	122	2	7	9	8	4	12
	South, Rushing	0.05	44	44	88	2	5	7	6	3	9
	North, US 80	0.14	122	122	244	4	14	18	15	9	24
	South, US 80	0.08	70	70	140	3	8	11	9	5	14
	East, Burkhalter	0.05	44	43	87	1	4	5	4	3	7
Total			873	872	1745	32	98	130	110	64	174
215 (Townhomes) C	North, 67	0.18	139	139	278	5	14	19	13	9	22
	South, 67	0.29	224	223	447	8	22	30	21	15	36
	West, Burkhalter	0.08	62	62	124	2	6	8	6	4	10
	North, Cawana	0.06	46	46	92	2	5	7	4	3	7
	North, Rushing	0.07	54	54	108	2	5	7	5	4	9
	South, Rushing	0.05	39	39	78	1	4	5	4	3	7
	North, US 80	0.14	108	108	216	4	11	15	10	7	17
	South, US 80	0.08	62	62	124	2	6	8	6	4	10
	East, Burkhalter	0.05	37	37	74	0	4	4	3	1	4
Total			771	770	1541	26	77	103	72	50	122
215 (Townhomes) D	North, 67	0.18	130	130	260	4	13	17	12	8	20
	South, 67	0.29	209	209	418	7	21	28	19	14	33
	West, Burkhalter	0.08	58	58	116	2	6	8	5	4	9
	North, Cawana	0.06	43	43	86	1	4	5	4	3	7
	North, Rushing	0.07	50	50	100	2	5	7	5	3	8
	South, Rushing	0.05	36	36	72	1	4	5	3	2	5
	North, US 80	0.14	101	101	202	3	10	13	9	7	16
	South, US 80	0.08	58	58	116	2	6	8	5	4	9
	East, Burkhalter	0.05	35	35	70	2	3	5	5	2	7
Total			720	720	1440	24	72	96	67	47	114
215 (Townhomes) E	North, 67	0.18	124	124	248	4	12	16	12	8	20
	South, 67	0.29	200	200	400	7	20	27	19	13	32
	West, Burkhalter	0.08	55	55	110	2	6	8	5	4	9
	North, Cawana	0.06	41	41	82	1	4	5	4	3	7
	North, Rushing	0.07	48	48	96	2	5	7	4	3	7
	South, Rushing	0.05	35	35	70	1	3	4	3	2	5
	North, US 80	0.14	97	97	194	3	10	13	9	6	15
	South, US 80	0.08	55	55	110	2	6	8	5	4	9
	East, Burkhalter	0.05	36	36	72	1	3	4	3	2	5
Total			691	691	1382	23	69	92	64	45	109

Appendix D:

Other Development Relevant Info

Figure 8: Traffic Assignment

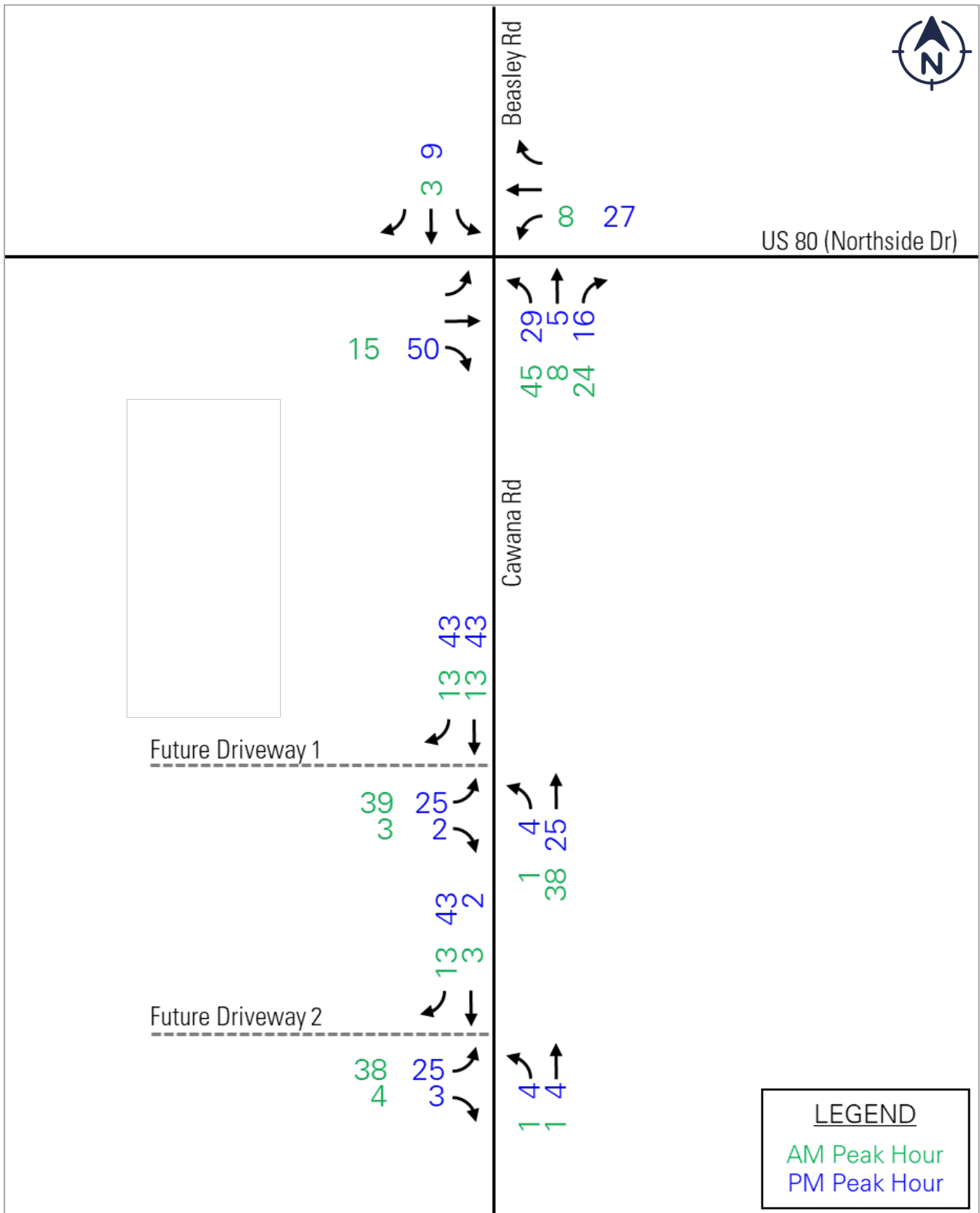


Figure 6. Project Traffic Volumes

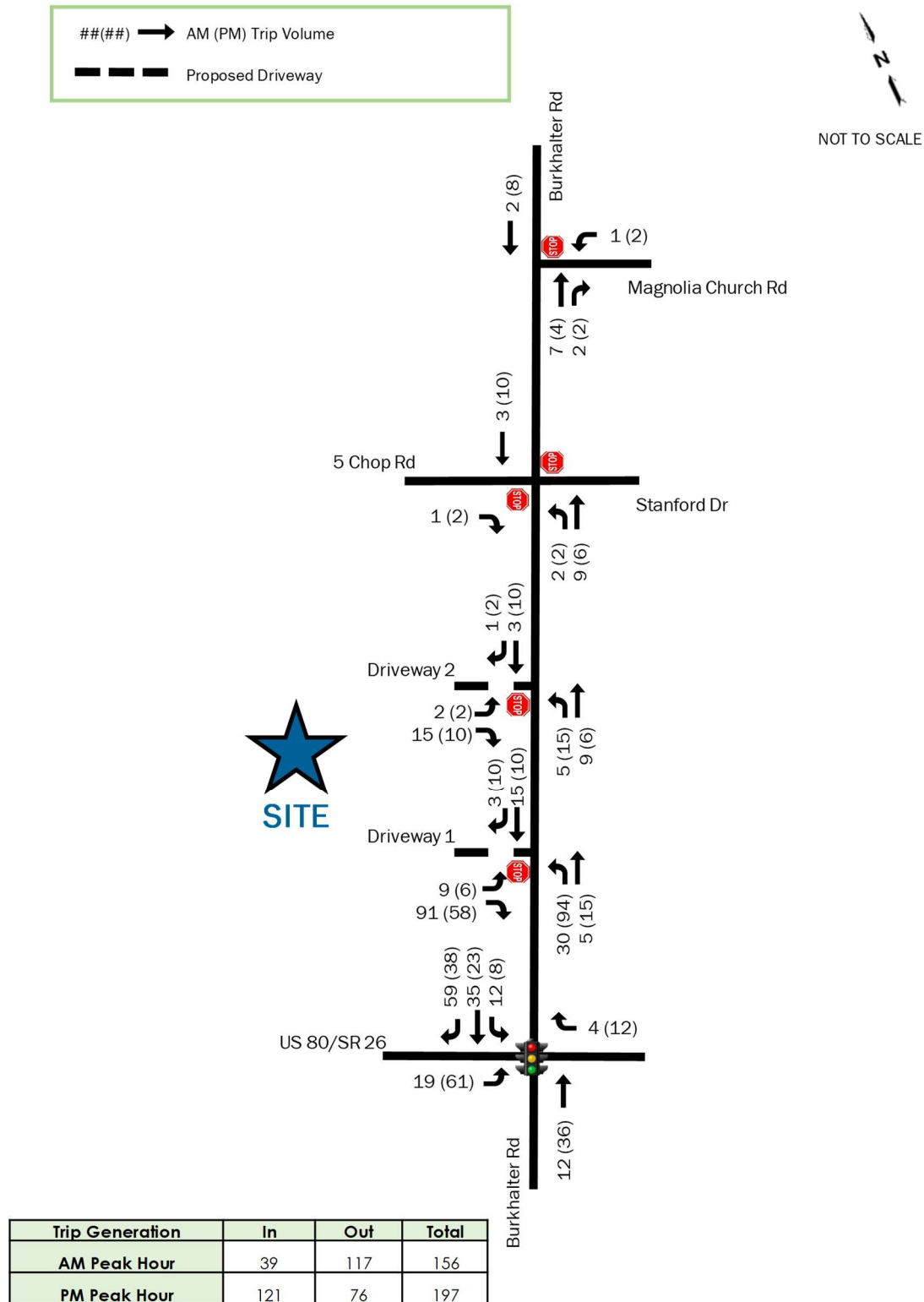
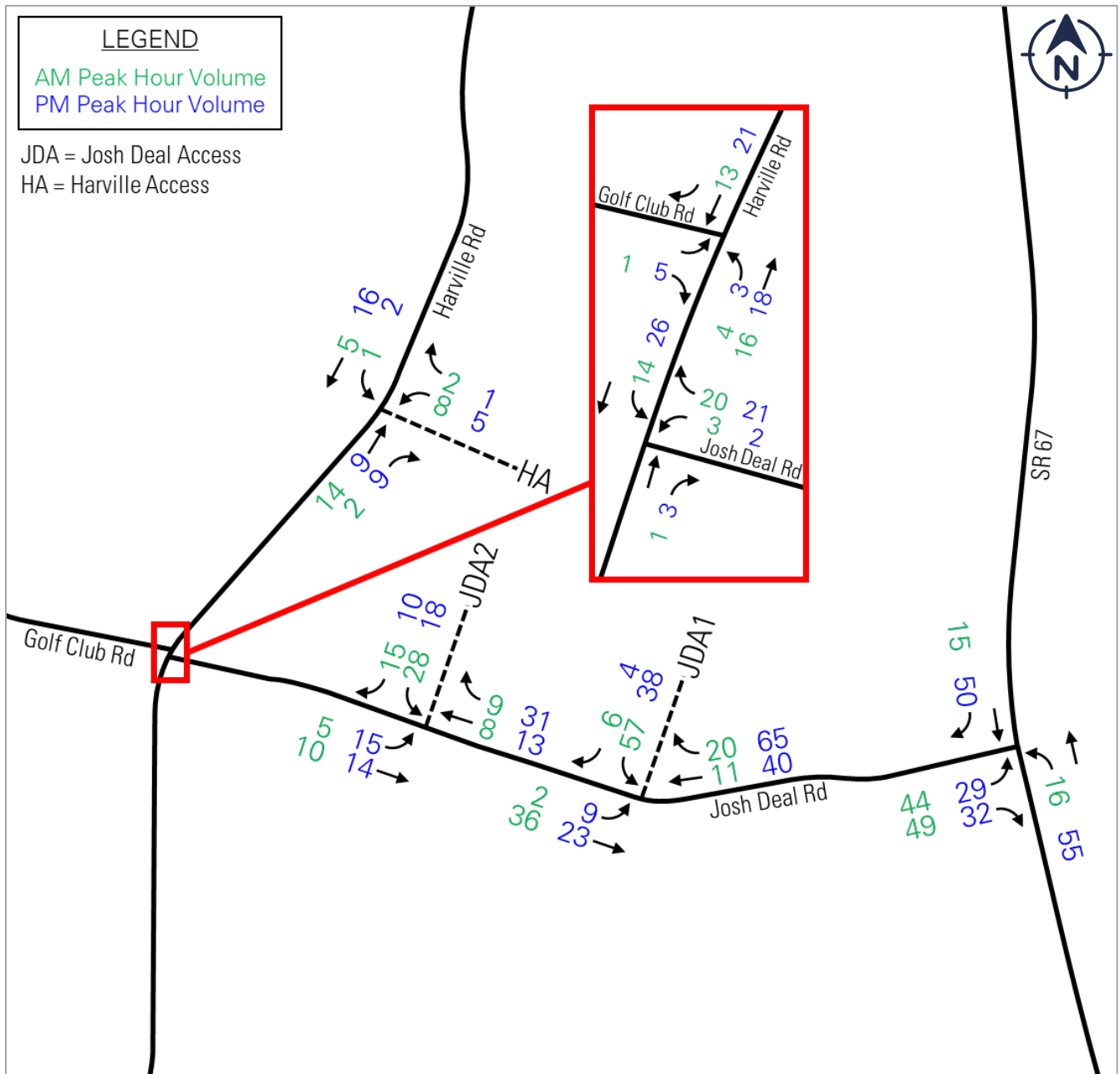
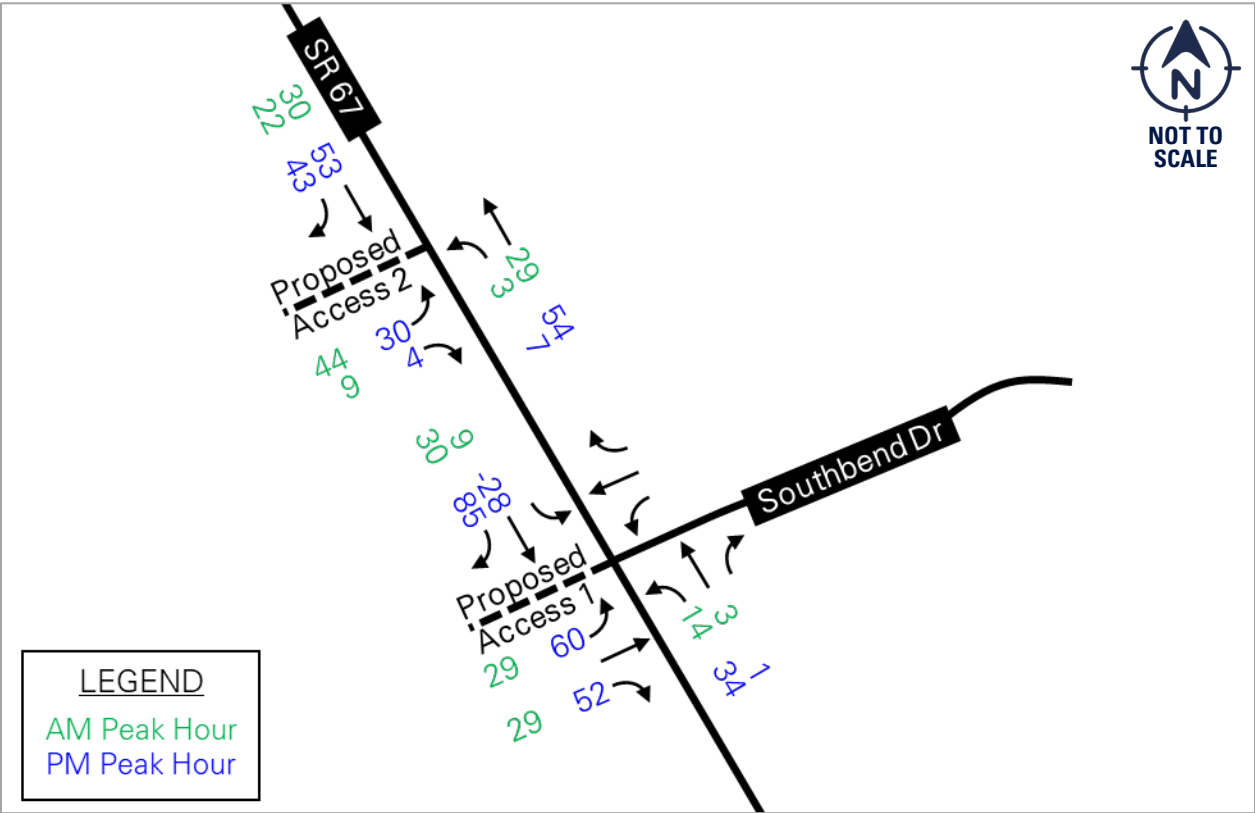


Figure 6: Traffic Assignment



The total traffic assignment, found by combining the assignment for residential new trips, commercial new trips, and commercial pass-by trips, is shown below in Figure 9.

Figure 9: Total Traffic Assignment



Appendix E:
Capacity Analysis Reports
Existing Conditions

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Existing Conditions
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	147	154	239	157	83	114	588	61	72	744	45
Future Volume (veh/h)	48	147	154	239	157	83	114	588	61	72	744	45
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1826	1870	1885	1811	1870	1870	1826	1796	1856	1841	1796
Adj Flow Rate, veh/h	80	171	214	278	207	128	146	646	84	104	855	52
Peak Hour Factor	0.60	0.86	0.72	0.86	0.76	0.65	0.78	0.91	0.73	0.69	0.87	0.87
Percent Heavy Veh, %	2	5	2	1	6	2	2	5	7	3	4	7
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	526	398	499	274	171	106	153	800	104	194	868	53
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.54	0.54	0.45	0.45	0.45	0.05	0.26	0.26	0.05	0.26	0.26
Unsig. Movement Delay												
Ln Grp Delay, s/veh	15.4	0.0	16.8	110.8	0.0	0.0	98.7	51.9	52.0	35.9	82.4	81.8
Ln Grp LOS	B	A	B	F	A	A	F	D	D	D	F	F
Approach Vol, veh/h	465			613			876			1011		
Approach Delay, s/veh	16.5			110.8			59.8			77.3		
Approach LOS	B			F			E			E		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Case No	1.1	4.0		4.0	1.1	4.0	1.2	8.3				
Phs Duration (G+Y+Rc), s	12.0	37.0		70.6	12.0	37.0	10.6	60.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0	6.0	6.0				
Max Green (Gmax), s	6.0	31.0		65.0	6.0	31.0	5.0	54.0				
Max Allow Headway (MAH), s	3.7	4.9		5.1	3.7	5.0	3.7	5.5				
Max Q Clear (g_c+1), s	8.0	32.4		18.6	7.2	25.5	4.8	56.0				
Green Ext Time (g_e), s	0.0	0.0		2.5	0.0	2.0	0.0	0.0				
Prob of Phs Call (p_c)	0.99	1.00		1.00	0.97	1.00	0.93	1.00				
Prob of Max Out (p_x)	1.00	1.00		0.00	1.00	0.90	1.00	1.00				
Left-Turn Movement Data												
Assigned Mvmt	1				5		7	3				
Mvmt Sat Flow, veh/h	1781				1767		1781	510				
Through Movement Data												
Assigned Mvmt		2		4		6		8				
Mvmt Sat Flow, veh/h		3349		737		3087		379				
Right-Turn Movement Data												
Assigned Mvmt		12		14		16		18				
Mvmt Sat Flow, veh/h		204		923		401		235				
Left Lane Group Data												
Assigned Mvmt	1	0	0	0	5	0	7	3				
Lane Assignment	L (Pr/Pm)			L (Pr/Pm)			L (Pr/Pm)		L+T+R			

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Existing Conditions
AM Peak Hour

Lanes in Grp	1	0	0	0	1	0	1	1
Grp Vol (v), veh/h	146	0	0	0	104	0	80	613
Grp Sat Flow (s), veh/h/ln	1781	0	0	0	1767	0	1781	1124
Q Serve Time (g_s), s	6.0	0.0	0.0	0.0	5.2	0.0	2.8	48.0
Cycle Q Clear Time (g_c), s	6.0	0.0	0.0	0.0	5.2	0.0	2.8	54.0
Perm LT Sat Flow (s_l), veh/h/ln	615	0	0	0	720	0	1045	1014
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	848	0
Perm LT Eff Green (g_p), s	31.0	0.0	0.0	0.0	31.0	0.0	56.0	54.0
Perm LT Serve Time (g_u), s	0.6	0.0	0.0	0.0	7.5	0.0	0.0	48.0
Perm LT Q Serve Time (g_ps), s	0.6	0.0	0.0	0.0	4.0	0.0	0.0	48.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.45
Lane Grp Cap (c), veh/h	153	0	0	0	194	0	526	551
V/C Ratio (X)	0.96	0.00	0.00	0.00	0.54	0.00	0.15	1.11
Avail Cap (c_a), veh/h	153	0	0	0	194	0	532	551
Upstream Filter (I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	39.0	0.0	0.0	0.0	33.0	0.0	15.2	37.7
Incr Delay (d2), s/veh	59.7	0.0	0.0	0.0	2.9	0.0	0.1	73.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	98.7	0.0	0.0	0.0	35.9	0.0	15.4	110.8
1st-Term Q (Q1), veh/ln	1.4	0.0	0.0	0.0	2.1	0.0	1.1	16.0
2nd-Term Q (Q2), veh/ln	2.5	0.0	0.0	0.0	0.2	0.0	0.0	11.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	3.9	0.0	0.0	0.0	2.3	0.0	1.1	27.1
%ile Storage Ratio (RQ%)	1.32	0.00	0.00	0.00	0.78	0.00	0.22	0.21
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	446	0	0	0	363	0	0
Grp Sat Flow (s), veh/h/ln	0	1749	0	0	0	1735	0	0
Q Serve Time (g_s), s	0.0	30.4	0.0	0.0	0.0	23.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	30.4	0.0	0.0	0.0	23.4	0.0	0.0
Lane Grp Cap (c), veh/h	0	453	0	0	0	449	0	0
V/C Ratio (X)	0.00	0.99	0.00	0.00	0.00	0.81	0.00	0.00
Avail Cap (c_a), veh/h	0	453	0	0	0	449	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	44.1	0.0	0.0	0.0	41.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	38.3	0.0	0.0	0.0	10.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	82.4	0.0	0.0	0.0	51.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	12.6	0.0	0.0	0.0	9.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	4.8	0.0	0.0	0.0	1.3	0.0	0.0

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Existing Conditions
AM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	17.4	0.0	0.0	0.0	10.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.12	0.00	0.00	0.00	0.68	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R			
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	461	0	385	0	367	0	0
Grp Sat Flow (s), veh/h/ln	0	1804	0	1660	0	1754	0	0
Q Serve Time (g_s), s	0.0	30.4	0.0	16.6	0.0	23.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	30.4	0.0	16.6	0.0	23.5	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.11	0.00	0.56	0.00	0.23	0.00	0.21
Lane Grp Cap (c), veh/h	0	467	0	897	0	454	0	0
V/C Ratio (X)	0.00	0.99	0.00	0.43	0.00	0.81	0.00	0.00
Avail Cap (c_a), veh/h	0	467	0	902	0	454	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	44.1	0.0	16.5	0.0	41.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	37.7	0.0	0.3	0.0	10.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	81.8	0.0	16.8	0.0	52.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	13.0	0.0	5.9	0.0	9.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	4.9	0.0	0.1	0.0	1.3	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	17.9	0.0	5.9	0.0	11.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.15	0.00	0.45	0.00	0.69	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	69.5
HCM 6th LOS	E

HCM 6th TWSC
2: Burkhalter Rd & Cawana Rd

Existing Conditions
AM Peak Hour

Intersection						
Int Delay, s/veh	4.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	181	164	267	54	18	93
Future Vol, veh/h	181	164	267	54	18	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	78	79	94	64	88	69
Heavy Vehicles, %	3	3	3	4	0	4
Mvmt Flow	232	208	284	84	20	135
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	368	0	-	0	998	326
Stage 1	-	-	-	-	326	-
Stage 2	-	-	-	-	672	-
Critical Hdwy	4.13	-	-	-	6.4	6.24
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.227	-	-	-	3.5	3.336
Pot Cap-1 Maneuver	1185	-	-	-	273	711
Stage 1	-	-	-	-	736	-
Stage 2	-	-	-	-	511	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1185	-	-	-	213	711
Mov Cap-2 Maneuver	-	-	-	-	213	-
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	511	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.6	0		14.2		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1185	-	-	-	544	
HCM Lane V/C Ratio	0.196	-	-	-	0.285	
HCM Control Delay (s)	8.8	0	-	-	14.2	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.7	-	-	-	1.2	

HCM 6th TWSC
3: Herman Rushing Rd & Burkhalter Rd

Existing Conditions
AM Peak Hour

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	166	14	11	244	79	13
Future Vol, veh/h	166	14	11	244	79	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	72	54	95	82	65
Heavy Vehicles, %	1	0	9	4	1	0
Mvmt Flow	213	19	20	257	96	20
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	232	0	520	223
Stage 1	-	-	-	-	223	-
Stage 2	-	-	-	-	297	-
Critical Hdwy	-	-	4.19	-	6.41	6.2
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.281	-	3.509	3.3
Pot Cap-1 Maneuver	-	-	1295	-	518	822
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	756	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1295	-	509	822
Mov Cap-2 Maneuver	-	-	-	-	509	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	742	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.6		13.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	545	-	-	1295	-	
HCM Lane V/C Ratio	0.213	-	-	0.016	-	
HCM Control Delay (s)	13.4	-	-	7.8	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.8	-	-	0	-	

MOVEMENT SUMMARY

 **Site: 4 [Existing AM]**

Site Category: -
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Rushing Rd												
3	L2	85	4.0	0.360	7.1	LOS A	1.9	47.2	0.44	0.32	0.44	33.6
8	T1	301	2.0	0.360	7.0	LOS A	1.9	47.2	0.44	0.32	0.44	33.6
18	R2	32	4.0	0.029	3.5	LOS A	0.1	2.8	0.29	0.15	0.29	34.9
Approach		419	2.6	0.360	6.8	LOS A	1.9	47.2	0.43	0.30	0.43	33.7
East: Burkhalter Rd												
1	L2	76	2.0	0.375	9.0	LOS A	1.8	47.2	0.62	0.59	0.62	32.5
6	T1	180	4.0	0.375	9.1	LOS A	1.8	47.2	0.62	0.59	0.62	32.4
16	R2	44	3.0	0.375	9.1	LOS A	1.8	47.2	0.62	0.59	0.62	31.6
Approach		299	3.3	0.375	9.1	LOS A	1.8	47.2	0.62	0.59	0.62	32.3
North: Pretoria Rushing Rd												
7	L2	18	6.0	0.214	6.4	LOS A	0.9	24.5	0.51	0.42	0.51	34.2
4	T1	139	4.0	0.214	6.4	LOS A	0.9	24.5	0.51	0.42	0.51	34.2
14	R2	28	4.0	0.214	6.4	LOS A	0.9	24.5	0.51	0.42	0.51	33.2
Approach		185	4.2	0.214	6.4	LOS A	0.9	24.5	0.51	0.42	0.51	34.1
West: Burkhalter Rd												
5	L2	40	0.0	0.249	6.0	LOS A	1.2	30.8	0.45	0.33	0.45	34.3
2	T1	152	4.0	0.249	6.1	LOS A	1.2	30.8	0.45	0.33	0.45	34.1
12	R2	55	0.0	0.249	6.0	LOS A	1.2	30.8	0.45	0.33	0.45	33.2
Approach		246	2.5	0.249	6.1	LOS A	1.2	30.8	0.45	0.33	0.45	34.0
All Vehicles		1150	3.0	0.375	7.2	LOS A	1.9	47.2	0.49	0.40	0.49	33.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: P:\24-12 Burkhalter Development\Sidra\Roundabout Analysis.sip8

HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Existing Conditions
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	32	76	20	59	78	99	435	11	22	204	29
Future Volume (veh/h)	46	32	76	20	59	78	99	435	11	22	204	29
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1796	1856	1796	1826	1900	1841	1841	1826	1633	1826	1722	1796
Adj Flow Rate, veh/h	60	44	100	28	76	92	129	494	16	36	212	32
Peak Hour Factor	0.77	0.73	0.76	0.71	0.78	0.85	0.77	0.88	0.69	0.61	0.96	0.91
Percent Heavy Veh, %	7	3	7	5	0	4	4	5	18	5	12	7
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	338	167	276	177	133	143	595	706	535	397	665	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.39	0.39	0.39	0.39	0.39	0.39
Unsig. Movement Delay												
Ln Grp Delay, s/veh	10.1	0.0	10.8	11.1	0.0	0.0	7.9	8.4	5.3	10.4	6.2	5.4
Ln Grp LOS	B	A	B	B	A	A	A	A	A	B	A	A
Approach Vol, veh/h	204			196			639			280		
Approach Delay, s/veh	10.4			11.1			8.2			6.7		
Approach LOS	B			B			A			A		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	2			4			6			8		
Case No	5.0			7.0			5.0			8.0		
Phs Duration (G+Y+Rc), s	16.7			11.0			16.7			11.0		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green (Gmax), s	19.0			9.0			19.0			9.0		
Max Allow Headway (MAH), s	4.7			4.6			4.6			5.1		
Max Q Clear (g_c+I1), s	9.3			3.6			8.3			5.0		
Green Ext Time (g_e), s	0.9			0.4			2.4			0.3		
Prob of Phs Call (p_c)	1.00			0.95			1.00			0.95		
Prob of Max Out (p_x)	0.09			0.60			0.22			1.00		
Left-Turn Movement Data												
Assigned Mvmt	5			7			1			3		
Mvmt Sat Flow, veh/h	869			734			1118			159		
Through Movement Data												
Assigned Mvmt	2			4			6			8		
Mvmt Sat Flow, veh/h	1722			920			1826			732		
Right-Turn Movement Data												
Assigned Mvmt	12			14			16			18		
Mvmt Sat Flow, veh/h	1522			1522			1384			788		
Left Lane Group Data												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment	L			L+T			L			L+T+R		

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Existing Conditions
AM Peak Hour

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	36	0	104	0	129	0	196
Grp Sat Flow (s), veh/h/ln	0	869	0	1654	0	1118	0	1678
Q Serve Time (g_s), s	0.0	1.0	0.0	0.0	0.0	2.5	0.0	1.3
Cycle Q Clear Time (g_c), s	0.0	7.3	0.0	1.4	0.0	4.9	0.0	3.0
Perm LT Sat Flow (s_l), veh/h/ln	0	869	0	1237	0	1118	0	1264
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1804	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	10.7	0.0	5.0	0.0	10.7	0.0	5.0
Perm LT Serve Time (g_u), s	0.0	4.4	0.0	2.1	0.0	8.3	0.0	3.7
Perm LT Q Serve Time (g_ps), s	0.0	1.0	0.0	0.0	0.0	2.5	0.0	1.3
Time to First Blk (g_f), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.6
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.6
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.58	0.00	1.00	0.00	0.14
Lane Grp Cap (c), veh/h	0	397	0	505	0	595	0	453
V/C Ratio (X)	0.00	0.09	0.00	0.21	0.00	0.22	0.00	0.43
Avail Cap (c_a), veh/h	0	656	0	706	0	927	0	687
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	10.3	0.0	9.9	0.0	7.7	0.0	10.5
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.2	0.0	0.2	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.4	0.0	10.1	0.0	7.9	0.0	11.1
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.3	0.0	0.2	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.3	0.0	0.2	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.01	0.00	0.02	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	212	0	0	0	494	0	0
Grp Sat Flow (s), veh/h/ln	0	1722	0	0	0	1826	0	0
Q Serve Time (g_s), s	0.0	2.4	0.0	0.0	0.0	6.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.4	0.0	0.0	0.0	6.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	665	0	0	0	706	0	0
V/C Ratio (X)	0.00	0.32	0.00	0.00	0.00	0.70	0.00	0.00
Avail Cap (c_a), veh/h	0	1178	0	0	0	1249	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.0	0.0	0.0	0.0	7.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	1.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.2	0.0	0.0	0.0	8.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis 5: US 80/SR 26 & Burkhalter Rd

Existing Conditions
AM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.0	0.0	0.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	R		R		R			
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	32	0	100	0	16	0	0
Grp Sat Flow (s), veh/h/ln	0	1522	0	1522	0	1384	0	0
Q Serve Time (g_s), s	0.0	0.4	0.0	1.6	0.0	0.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.4	0.0	1.6	0.0	0.2	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.47
Lane Grp Cap (c), veh/h	0	588	0	276	0	535	0	0
V/C Ratio (X)	0.00	0.05	0.00	0.36	0.00	0.03	0.00	0.00
Avail Cap (c_a), veh/h	0	1041	0	493	0	947	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.3	0.0	10.0	0.0	5.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.4	0.0	10.8	0.0	5.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	8.7
HCM 6th LOS	A

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Existing Conditions
PM Peak Hour

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (veh/h)	60	201	111	222	181	46	219	721	347	80	802	100		
Future Volume (veh/h)	60	201	111	222	181	46	219	721	347	80	802	100		
Number	7	4	14	3	8	18	1	6	16	5	2	12		
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No			No			No				
Lanes Open During Work Zone														
Adj Sat Flow, veh/h/ln	1900	1885	1885	1885	1856	1900	1885	1885	1900	1856	1870	1885		
Adj Flow Rate, veh/h	63	223	152	261	241	61	235	829	361	104	881	123		
Peak Hour Factor	0.95	0.90	0.73	0.85	0.75	0.76	0.93	0.87	0.96	0.77	0.91	0.81		
Percent Heavy Veh, %	0	1	1	1	3	0	1	1	0	3	2	1		
Opposing Right Turn Influence	Yes			Yes			Yes			Yes				
Cap, veh/h	496	521	355	258	203	51	219	819	355	115	875	122		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Prop Arrive On Green	0.03	0.50	0.50	0.42	0.42	0.42	0.09	0.34	0.34	0.04	0.28	0.28		
Unsig. Movement Delay														
Ln Grp Delay, s/veh	20.4	0.0	22.7	115.8	0.0	0.0	123.4	85.7	88.1	99.9	92.4	92.2		
Ln Grp LOS	C	A	C	F	A	A	F	F	F	F	F	F		
Approach Vol, veh/h	438			563			1425			1108				
Approach Delay, s/veh	22.3			115.8			92.9			93.0				
Approach LOS	C			F			F			F				
Timer:	1	2	3	4	5	6	7	8						
Assigned Phs	1	2			4	5	6	7	8					
Case No	1.1	4.0			4.0	1.1	4.0	1.2	8.3					
Phs Duration (G+Y+Rc), s	19.0	45.0			75.6	11.0	53.0	10.6	65.0					
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0	6.0	6.0	6.0					
Max Green (Gmax), s	13.0	39.0			70.0	5.0	47.0	5.0	59.0					
Max Allow Headway (MAH), s	3.7	4.9			5.0	3.7	5.0	3.7	5.4					
Max Q Clear (g_c+1), s	15.0	41.0			21.0	7.0	49.0	4.7	61.0					
Green Ext Time (g_e), s	0.0	0.0			2.3	0.0	0.0	0.0	0.0					
Prob of Phs Call (p_c)	1.00	1.00			1.00	0.98	1.00	0.91	1.00					
Prob of Max Out (p_x)	1.00	1.00			0.00	1.00	1.00	1.00	1.00					
Left-Turn Movement Data														
Assigned Mvmt	1					5			7	3				
Mvmt Sat Flow, veh/h	1795					1767			1810	521				
Through Movement Data														
Assigned Mvmt				2			4			6				
Mvmt Sat Flow, veh/h				3131			1045			2431				
Right-Turn Movement Data														
Assigned Mvmt				12			14			16				
Mvmt Sat Flow, veh/h				437			712			1055				
Left Lane Group Data														
Assigned Mvmt	1	0	0	0	5	0	7	3						
Lane Assignment	L (Pr/Pm)			L (Pr/Pm)			L (Pr/Pm)		L+T+R					

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Existing Conditions
PM Peak Hour

Lanes in Grp	1	0	0	0	1	0	1	1
Grp Vol (v), veh/h	235	0	0	0	104	0	63	563
Grp Sat Flow (s), veh/h/ln	1795	0	0	0	1767	0	1810	1123
Q Serve Time (g_s), s	13.0	0.0	0.0	0.0	5.0	0.0	2.7	50.6
Cycle Q Clear Time (g_c), s	13.0	0.0	0.0	0.0	5.0	0.0	2.7	59.0
Perm LT Sat Flow (s_l), veh/h/ln	566	0	0	0	467	0	1094	1024
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	881	0
Perm LT Eff Green (g_p), s	41.0	0.0	0.0	0.0	39.0	0.0	61.0	59.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.6
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.6
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.46
Lane Grp Cap (c), veh/h	219	0	0	0	115	0	496	512
V/C Ratio (X)	1.07	0.00	0.00	0.00	0.91	0.00	0.13	1.10
Avail Cap (c_a), veh/h	219	0	0	0	115	0	501	512
Upstream Filter (I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	41.6	0.0	0.0	0.0	44.5	0.0	20.3	46.4
Incr Delay (d2), s/veh	81.8	0.0	0.0	0.0	55.4	0.0	0.1	69.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	123.4	0.0	0.0	0.0	99.9	0.0	20.4	115.8
1st-Term Q (Q1), veh/ln	5.0	0.0	0.0	0.0	1.2	0.0	1.1	17.8
2nd-Term Q (Q2), veh/ln	5.0	0.0	0.0	0.0	1.8	0.0	0.0	9.9
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	10.0	0.0	0.0	0.0	3.0	0.0	1.1	27.7
%ile Storage Ratio (RQ%)	3.36	0.00	0.00	0.00	1.02	0.00	0.22	0.21
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	4.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	500	0	0	0	610	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1791	0	0
Q Serve Time (g_s), s	0.0	39.0	0.0	0.0	0.0	47.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	39.0	0.0	0.0	0.0	47.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	497	0	0	0	603	0	0
V/C Ratio (X)	0.00	1.01	0.00	0.00	0.00	1.01	0.00	0.00
Avail Cap (c_a), veh/h	0	497	0	0	0	603	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	50.3	0.0	0.0	0.0	46.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	42.1	0.0	0.0	0.0	39.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	92.4	0.0	0.0	0.0	85.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	16.8	0.0	0.0	0.0	20.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	5.8	0.0	0.0	0.0	6.6	0.0	0.0

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HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Existing Conditions
PM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	22.6	0.0	0.0	0.0	26.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.43	0.00	0.00	0.00	1.60	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.8	0.0	0.0	0.0	1.7	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R			
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	504	0	375	0	580	0	0
Grp Sat Flow (s), veh/h/ln	0	1792	0	1757	0	1695	0	0
Q Serve Time (g_s), s	0.0	39.0	0.0	19.0	0.0	47.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	39.0	0.0	19.0	0.0	47.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.24	0.00	0.41	0.00	0.62	0.00	0.11
Lane Grp Cap (c), veh/h	0	501	0	876	0	571	0	0
V/C Ratio (X)	0.00	1.01	0.00	0.43	0.00	1.02	0.00	0.00
Avail Cap (c_a), veh/h	0	501	0	881	0	571	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	50.3	0.0	22.3	0.0	46.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	41.9	0.0	0.3	0.0	41.8	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	92.2	0.0	22.7	0.0	88.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	16.9	0.0	7.6	0.0	19.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	5.8	0.0	0.1	0.0	6.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	22.8	0.0	7.6	0.0	25.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.44	0.00	0.56	0.00	1.54	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.9	0.0	0.0	0.0	2.3	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	87.8
HCM 6th LOS	F

HCM 6th TWSC
2: Burkhalter Rd & Cawana Rd

Existing Conditions
PM Peak Hour

Intersection						
Int Delay, s/veh	4.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	149	340	244	34	33	128
Future Vol, veh/h	149	340	244	34	33	128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	90	94	73	70	79
Heavy Vehicles, %	1	2	1	0	0	1
Mvmt Flow	175	378	260	47	47	162
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	307	0	-	0	1012	284
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	728	-
Critical Hdwy	4.11	-	-	-	6.4	6.21
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.309
Pot Cap-1 Maneuver	1259	-	-	-	267	757
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	482	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1259	-	-	-	220	757
Mov Cap-2 Maneuver	-	-	-	-	220	-
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	482	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.6	0		17.8		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1259	-	-	-	488	
HCM Lane V/C Ratio	0.139	-	-	-	0.429	
HCM Control Delay (s)	8.3	0	-	-	17.8	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0.5	-	-	-	2.1	

HCM 6th TWSC
3: Herman Rushing Rd & Burkhalter Rd

Existing Conditions
PM Peak Hour

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	310	61	15	228	45	3
Future Vol, veh/h	310	61	15	228	45	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	73	75	95	78	63
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	333	84	20	240	58	5
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	417	0	655	375
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	280	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1153	-	434	676
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	772	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1153	-	425	676
Mov Cap-2 Maneuver	-	-	-	-	425	-
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	757	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.6		14.6		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	437	-	-	1153	-	
HCM Lane V/C Ratio	0.143	-	-	0.017	-	
HCM Control Delay (s)	14.6	-	-	8.2	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-	

MOVEMENT SUMMARY

 **Site: 4 [Existing PM]**

Site Category: -
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Rushing Rd												
3	L2	55	2.0	0.234	6.0	LOS A	1.0	26.0	0.47	0.39	0.47	34.1
8	T1	173	0.0	0.234	6.0	LOS A	1.0	26.0	0.47	0.39	0.47	34.1
18	R2	40	0.0	0.039	3.9	LOS A	0.2	3.8	0.38	0.25	0.38	34.8
Approach		268	0.4	0.234	5.7	LOS A	1.0	26.0	0.46	0.37	0.46	34.2
East: Burkhalter Rd												
1	L2	52	0.0	0.300	6.7	LOS A	1.5	38.2	0.49	0.38	0.49	33.8
6	T1	182	6.0	0.300	7.0	LOS A	1.5	38.2	0.49	0.38	0.49	33.6
16	R2	52	0.0	0.300	6.7	LOS A	1.5	38.2	0.49	0.38	0.49	32.8
Approach		286	3.8	0.300	6.9	LOS A	1.5	38.2	0.49	0.38	0.49	33.5
North: Pretoria Rushing Rd												
7	L2	44	0.0	0.291	6.8	LOS A	1.5	37.0	0.51	0.41	0.51	34.0
4	T1	189	0.0	0.291	6.8	LOS A	1.5	37.0	0.51	0.41	0.51	33.9
14	R2	45	0.0	0.291	6.8	LOS A	1.5	37.0	0.51	0.41	0.51	32.9
Approach		278	0.0	0.291	6.8	LOS A	1.5	37.0	0.51	0.41	0.51	33.7
West: Burkhalter Rd												
5	L2	36	0.0	0.383	8.0	LOS A	2.1	53.2	0.55	0.44	0.55	33.5
2	T1	253	2.0	0.383	8.0	LOS A	2.1	53.2	0.55	0.44	0.55	33.4
12	R2	77	0.0	0.383	8.0	LOS A	2.1	53.2	0.55	0.44	0.55	32.5
Approach		366	1.4	0.383	8.0	LOS A	2.1	53.2	0.55	0.44	0.55	33.2
All Vehicles		1198	1.4	0.383	6.9	LOS A	2.1	53.2	0.50	0.40	0.50	33.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: P:\24-12 Burkhalter Development\Sidra\Roundabout Analysis.sip8

HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Existing Conditions
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	55	105	21	39	42	91	393	24	73	443	43
Future Volume (veh/h)	32	55	105	21	39	42	91	393	24	73	443	43
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1870	1856	1826	1856	1900	1870	1796	1781	1856	1841	1870
Adj Flow Rate, veh/h	40	68	119	24	52	56	128	427	32	84	521	60
Peak Hour Factor	0.80	0.81	0.88	0.88	0.75	0.75	0.71	0.92	0.75	0.87	0.85	0.72
Percent Heavy Veh, %	0	2	3	5	3	0	2	7	8	3	4	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	228	190	238	163	107	100	444	843	709	509	864	744
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.47	0.47	0.47	0.47	0.47	0.47
Unsig. Movement Delay												
Ln Grp Delay, s/veh	12.4	0.0	14.0	13.0	0.0	0.0	10.6	6.3	4.6	8.6	6.9	4.7
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h	227			132			587			665		
Approach Delay, s/veh	13.2			13.0			7.1			6.9		
Approach LOS	B			B			A			A		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	2			4			6			8		
Case No	5.0			7.0			5.0			8.0		
Phs Duration (G+Y+Rc), s	20.9			10.8			20.9			10.8		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green (Gmax), s	21.0			7.0			21.0			7.0		
Max Allow Headway (MAH), s	4.7			4.4			4.8			5.1		
Max Q Clear (g_c+I1), s	9.4			4.2			12.9			4.5		
Green Ext Time (g_e), s	2.7			0.2			2.0			0.1		
Prob of Phs Call (p_c)	1.00			0.96			1.00			0.96		
Prob of Max Out (p_x)	0.20			1.00			0.44			1.00		
Left-Turn Movement Data												
Assigned Mvmt	5			7			1			3		
Mvmt Sat Flow, veh/h	925			475			833			187		
Through Movement Data												
Assigned Mvmt	2			4			6			8		
Mvmt Sat Flow, veh/h	1841			1258			1796			709		
Right-Turn Movement Data												
Assigned Mvmt	12			14			16			18		
Mvmt Sat Flow, veh/h	1585			1572			1510			661		
Left Lane Group Data												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment	L			L+T			L			L+T+R		

M&W

Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Existing Conditions
PM Peak Hour

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	84	0	108	0	128	0	132
Grp Sat Flow (s), veh/h/ln	0	925	0	1733	0	833	0	1557
Q Serve Time (g_s), s	0.0	2.2	0.0	0.0	0.0	4.2	0.0	0.9
Cycle Q Clear Time (g_c), s	0.0	7.4	0.0	1.7	0.0	10.9	0.0	2.5
Perm LT Sat Flow (s_l), veh/h/ln	0	925	0	1306	0	833	0	1215
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1836	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	14.9	0.0	4.8	0.0	14.9	0.0	4.8
Perm LT Serve Time (g_u), s	0.0	9.6	0.0	2.3	0.0	8.2	0.0	3.1
Perm LT Q Serve Time (g_ps), s	0.0	2.2	0.0	0.0	0.0	4.2	0.0	0.9
Time to First Blk (g_f), s	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.5
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.37	0.00	1.00	0.00	0.18
Lane Grp Cap (c), veh/h	0	509	0	418	0	444	0	370
V/C Ratio (X)	0.00	0.17	0.00	0.26	0.00	0.29	0.00	0.36
Avail Cap (c_a), veh/h	0	688	0	530	0	606	0	480
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.4	0.0	12.1	0.0	10.2	0.0	12.4
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.3	0.0	0.4	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.6	0.0	12.4	0.0	10.6	0.0	13.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.4	0.0	0.4	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.5	0.0	0.4	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.01	0.00	0.04	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	521	0	0	0	427	0	0
Grp Sat Flow (s), veh/h/ln	0	1841	0	0	0	1796	0	0
Q Serve Time (g_s), s	0.0	6.6	0.0	0.0	0.0	5.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	6.6	0.0	0.0	0.0	5.2	0.0	0.0
Lane Grp Cap (c), veh/h	0	864	0	0	0	843	0	0
V/C Ratio (X)	0.00	0.60	0.00	0.00	0.00	0.51	0.00	0.00
Avail Cap (c_a), veh/h	0	1221	0	0	0	1192	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.2	0.0	0.0	0.0	5.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.9	0.0	0.0	0.0	6.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Existing Conditions
PM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.6	0.0	0.0	0.0	0.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.00	0.00	0.02	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	R		R		R			
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	60	0	119	0	32	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1572	0	1510	0	0
Q Serve Time (g_s), s	0.0	0.7	0.0	2.2	0.0	0.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.7	0.0	2.2	0.0	0.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.42
Lane Grp Cap (c), veh/h	0	744	0	238	0	709	0	0
V/C Ratio (X)	0.00	0.08	0.00	0.50	0.00	0.05	0.00	0.00
Avail Cap (c_a), veh/h	0	1052	0	348	0	1002	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	4.6	0.0	12.3	0.0	4.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	4.7	0.0	14.0	0.0	4.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Appendix F:
Capacity Analysis Reports
Projected Conditions without Other Developments

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Projected w/o Other Developments
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	158	154	352	189	154	114	588	99	95	744	45
Future Volume (veh/h)	48	158	154	352	189	154	114	588	99	95	744	45
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1826	1870	1885	1811	1870	1870	1826	1796	1856	1841	1796
Adj Flow Rate, veh/h	80	184	214	409	249	237	146	646	136	138	855	52
Peak Hour Factor	0.60	0.86	0.72	0.86	0.76	0.65	0.78	0.91	0.73	0.69	0.87	0.87
Percent Heavy Veh, %	2	5	2	1	6	2	2	5	7	3	4	7
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	585	477	555	319	173	165	119	628	132	119	738	45
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.62	0.62	0.55	0.55	0.55	0.04	0.22	0.22	0.04	0.22	0.22
Unsig. Movement Delay												
Ln Grp Delay, s/veh	13.1	0.0	14.5	212.6	0.0	0.0	207.5	111.6	112.5	185.9	155.2	154.6
Ln Grp LOS	B	A	B	F	A	A	F	F	F	F	F	F
Approach Vol, veh/h	478			895			928			1045		
Approach Delay, s/veh	14.3			212.6			127.0			159.0		
Approach LOS	B			F			F			F		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			4	5	6	7	8			
Case No	1.1	4.0			4.0	1.1	4.0	1.2	8.3			
Phs Duration (G+Y+Rc), s	12.0	39.0			98.8	12.0	39.0	10.8	88.0			
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0	6.0	6.0	6.0			
Max Green (Gmax), s	6.0	33.0			93.0	6.0	33.0	5.0	82.0			
Max Allow Headway (MAH), s	3.7	4.9			5.1	3.7	5.0	3.7	5.7			
Max Q Clear (g_c+I1), s	8.0	35.0			19.9	8.0	35.0	4.9	84.0			
Green Ext Time (g_e), s	0.0	0.0			2.6	0.0	0.0	0.0	0.0			
Prob of Phs Call (p_c)	1.00	1.00			1.00	1.00	1.00	0.96	1.00			
Prob of Max Out (p_x)	1.00	1.00			0.00	1.00	1.00	1.00	1.00			
Left-Turn Movement Data												
Assigned Mvmt	1					5			7	3		
Mvmt Sat Flow, veh/h	1781					1767			1781	519		
Through Movement Data												
Assigned Mvmt				2			4			6		
Mvmt Sat Flow, veh/h				3349			770			2853		
Right-Turn Movement Data												
Assigned Mvmt				12			14			16		
Mvmt Sat Flow, veh/h				204			895			600		
Left Lane Group Data												
Assigned Mvmt	1	0	0	0	5	0	7	3				
Lane Assignment	L (Pr/Pm)			L (Pr/Pm)			L (Pr/Pm)		L+T+R			

M&W

Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Projected w/o Other Developments

AM Peak Hour

Lanes in Grp	1	0	0	0	1	0	1	1
Grp Vol (v), veh/h	146	0	0	0	138	0	80	895
Grp Sat Flow (s), veh/h/ln	1781	0	0	0	1767	0	1781	1136
Q Serve Time (g_s), s	6.0	0.0	0.0	0.0	6.0	0.0	2.9	74.9
Cycle Q Clear Time (g_c), s	6.0	0.0	0.0	0.0	6.0	0.0	2.9	82.0
Perm LT Sat Flow (s_l), veh/h/ln	615	0	0	0	686	0	910	1002
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	855	0
Perm LT Eff Green (g_p), s	33.0	0.0	0.0	0.0	33.0	0.0	84.0	82.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	74.9
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.46
Lane Grp Cap (c), veh/h	119	0	0	0	119	0	585	657
V/C Ratio (X)	1.22	0.00	0.00	0.00	1.16	0.00	0.14	1.36
Avail Cap (c_a), veh/h	119	0	0	0	119	0	587	657
Upstream Filter (I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	53.4	0.0	0.0	0.0	53.5	0.0	13.0	39.5
Incr Delay (d2), s/veh	154.1	0.0	0.0	0.0	132.4	0.0	0.1	173.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	207.5	0.0	0.0	0.0	185.9	0.0	13.1	212.6
1st-Term Q (Q1), veh/ln	1.6	0.0	0.0	0.0	1.6	0.0	1.1	24.7
2nd-Term Q (Q2), veh/ln	5.1	0.0	0.0	0.0	4.4	0.0	0.0	31.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	6.7	0.0	0.0	0.0	5.9	0.0	1.1	56.2
%ile Storage Ratio (RQ%)	2.26	0.00	0.00	0.00	2.03	0.00	0.23	1.41
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	6.7	0.0	0.0	0.0	4.8	0.0	0.0	59.6
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.3

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	446	0	0	0	392	0	0
Grp Sat Flow (s), veh/h/ln	0	1749	0	0	0	1735	0	0
Q Serve Time (g_s), s	0.0	33.0	0.0	0.0	0.0	33.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	33.0	0.0	0.0	0.0	33.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	385	0	0	0	382	0	0
V/C Ratio (X)	0.00	1.16	0.00	0.00	0.00	1.03	0.00	0.00
Avail Cap (c_a), veh/h	0	385	0	0	0	382	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	58.4	0.0	0.0	0.0	58.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	96.7	0.0	0.0	0.0	53.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	155.2	0.0	0.0	0.0	111.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	14.3	0.0	0.0	0.0	14.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	10.4	0.0	0.0	0.0	5.6	0.0	0.0

M&W

Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Projected w/o Other Developments
AM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	24.6	0.0	0.0	0.0	19.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.58	0.00	0.00	0.00	1.22	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	15.3	0.0	0.0	0.0	2.6	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R			
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	461	0	398	0	390	0	0
Grp Sat Flow (s), veh/h/ln	0	1804	0	1665	0	1718	0	0
Q Serve Time (g_s), s	0.0	33.0	0.0	17.9	0.0	33.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	33.0	0.0	17.9	0.0	33.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.11	0.00	0.54	0.00	0.35	0.00	0.26
Lane Grp Cap (c), veh/h	0	397	0	1031	0	378	0	0
V/C Ratio (X)	0.00	1.16	0.00	0.39	0.00	1.03	0.00	0.00
Avail Cap (c_a), veh/h	0	397	0	1033	0	378	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	58.4	0.0	14.2	0.0	58.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	96.2	0.0	0.2	0.0	54.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	154.6	0.0	14.5	0.0	112.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	14.7	0.0	6.4	0.0	14.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	10.6	0.0	0.1	0.0	5.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	25.3	0.0	6.5	0.0	19.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.63	0.00	0.48	0.00	1.22	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	15.8	0.0	0.0	0.0	2.8	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	143.8
HCM 6th LOS	F

HCM 6th TWSC
2: Driveway 3/Cawana Rd & Burkhalter Rd

Projected w/o Other Developments
AM Peak Hour

Intersection												
Int Delay, s/veh	8.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	187	230	12	14	365	63	34	9	45	20	4	94
Future Vol, veh/h	187	230	12	14	365	63	34	9	45	20	4	94
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	175	235	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	79	92	92	94	64	92	92	92	88	92	69
Heavy Vehicles, %	3	3	2	2	3	4	2	2	2	0	2	4
Mvmt Flow	240	291	13	15	388	98	37	10	49	23	4	136

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	486	0	0	304	0	0	1308	1287	291	1274	1251	437
Stage 1	-	-	-	-	-	-	771	771	-	467	467	-
Stage 2	-	-	-	-	-	-	537	516	-	807	784	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.52	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.52	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.336
Pot Cap-1 Maneuver	1072	-	-	1257	-	-	136	164	748	145	172	615
Stage 1	-	-	-	-	-	-	393	410	-	580	562	-
Stage 2	-	-	-	-	-	-	528	534	-	378	404	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1072	-	-	1257	-	-	85	126	748	105	132	615
Mov Cap-2 Maneuver	-	-	-	-	-	-	85	126	-	105	132	-
Stage 1	-	-	-	-	-	-	305	318	-	450	555	-
Stage 2	-	-	-	-	-	-	403	528	-	266	314	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.1			0.2			52.6			24.3		
HCM LOS							F			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	166	1072	-	-	1257	-	-	347
HCM Lane V/C Ratio	0.576	0.224	-	-	0.012	-	-	0.471
HCM Control Delay (s)	52.6	9.3	-	-	7.9	-	-	24.3
HCM Lane LOS	F	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	3	0.9	-	-	0	-	-	2.4

HCM 6th TWSC
3: Herman Rushing Rd & Burkhalter Rd

Projected w/o Other Developments
AM Peak Hour

Intersection						
Int Delay, s/veh	6.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	262	31	26	312	132	56
Future Vol, veh/h	262	31	26	312	132	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	72	54	95	82	65
Heavy Vehicles, %	1	0	9	4	1	0
Mvmt Flow	336	43	48	328	161	86

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	379	0	782
Stage 1	-	-	-	-	358
Stage 2	-	-	-	-	424
Critical Hdwy	-	-	4.19	-	6.41
Critical Hdwy Stg 1	-	-	-	-	5.41
Critical Hdwy Stg 2	-	-	-	-	5.41
Follow-up Hdwy	-	-	2.281	-	3.509
Pot Cap-1 Maneuver	-	-	1142	-	364
Stage 1	-	-	-	-	710
Stage 2	-	-	-	-	662
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1142	-	345
Mov Cap-2 Maneuver	-	-	-	-	345
Stage 1	-	-	-	-	710
Stage 2	-	-	-	-	628

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	25.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	418	-	-	1142	-
HCM Lane V/C Ratio	0.591	-	-	0.042	-
HCM Control Delay (s)	25.3	-	-	8.3	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	3.7	-	-	0.1	-

MOVEMENT SUMMARY

 Site: 4 [Projected W/O Other AM]

Site Category: -
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Rushing Rd												
3	L2	93	4.0	0.438	9.3	LOS A	2.4	62.4	0.60	0.58	0.67	32.5
8	T1	301	2.0	0.438	9.3	LOS A	2.4	62.4	0.60	0.58	0.67	32.5
18	R2	32	4.0	0.033	4.0	LOS A	0.1	3.2	0.39	0.25	0.39	34.6
Approach		426	2.6	0.438	8.9	LOS A	2.4	62.4	0.59	0.56	0.65	32.6
East: Burkhalter Rd												
1	L2	76	2.0	0.449	10.8	LOS B	2.7	70.0	0.68	0.74	0.86	31.8
6	T1	218	4.0	0.449	10.9	LOS B	2.7	70.0	0.68	0.74	0.86	31.7
16	R2	44	3.0	0.449	10.8	LOS B	2.7	70.0	0.68	0.74	0.86	30.9
Approach		337	3.4	0.449	10.9	LOS B	2.7	70.0	0.68	0.74	0.86	31.6
North: Pretoria Rushing Rd												
7	L2	18	6.0	0.239	7.0	LOS A	1.1	27.4	0.54	0.48	0.54	33.9
4	T1	139	4.0	0.239	6.9	LOS A	1.1	27.4	0.54	0.48	0.54	33.9
14	R2	39	4.0	0.239	6.9	LOS A	1.1	27.4	0.54	0.48	0.54	32.9
Approach		197	4.2	0.239	6.9	LOS A	1.1	27.4	0.54	0.48	0.54	33.7
West: Burkhalter Rd												
5	L2	86	0.0	0.459	8.9	LOS A	2.8	70.4	0.55	0.43	0.55	32.8
2	T1	285	4.0	0.459	9.0	LOS A	2.8	70.4	0.55	0.43	0.55	32.6
12	R2	83	0.0	0.459	8.9	LOS A	2.8	70.4	0.55	0.43	0.55	31.8
Approach		454	2.5	0.459	9.0	LOS A	2.8	70.4	0.55	0.43	0.55	32.5
All Vehicles		1414	3.0	0.459	9.1	LOS A	2.8	70.4	0.59	0.55	0.65	32.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Projected w/o Other Developments
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	49	108	20	65	78	110	435	11	22	204	46
Future Volume (veh/h)	102	49	108	20	65	78	110	435	11	22	204	46
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1796	1856	1796	1826	1900	1841	1841	1826	1633	1826	1722	1796
Adj Flow Rate, veh/h	132	67	142	28	83	92	143	494	16	36	212	51
Peak Hour Factor	0.77	0.73	0.76	0.71	0.78	0.85	0.77	0.88	0.69	0.61	0.96	0.91
Percent Heavy Veh, %	7	3	7	5	0	4	4	5	18	5	12	7
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	415	130	315	166	148	143	569	691	524	377	652	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.38	0.38	0.38	0.38	0.38	0.38
Unsig. Movement Delay												
Ln Grp Delay, s/veh	10.6	0.0	11.1	11.1	0.0	0.0	8.6	9.1	5.7	11.1	6.7	5.9
Ln Grp LOS	B	A	B	B	A	A	A	A	A	B	A	A
Approach Vol, veh/h	341			203			653			299		
Approach Delay, s/veh	10.8			11.1			8.9			7.1		
Approach LOS	B			B			A			A		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	2			4			6			8		
Case No	5.0			7.0			5.0			8.0		
Phs Duration (G+Y+Rc), s	17.0			12.0			17.0			12.0		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green (Gmax), s	18.0			10.0			18.0			10.0		
Max Allow Headway (MAH), s	4.7			4.7			4.6			5.1		
Max Q Clear (g_c+1), s	9.7			4.8			8.7			5.7		
Green Ext Time (g_e), s	0.8			0.7			2.3			0.4		
Prob of Phs Call (p_c)	1.00			0.99			1.00			0.99		
Prob of Max Out (p_x)	0.19			0.82			0.32			1.00		
Left-Turn Movement Data												
Assigned Mvmt	5			7			1			3		
Mvmt Sat Flow, veh/h	869			1004			1099			118		
Through Movement Data												
Assigned Mvmt	2			4			6			8		
Mvmt Sat Flow, veh/h	1722			630			1826			716		
Right-Turn Movement Data												
Assigned Mvmt	12			14			16			18		
Mvmt Sat Flow, veh/h	1522			1522			1384			692		
Left Lane Group Data												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment	L			L+T			L			L+T+R		

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Projected w/o Other Developments
AM Peak Hour

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	36	0	199	0	143	0	203
Grp Sat Flow (s), veh/h/ln	0	869	0	1634	0	1099	0	1526
Q Serve Time (g_s), s	0.0	1.1	0.0	0.0	0.0	3.1	0.0	0.9
Cycle Q Clear Time (g_c), s	0.0	7.7	0.0	2.8	0.0	5.6	0.0	3.7
Perm LT Sat Flow (s_l), veh/h/ln	0	869	0	1229	0	1099	0	1191
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1796	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	11.0	0.0	6.0	0.0	11.0	0.0	6.0
Perm LT Serve Time (g_u), s	0.0	4.3	0.0	2.3	0.0	8.4	0.0	3.2
Perm LT Q Serve Time (g_ps), s	0.0	1.1	0.0	0.0	0.0	3.1	0.0	0.9
Time to First Blk (g_f), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	2.3
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	2.3
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.66	0.00	1.00	0.00	0.14
Lane Grp Cap (c), veh/h	0	377	0	545	0	569	0	458
V/C Ratio (X)	0.00	0.10	0.00	0.37	0.00	0.25	0.00	0.44
Avail Cap (c_a), veh/h	0	588	0	733	0	835	0	683
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.0	0.0	10.2	0.0	8.4	0.0	10.4
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.4	0.0	0.2	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.1	0.0	10.6	0.0	8.6	0.0	11.1
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.6	0.0	0.3	0.0	0.6
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.7	0.0	0.3	0.0	0.7
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.02	0.00	0.03	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	212	0	0	0	494	0	0
Grp Sat Flow (s), veh/h/ln	0	1722	0	0	0	1826	0	0
Q Serve Time (g_s), s	0.0	2.5	0.0	0.0	0.0	6.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	2.5	0.0	0.0	0.0	6.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	652	0	0	0	691	0	0
V/C Ratio (X)	0.00	0.33	0.00	0.00	0.00	0.71	0.00	0.00
Avail Cap (c_a), veh/h	0	1070	0	0	0	1134	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.4	0.0	0.0	0.0	7.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	1.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.7	0.0	0.0	0.0	9.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.0	0.0	0.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis 5: US 80/SR 26 & Burkhalter Rd

Projected w/o Other Developments
AM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.0	0.0	0.9	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	R		R		R			
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	51	0	142	0	16	0	0
Grp Sat Flow (s), veh/h/ln	0	1522	0	1522	0	1384	0	0
Q Serve Time (g_s), s	0.0	0.6	0.0	2.4	0.0	0.2	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.6	0.0	2.4	0.0	0.2	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.45
Lane Grp Cap (c), veh/h	0	576	0	315	0	524	0	0
V/C Ratio (X)	0.00	0.09	0.00	0.45	0.00	0.03	0.00	0.00
Avail Cap (c_a), veh/h	0	946	0	525	0	860	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.8	0.0	10.0	0.0	5.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	1.0	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.9	0.0	11.1	0.0	5.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.4	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.5	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.13	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

HCM 6th TWSC
10: Driveway 1 & Burkhalter Rd

Projected w/o Other Developments
AM Peak Hour

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	389	18	2	488	2	54	0	9	7	0	34
Future Vol, veh/h	10	389	18	2	488	2	54	0	9	7	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	235	-	175	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	423	20	2	530	2	59	0	10	8	0	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	532	0	0	443	0	0	999	981	423	995	1000	531
Stage 1	-	-	-	-	-	-	445	445	-	535	535	-
Stage 2	-	-	-	-	-	-	554	536	-	460	465	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1036	-	-	1117	-	-	222	249	631	224	243	548
Stage 1	-	-	-	-	-	-	592	575	-	529	524	-
Stage 2	-	-	-	-	-	-	517	523	-	581	563	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1036	-	-	1117	-	-	205	246	631	218	240	548
Mov Cap-2 Maneuver	-	-	-	-	-	-	205	246	-	218	240	-
Stage 1	-	-	-	-	-	-	585	569	-	523	523	-
Stage 2	-	-	-	-	-	-	481	522	-	566	557	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			27.6			14.2		
HCM LOS							D			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	227	1036	-	-	1117	-	-	435
HCM Lane V/C Ratio	0.302	0.01	-	-	0.002	-	-	0.102
HCM Control Delay (s)	27.6	8.5	-	-	8.2	-	-	14.2
HCM Lane LOS	D	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-	-	0.3

HCM 6th TWSC
20: Burkhalter Rd & Driveway 2

Projected w/o Other Developments
AM Peak Hour

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	402	484	9	27	8
Future Vol, veh/h	3	402	484	9	27	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	175	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	437	526	10	29	9
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	536	0	-	0	969	526
Stage 1	-	-	-	-	526	-
Stage 2	-	-	-	-	443	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1032	-	-	-	281	552
Stage 1	-	-	-	-	593	-
Stage 2	-	-	-	-	647	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1032	-	-	-	280	552
Mov Cap-2 Maneuver	-	-	-	-	280	-
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	647	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		17.9		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1032	-	-	-	316	
HCM Lane V/C Ratio	0.003	-	-	-	0.12	
HCM Control Delay (s)	8.5	0	-	-	17.9	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.4	

HCM 6th TWSC
40: Herman Rushing Rd & Driveway 4

Projected w/o Other Developments
AM Peak Hour

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	↕
Traffic Vol, veh/h	24	0	0	0	0	72	0	92	0	24	25	8
Future Vol, veh/h	24	0	0	0	0	72	0	92	0	24	25	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	0	0	0	0	78	0	100	0	26	27	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	218	179	27	184	188	100	36	0	0	100	0	0
Stage 1	79	79	-	100	100	-	-	-	-	-	-	-
Stage 2	139	100	-	84	88	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	738	715	1048	777	707	956	1575	-	-	1493	-	-
Stage 1	930	829	-	906	812	-	-	-	-	-	-	-
Stage 2	864	812	-	924	822	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	669	703	1048	767	695	956	1575	-	-	1493	-	-
Mov Cap-2 Maneuver	669	703	-	767	695	-	-	-	-	-	-	-
Stage 1	930	815	-	906	812	-	-	-	-	-	-	-
Stage 2	793	812	-	908	808	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.6		9.1		0		3.1	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1575	-	-	669	956	1493	-
HCM Lane V/C Ratio	-	-	-	0.039	0.082	0.017	-
HCM Control Delay (s)	0	-	-	10.6	9.1	7.5	-
HCM Lane LOS	A	-	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.1	-

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Synchro 11 Report

HCM 6th TWSC
50: Burkhalter Rd & Driveway 5

Projected w/o Other Developments
AM Peak Hour

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	310	303	2	5	34
Future Vol, veh/h	11	310	303	2	5	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	337	329	2	5	37
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	331	0	-	0	691	330
Stage 1	-	-	-	-	330	-
Stage 2	-	-	-	-	361	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1228	-	-	-	410	712
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	705	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1228	-	-	-	406	712
Mov Cap-2 Maneuver	-	-	-	-	406	-
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	705	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.3	0		10.9		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1228	-	-	-	649	
HCM Lane V/C Ratio	0.01	-	-	-	0.065	
HCM Control Delay (s)	8	-	-	-	10.9	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	312	297	7	22	8
Future Vol, veh/h	3	312	297	7	22	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	200	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	339	323	8	24	9
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	331	0	-	0	668	323
Stage 1	-	-	-	-	323	-
Stage 2	-	-	-	-	345	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1228	-	-	-	423	718
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	717	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1228	-	-	-	422	718
Mov Cap-2 Maneuver	-	-	-	-	422	-
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	717	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		13.2		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1228	-	-	-	474	
HCM Lane V/C Ratio	0.003	-	-	-	0.069	
HCM Control Delay (s)	7.9	0	-	-	13.2	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Projected w/o Other Developments

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	232	111	297	202	91	219	721	461	152	802	100
Future Volume (veh/h)	60	232	111	297	202	91	219	721	461	152	802	100
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1885	1885	1885	1856	1900	1885	1885	1900	1856	1870	1885
Adj Flow Rate, veh/h	63	258	152	349	269	120	235	829	480	197	881	123
Peak Hour Factor	0.95	0.90	0.73	0.85	0.75	0.76	0.93	0.87	0.96	0.77	0.91	0.81
Percent Heavy Veh, %	0	1	1	1	3	0	1	1	0	3	2	1
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	528	580	341	267	174	78	180	627	359	151	846	118
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.52	0.52	0.44	0.44	0.44	0.07	0.29	0.29	0.05	0.27	0.27
Unsig. Movement Delay												
Ln Grp Delay, s/veh	17.5	0.0	19.7	243.8	0.0	0.0	207.9	202.9	212.0	216.6	99.3	99.2
Ln Grp LOS	B	A	B	F	A	A	F	F	F	F	F	F
Approach Vol, veh/h	473				738		1544				1201	
Approach Delay, s/veh	19.4				243.8		207.4				118.5	
Approach LOS	B				F		F				F	
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			4	5	6	7	8			
Case No	1.1	4.0			4.0	1.1	4.0	1.2	8.3			
Phs Duration (G+Y+Rc), s	15.0	41.0			73.5	13.0	43.0	10.5	63.0			
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0	6.0	6.0	6.0			
Max Green (Gmax), s	9.0	35.0			68.0	7.0	37.0	5.0	57.0			
Max Allow Headway (MAH), s	3.7	4.9			5.0	3.7	5.0	3.7	5.7			
Max Q Clear (g_c+I1), s	11.0	37.0			20.7	9.0	39.0	4.4	59.0			
Green Ext Time (g_e), s	0.0	0.0			2.6	0.0	0.0	0.0	0.0			
Prob of Phs Call (p_c)	1.00	1.00			1.00	1.00	1.00	0.90	1.00			
Prob of Max Out (p_x)	1.00	1.00			0.00	1.00	1.00	1.00	1.00			
Left-Turn Movement Data												
Assigned Mvmt	1					5			7	3		
Mvmt Sat Flow, veh/h	1795					1767			1810	513		
Through Movement Data												
Assigned Mvmt				2			4			6		
Mvmt Sat Flow, veh/h				3131			1112			2194		
Right-Turn Movement Data												
Assigned Mvmt				12			14			16		
Mvmt Sat Flow, veh/h				437			655			1256		
Left Lane Group Data												
Assigned Mvmt	1	0	0	0	5	0	7	3				
Lane Assignment	L (Pr/Pm)			L (Pr/Pm)			L (Pr/Pm)		L+T+R			

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Projected w/o Other Developments

PM Peak Hour

Lanes in Grp	1	0	0	0	1	0	1	1
Grp Vol (v), veh/h	235	0	0	0	197	0	63	738
Grp Sat Flow (s), veh/h/ln	1795	0	0	0	1767	0	1810	1085
Q Serve Time (g_s), s	9.0	0.0	0.0	0.0	7.0	0.0	2.4	48.8
Cycle Q Clear Time (g_c), s	9.0	0.0	0.0	0.0	7.0	0.0	2.4	57.0
Perm LT Sat Flow (s_l), veh/h/ln	566	0	0	0	417	0	1010	991
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	899	0
Perm LT Eff Green (g_p), s	35.0	0.0	0.0	0.0	35.0	0.0	59.0	57.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.8
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.8
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.47
Lane Grp Cap (c), veh/h	180	0	0	0	151	0	528	519
V/C Ratio (X)	1.30	0.00	0.00	0.00	1.30	0.00	0.12	1.42
Avail Cap (c_a), veh/h	180	0	0	0	151	0	535	519
Upstream Filter (I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	37.4	0.0	0.0	0.0	40.4	0.0	17.4	42.3
Incr Delay (d2), s/veh	170.5	0.0	0.0	0.0	176.2	0.0	0.1	201.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	207.9	0.0	0.0	0.0	216.6	0.0	17.5	243.8
1st-Term Q (Q1), veh/ln	4.0	0.0	0.0	0.0	3.4	0.0	1.0	17.0
2nd-Term Q (Q2), veh/ln	8.5	0.0	0.0	0.0	7.4	0.0	0.0	29.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	12.6	0.0	0.0	0.0	10.8	0.0	1.0	46.0
%ile Storage Ratio (RQ%)	4.23	0.00	0.00	0.00	3.69	0.00	0.20	1.13
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	13.6	0.0	0.0	0.0	11.5	0.0	0.0	54.9
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.4

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	500	0	0	0	675	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1791	0	0
Q Serve Time (g_s), s	0.0	35.0	0.0	0.0	0.0	37.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	35.0	0.0	0.0	0.0	37.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	480	0	0	0	512	0	0
V/C Ratio (X)	0.00	1.04	0.00	0.00	0.00	1.32	0.00	0.00
Avail Cap (c_a), veh/h	0	480	0	0	0	512	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	47.2	0.0	0.0	0.0	46.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	52.1	0.0	0.0	0.0	156.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	99.3	0.0	0.0	0.0	202.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	14.9	0.0	0.0	0.0	15.8	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	6.9	0.0	0.0	0.0	22.3	0.0	0.0

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Projected w/o Other Developments
PM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	21.9	0.0	0.0	0.0	38.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.38	0.00	0.00	0.00	2.28	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	4.9	0.0	0.0	0.0	40.8	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R			
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	504	0	410	0	634	0	0
Grp Sat Flow (s), veh/h/ln	0	1792	0	1767	0	1659	0	0
Q Serve Time (g_s), s	0.0	35.0	0.0	18.7	0.0	37.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	35.0	0.0	18.7	0.0	37.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.24	0.00	0.37	0.00	0.76	0.00	0.16
Lane Grp Cap (c), veh/h	0	484	0	921	0	474	0	0
V/C Ratio (X)	0.00	1.04	0.00	0.45	0.00	1.34	0.00	0.00
Avail Cap (c_a), veh/h	0	484	0	928	0	474	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	47.2	0.0	19.3	0.0	46.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	51.9	0.0	0.3	0.0	165.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	99.2	0.0	19.7	0.0	212.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	15.1	0.0	7.3	0.0	14.7	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	7.0	0.0	0.1	0.0	21.8	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	22.0	0.0	7.4	0.0	36.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.39	0.00	0.54	0.00	2.19	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	4.9	0.0	0.0	0.0	40.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	164.7
HCM 6th LOS	F

HCM 6th TWSC
2: Driveway 3/Cawana Rd & Burkhalter Rd

Projected w/o Other Developments
PM Peak Hour

Intersection												
Int Delay, s/veh	19.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	153	443	32	48	341	41	22	5	28	42	9	134
Future Vol, veh/h	153	443	32	48	341	41	22	5	28	42	9	134
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	175	235	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	90	92	92	94	73	92	92	92	70	92	79
Heavy Vehicles, %	1	2	2	2	1	0	2	2	2	0	2	1
Mvmt Flow	180	492	35	52	363	56	24	5	30	60	10	170

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	419	0	0	527	0	0	1437	1375	492	1382	1382	391
Stage 1	-	-	-	-	-	-	852	852	-	495	495	-
Stage 2	-	-	-	-	-	-	585	523	-	887	887	-
Critical Hdwy	4.11	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.52	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.52	-
Follow-up Hdwy	2.209	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.309
Pot Cap-1 Maneuver	1145	-	-	1040	-	-	111	145	577	122	144	660
Stage 1	-	-	-	-	-	-	354	376	-	560	546	-
Stage 2	-	-	-	-	-	-	497	530	-	341	362	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1145	-	-	1040	-	-	65	116	577	94	115	660
Mov Cap-2 Maneuver	-	-	-	-	-	-	65	116	-	94	115	-
Stage 1	-	-	-	-	-	-	298	317	-	472	519	-
Stage 2	-	-	-	-	-	-	344	504	-	268	305	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.2	1	55.7	96.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	128	1145	-	-	1040	-	-	244
HCM Lane V/C Ratio	0.467	0.157	-	-	0.05	-	-	0.981
HCM Control Delay (s)	55.7	8.7	-	-	8.6	-	-	96.3
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	2.1	0.6	-	-	0.2	-	-	9.2

HCM 6th TWSC
3: Herman Rushing Rd & Burkhalter Rd

Projected w/o Other Developments
PM Peak Hour

Intersection						
Int Delay, s/veh	4.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	401	110	56	344	81	31
Future Vol, veh/h	401	110	56	344	81	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	73	75	95	78	63
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	431	151	75	362	104	49
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	582	0	1019	507
Stage 1	-	-	-	-	507	-
Stage 2	-	-	-	-	512	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1002	-	265	570
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	606	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1002	-	240	570
Mov Cap-2 Maneuver	-	-	-	-	240	-
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	549	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.5		29.6	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	295	-	-	1002	-	
HCM Lane V/C Ratio	0.519	-	-	0.075	-	
HCM Control Delay (s)	29.6	-	-	8.9	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	2.8	-	-	0.2	-	

MOVEMENT SUMMARY

 Site: 4 [Projected W/O Other PM]

Site Category: -
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Rushing Rd												
3	L2	79	2.0	0.288	7.3	LOS A	1.3	32.3	0.55	0.51	0.55	33.3
8	T1	173	0.0	0.288	7.2	LOS A	1.3	32.3	0.55	0.51	0.55	33.3
18	R2	40	0.0	0.043	4.2	LOS A	0.2	4.1	0.43	0.31	0.43	34.6
Approach		292	0.5	0.288	6.8	LOS A	1.3	32.3	0.54	0.48	0.54	33.5
East: Burkhalter Rd												
1	L2	52	0.0	0.451	9.3	LOS A	2.5	64.7	0.60	0.51	0.60	32.7
6	T1	302	6.0	0.451	9.6	LOS A	2.5	64.7	0.60	0.51	0.60	32.5
16	R2	52	0.0	0.451	9.3	LOS A	2.5	64.7	0.60	0.51	0.60	31.8
Approach		406	4.5	0.451	9.5	LOS A	2.5	64.7	0.60	0.51	0.60	32.5
North: Pretoria Rushing Rd												
7	L2	44	0.0	0.384	9.1	LOS A	2.0	50.1	0.64	0.62	0.66	32.9
4	T1	189	0.0	0.384	9.1	LOS A	2.0	50.1	0.64	0.62	0.66	32.8
14	R2	78	0.0	0.384	9.1	LOS A	2.0	50.1	0.64	0.62	0.66	31.9
Approach		311	0.0	0.384	9.1	LOS A	2.0	50.1	0.64	0.62	0.66	32.6
West: Burkhalter Rd												
5	L2	59	0.0	0.510	10.1	LOS B	3.6	91.6	0.63	0.55	0.69	32.4
2	T1	338	2.0	0.510	10.2	LOS B	3.6	91.6	0.63	0.55	0.69	32.3
12	R2	91	0.0	0.510	10.1	LOS B	3.6	91.6	0.63	0.55	0.69	31.5
Approach		488	1.4	0.510	10.2	LOS B	3.6	91.6	0.63	0.55	0.69	32.2
All Vehicles		1497	1.8	0.510	9.1	LOS A	3.6	91.6	0.60	0.54	0.63	32.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: P:\24-21 Burkhalter Development REVISION\Sidra\Roundabout Analysis.sip8

HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Projected w/o Other Developments
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	65	126	21	59	42	122	393	24	73	443	97
Future Volume (veh/h)	68	65	126	21	59	42	122	393	24	73	443	97
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1870	1856	1826	1856	1900	1870	1796	1781	1856	1841	1870
Adj Flow Rate, veh/h	85	80	143	24	79	56	172	427	32	84	521	135
Peak Hour Factor	0.80	0.81	0.88	0.88	0.75	0.75	0.71	0.92	0.75	0.87	0.85	0.72
Percent Heavy Veh, %	0	2	3	5	3	0	2	7	8	3	4	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	284	160	265	139	139	87	429	879	739	511	901	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.49	0.49	0.49	0.49	0.49	0.49
Unsig. Movement Delay												
Ln Grp Delay, s/veh	13.8	0.0	15.0	14.3	0.0	0.0	12.0	6.4	4.7	8.8	7.1	5.1
Ln Grp LOS	B	A	B	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h	308			159			631			740		
Approach Delay, s/veh	14.4			14.3			7.9			6.9		
Approach LOS	B			B			A			A		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	2			4			6			8		
Case No	5.0			7.0			5.0			8.0		
Phs Duration (G+Y+Rc), s	23.2			11.9			23.2			11.9		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green (Gmax), s	19.0			9.0			19.0			9.0		
Max Allow Headway (MAH), s	4.6			4.6			5.0			5.1		
Max Q Clear (g_c+I1), s	9.9			4.9			16.2			5.8		
Green Ext Time (g_e), s	2.6			0.5			1.0			0.2		
Prob of Phs Call (p_c)	1.00			0.99			1.00			0.99		
Prob of Max Out (p_x)	0.38			1.00			1.00			1.00		
Left-Turn Movement Data												
Assigned Mvmt	5			7			1			3		
Mvmt Sat Flow, veh/h	925			761			777			124		
Through Movement Data												
Assigned Mvmt	2			4			6			8		
Mvmt Sat Flow, veh/h	1841			949			1796			827		
Right-Turn Movement Data												
Assigned Mvmt	12			14			16			18		
Mvmt Sat Flow, veh/h	1585			1572			1510			517		
Left Lane Group Data												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment	L			L+T			L			L+T+R		

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Projected w/o Other Developments
PM Peak Hour

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	84	0	165	0	172	0	159
Grp Sat Flow (s), veh/h/ln	0	925	0	1709	0	777	0	1468
Q Serve Time (g_s), s	0.0	2.3	0.0	0.0	0.0	7.1	0.0	0.9
Cycle Q Clear Time (g_c), s	0.0	7.9	0.0	2.9	0.0	14.2	0.0	3.8
Perm LT Sat Flow (s_l), veh/h/ln	0	925	0	1274	0	777	0	1176
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1823	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	17.2	0.0	5.9	0.0	17.2	0.0	5.9
Perm LT Serve Time (g_u), s	0.0	11.6	0.0	2.1	0.0	10.1	0.0	3.0
Perm LT Q Serve Time (g_ps), s	0.0	2.3	0.0	0.0	0.0	7.1	0.0	0.9
Time to First Blk (g_f), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	2.2
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	2.2
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.52	0.00	1.00	0.00	0.15
Lane Grp Cap (c), veh/h	0	511	0	443	0	429	0	365
V/C Ratio (X)	0.00	0.16	0.00	0.37	0.00	0.40	0.00	0.44
Avail Cap (c_a), veh/h	0	559	0	575	0	470	0	507
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	8.7	0.0	13.3	0.0	11.4	0.0	13.5
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.5	0.0	0.6	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.8	0.0	13.8	0.0	12.0	0.0	14.3
1st-Term Q (Q1), veh/ln	0.0	0.2	0.0	0.8	0.0	0.6	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.9	0.0	0.7	0.0	0.9
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.02	0.00	0.06	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	521	0	0	0	427	0	0
Grp Sat Flow (s), veh/h/ln	0	1841	0	0	0	1796	0	0
Q Serve Time (g_s), s	0.0	7.1	0.0	0.0	0.0	5.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	7.1	0.0	0.0	0.0	5.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	901	0	0	0	879	0	0
V/C Ratio (X)	0.00	0.58	0.00	0.00	0.00	0.49	0.00	0.00
Avail Cap (c_a), veh/h	0	997	0	0	0	973	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.4	0.0	0.0	0.0	6.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.1	0.0	0.0	0.0	6.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	0.0	0.0	0.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Projected w/o Other Developments
PM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.9	0.0	0.0	0.0	0.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.03	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	R		R		R			
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	135	0	143	0	32	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1572	0	1510	0	0
Q Serve Time (g_s), s	0.0	1.7	0.0	2.9	0.0	0.4	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.7	0.0	2.9	0.0	0.4	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.35
Lane Grp Cap (c), veh/h	0	776	0	265	0	739	0	0
V/C Ratio (X)	0.00	0.17	0.00	0.54	0.00	0.04	0.00	0.00
Avail Cap (c_a), veh/h	0	859	0	404	0	818	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.0	0.0	13.3	0.0	4.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	1.7	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	5.1	0.0	15.0	0.0	4.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.7	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.2	0.0	0.8	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.02	0.00	0.20	0.00	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	9.1
HCM 6th LOS	A

HCM 6th TWSC
10: Driveway 1 & Burkhalter Rd

Projected w/o Other Developments
PM Peak Hour

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	610	61	9	456	7	36	0	6	4	0	21
Future Vol, veh/h	35	610	61	9	456	7	36	0	6	4	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	235	-	175	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	663	66	10	496	8	39	0	7	4	0	23
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	504	0	0	729	0	0	1271	1263	663	1296	1325	500
Stage 1	-	-	-	-	-	-	739	739	-	520	520	-
Stage 2	-	-	-	-	-	-	532	524	-	776	805	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1061	-	-	875	-	-	145	170	461	139	156	571
Stage 1	-	-	-	-	-	-	409	424	-	539	532	-
Stage 2	-	-	-	-	-	-	531	530	-	390	395	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1061	-	-	875	-	-	134	162	461	132	149	571
Mov Cap-2 Maneuver	-	-	-	-	-	-	134	162	-	132	149	-
Stage 1	-	-	-	-	-	-	394	409	-	520	526	-
Stage 2	-	-	-	-	-	-	504	524	-	371	381	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.2			39.5			15.4		
HCM LOS							E			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	149	1061	-	-	875	-	-	373				
HCM Lane V/C Ratio	0.306	0.036	-	-	0.011	-	-	0.073				
HCM Control Delay (s)	39.5	8.5	-	-	9.2	-	-	15.4				
HCM Lane LOS	E	A	-	-	A	-	-	C				
HCM 95th %tile Q(veh)	1.2	0.1	-	-	0	-	-	0.2				

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Synchro 11 Report

HCM 6th TWSC
20: Burkhalter Rd & Driveway 2

Projected w/o Other Developments
PM Peak Hour

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	611	467	30	17	5
Future Vol, veh/h	9	611	467	30	17	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	175	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	664	508	33	18	5
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	541	0	-	0	1192	508
Stage 1	-	-	-	-	508	-
Stage 2	-	-	-	-	684	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1028	-	-	-	207	565
Stage 1	-	-	-	-	604	-
Stage 2	-	-	-	-	501	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1028	-	-	-	204	565
Mov Cap-2 Maneuver	-	-	-	-	204	-
Stage 1	-	-	-	-	595	-
Stage 2	-	-	-	-	501	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		21.7		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1028	-	-	-	239	
HCM Lane V/C Ratio	0.01	-	-	-	0.1	
HCM Control Delay (s)	8.5	0	-	-	21.7	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.3	

HCM 6th TWSC
40: Herman Rushing Rd & Driveway 4

Projected w/o Other Developments
PM Peak Hour

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↙	↗	↗
Traffic Vol, veh/h	17	0	0	0	0	47	0	48	0	67	76	23
Future Vol, veh/h	17	0	0	0	0	47	0	48	0	67	76	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	0	0	0	51	0	52	0	73	83	25
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	307	281	83	294	306	52	108	0	0	52	0	0
Stage 1	229	229	-	52	52	-	-	-	-	-	-	-
Stage 2	78	52	-	242	254	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	645	627	976	658	608	1016	1483	-	-	1554	-	-
Stage 1	774	715	-	961	852	-	-	-	-	-	-	-
Stage 2	931	852	-	762	697	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	591	598	976	634	579	1016	1483	-	-	1554	-	-
Mov Cap-2 Maneuver	591	598	-	634	579	-	-	-	-	-	-	-
Stage 1	774	681	-	961	852	-	-	-	-	-	-	-
Stage 2	884	852	-	726	664	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.3		8.7		0		3					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1483	-	-	591	1016	1554	-	-				
HCM Lane V/C Ratio	-	-	-	0.031	0.05	0.047	-	-				
HCM Control Delay (s)	0	-	-	11.3	8.7	7.4	-	-				
HCM Lane LOS	A	-	-	B	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0.1	-	-				

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Synchro 11 Report

HCM 6th TWSC
50: Burkhalter Rd & Driveway 5

Projected w/o Other Developments
PM Peak Hour

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	32	382	376	5	3	22
Future Vol, veh/h	32	382	376	5	3	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	415	409	5	3	24
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	414	0	-	0	897	412
Stage 1	-	-	-	-	412	-
Stage 2	-	-	-	-	485	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1145	-	-	-	310	640
Stage 1	-	-	-	-	669	-
Stage 2	-	-	-	-	619	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1145	-	-	-	300	640
Mov Cap-2 Maneuver	-	-	-	-	300	-
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	619	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.6	0		11.7		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1145	-	-	-	563	
HCM Lane V/C Ratio	0.03	-	-	-	0.048	
HCM Control Delay (s)	8.2	-	-	-	11.7	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2	

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	377	375	19	14	6
Future Vol, veh/h	8	377	375	19	14	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	200	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	410	408	21	15	7
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	429	0	-	0	836	408
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	428	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1130	-	-	-	337	643
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	657	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1130	-	-	-	334	643
Mov Cap-2 Maneuver	-	-	-	-	334	-
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	657	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		14.8		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1130	-	-	-	390	
HCM Lane V/C Ratio	0.008	-	-	-	0.056	
HCM Control Delay (s)	8.2	0	-	-	14.8	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Appendix G:
Capacity Analysis Reports
Projected Conditions with Other Developments

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Projected w/ Other Developments
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	160	154	371	195	166	114	705	106	100	811	51
Future Volume (veh/h)	64	160	154	371	195	166	114	705	106	100	811	51
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1826	1870	1885	1811	1870	1870	1826	1796	1856	1841	1796
Adj Flow Rate, veh/h	107	186	214	431	257	255	146	775	145	145	932	59
Peak Hour Factor	0.60	0.86	0.72	0.86	0.76	0.65	0.78	0.91	0.73	0.69	0.87	0.87
Percent Heavy Veh, %	2	5	2	1	6	2	2	5	7	3	4	7
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	586	480	552	318	169	168	107	661	124	107	757	48
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.62	0.62	0.55	0.55	0.55	0.03	0.23	0.23	0.03	0.23	0.23
Unsig. Movement Delay												
Ln Grp Delay, s/veh	13.3	0.0	14.5	245.8	0.0	0.0	265.4	159.3	159.5	264.3	182.2	181.7
Ln Grp LOS	B	A	B	F	A	A	F	F	F	F	F	F
Approach Vol, veh/h	507			943			1066			1136		
Approach Delay, s/veh	14.2			245.8			173.9			192.5		
Approach LOS	B			F			F			F		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Case No	1.1	4.0		4.0	1.1	4.0	1.2	8.3				
Phs Duration (G+Y+Rc), s	11.0	40.0		99.0	11.0	40.0	11.0	88.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0	6.0	6.0				
Max Green (Gmax), s	5.0	34.0		93.0	5.0	34.0	5.0	82.0				
Max Allow Headway (MAH), s	3.7	4.9		5.1	3.7	5.0	3.7	5.7				
Max Q Clear (g_c+1), s	7.0	36.0		20.0	7.0	36.0	5.9	84.0				
Green Ext Time (g_e), s	0.0	0.0		2.6	0.0	0.0	0.0	0.0				
Prob of Phs Call (p_c)	1.00	1.00		1.00	1.00	1.00	0.99	1.00				
Prob of Max Out (p_x)	1.00	1.00		0.00	1.00	1.00	1.00	1.00				
Left-Turn Movement Data												
Assigned Mvmt	1				5		7	3				
Mvmt Sat Flow, veh/h	1781				1767		1781	519				
Through Movement Data												
Assigned Mvmt		2		4		6		8				
Mvmt Sat Flow, veh/h		3340		774		2917		309				
Right-Turn Movement Data												
Assigned Mvmt		12		14		16		18				
Mvmt Sat Flow, veh/h		211		891		546		307				
Left Lane Group Data												
Assigned Mvmt	1	0	0	0	5	0	7	3				
Lane Assignment	L (Pr/Pm)			L (Pr/Pm)			L (Pr/Pm)		L+T+R			

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Projected w/ Other Developments
AM Peak Hour

Lanes in Grp	1	0	0	0	1	0	1	1
Grp Vol (v), veh/h	146	0	0	0	145	0	107	943
Grp Sat Flow (s), veh/h/ln	1781	0	0	0	1767	0	1781	1135
Q Serve Time (g_s), s	5.0	0.0	0.0	0.0	5.0	0.0	3.9	75.0
Cycle Q Clear Time (g_c), s	5.0	0.0	0.0	0.0	5.0	0.0	3.9	82.0
Perm LT Sat Flow (s_l), veh/h/ln	568	0	0	0	603	0	888	1000
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	855	0
Perm LT Eff Green (g_p), s	34.0	0.0	0.0	0.0	34.0	0.0	84.0	82.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.46
Lane Grp Cap (c), veh/h	107	0	0	0	107	0	586	655
V/C Ratio (X)	1.36	0.00	0.00	0.00	1.36	0.00	0.18	1.44
Avail Cap (c_a), veh/h	107	0	0	0	107	0	586	655
Upstream Filter (I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	54.8	0.0	0.0	0.0	54.9	0.0	13.2	39.5
Incr Delay (d2), s/veh	210.6	0.0	0.0	0.0	209.4	0.0	0.1	206.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	265.4	0.0	0.0	0.0	264.3	0.0	13.3	245.8
1st-Term Q (Q1), veh/ln	1.6	0.0	0.0	0.0	1.6	0.0	1.5	24.6
2nd-Term Q (Q2), veh/ln	6.3	0.0	0.0	0.0	6.2	0.0	0.0	37.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	7.9	0.0	0.0	0.0	7.8	0.0	1.5	62.2
%ile Storage Ratio (RQ%)	2.68	0.00	0.00	0.00	2.68	0.00	0.31	1.56
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	9.7	0.0	0.0	0.0	9.5	0.0	0.0	72.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.4
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	488	0	0	0	461	0	0
Grp Sat Flow (s), veh/h/ln	0	1749	0	0	0	1735	0	0
Q Serve Time (g_s), s	0.0	34.0	0.0	0.0	0.0	34.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	34.0	0.0	0.0	0.0	34.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	396	0	0	0	393	0	0
V/C Ratio (X)	0.00	1.23	0.00	0.00	0.00	1.17	0.00	0.00
Avail Cap (c_a), veh/h	0	396	0	0	0	393	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	58.0	0.0	0.0	0.0	58.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	124.2	0.0	0.0	0.0	101.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	182.2	0.0	0.0	0.0	159.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	14.7	0.0	0.0	0.0	14.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	13.7	0.0	0.0	0.0	11.1	0.0	0.0

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Projected w/ Other Developments
AM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	28.4	0.0	0.0	0.0	25.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.82	0.00	0.00	0.00	1.58	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	22.9	0.0	0.0	0.0	16.9	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R			
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	503	0	400	0	459	0	0
Grp Sat Flow (s), veh/h/ln	0	1803	0	1666	0	1728	0	0
Q Serve Time (g_s), s	0.0	34.0	0.0	18.0	0.0	34.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	34.0	0.0	18.0	0.0	34.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.12	0.00	0.54	0.00	0.32	0.00	0.27
Lane Grp Cap (c), veh/h	0	409	0	1033	0	392	0	0
V/C Ratio (X)	0.00	1.23	0.00	0.39	0.00	1.17	0.00	0.00
Avail Cap (c_a), veh/h	0	409	0	1033	0	392	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	58.0	0.0	14.3	0.0	58.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	123.7	0.0	0.2	0.0	101.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	181.7	0.0	14.5	0.0	159.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	15.1	0.0	6.5	0.0	14.5	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	14.0	0.0	0.1	0.0	11.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	29.2	0.0	6.5	0.0	25.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.87	0.00	0.49	0.00	1.58	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	23.6	0.0	0.0	0.0	16.9	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	176.1
HCM 6th LOS	F

HCM 6th TWSC
2: Driveway 3/Cawana Rd & Burkhalter Rd

Projected w/ Other Developments
AM Peak Hour

Intersection												
Int Delay, s/veh	9.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	189	242	12	14	396	67	34	9	45	21	4	100
Future Vol, veh/h	189	242	12	14	396	67	34	9	45	21	4	100
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	175	235	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	79	92	92	94	64	92	92	92	88	92	69
Heavy Vehicles, %	3	3	2	2	3	4	2	2	2	0	2	4
Mvmt Flow	242	306	13	15	421	105	37	10	49	24	4	145

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	526	0	0	319	0	0	1368	1346	306	1330	1307	474
Stage 1	-	-	-	-	-	-	790	790	-	504	504	-
Stage 2	-	-	-	-	-	-	578	556	-	826	803	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.52	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.52	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.336
Pot Cap-1 Maneuver	1036	-	-	1241	-	-	124	151	734	133	160	586
Stage 1	-	-	-	-	-	-	383	402	-	554	541	-
Stage 2	-	-	-	-	-	-	501	513	-	369	396	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1036	-	-	1241	-	-	74	114	734	95	121	586
Mov Cap-2 Maneuver	-	-	-	-	-	-	74	114	-	95	121	-
Stage 1	-	-	-	-	-	-	293	308	-	424	535	-
Stage 2	-	-	-	-	-	-	370	507	-	256	303	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.1			0.2			66.4			28.2		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	147	1036	-	-	1241	-	-	324
HCM Lane V/C Ratio	0.651	0.234	-	-	0.012	-	-	0.534
HCM Control Delay (s)	66.4	9.5	-	-	7.9	-	-	28.2
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	3.6	0.9	-	-	0	-	-	3

HCM 6th TWSC
3: Herman Rushing Rd & Burkhalter Rd

Projected w/ Other Developments
AM Peak Hour

Intersection						
Int Delay, s/veh	7.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	275	31	26	347	132	56
Future Vol, veh/h	275	31	26	347	132	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	72	54	95	82	65
Heavy Vehicles, %	1	0	9	4	1	0
Mvmt Flow	353	43	48	365	161	86
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	396	0	836	375
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	461	-
Critical Hdwy	-	-	4.19	-	6.41	6.2
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.281	-	3.509	3.3
Pot Cap-1 Maneuver	-	-	1126	-	339	676
Stage 1	-	-	-	-	697	-
Stage 2	-	-	-	-	637	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1126	-	321	676
Mov Cap-2 Maneuver	-	-	-	-	321	-
Stage 1	-	-	-	-	697	-
Stage 2	-	-	-	-	603	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1		28.5	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	393	-	-	1126	-	
HCM Lane V/C Ratio	0.629	-	-	0.043	-	
HCM Control Delay (s)	28.5	-	-	8.3	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	4.1	-	-	0.1	-	

MOVEMENT SUMMARY

 Site: 4 [Projected W/ Other AM]

Site Category: -
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Rushing Rd												
3	L2	93	4.0	0.445	9.6	LOS A	2.6	65.6	0.61	0.61	0.71	32.4
8	T1	301	2.0	0.445	9.5	LOS A	2.6	65.6	0.61	0.61	0.71	32.4
18	R2	32	4.0	0.034	4.1	LOS A	0.1	3.2	0.40	0.27	0.40	34.6
Approach		426	2.6	0.445	9.1	LOS A	2.6	65.6	0.60	0.59	0.69	32.5
East: Burkhalter Rd												
1	L2	76	2.0	0.501	11.9	LOS B	3.5	89.6	0.71	0.81	0.98	31.4
6	T1	257	4.0	0.501	12.0	LOS B	3.5	89.6	0.71	0.81	0.98	31.3
16	R2	44	3.0	0.501	12.0	LOS B	3.5	89.6	0.71	0.81	0.98	30.5
Approach		377	3.5	0.501	12.0	LOS B	3.5	89.6	0.71	0.81	0.98	31.2
North: Pretoria Rushing Rd												
7	L2	18	6.0	0.250	7.4	LOS A	1.1	28.5	0.57	0.52	0.57	33.7
4	T1	139	4.0	0.250	7.3	LOS A	1.1	28.5	0.57	0.52	0.57	33.7
14	R2	39	4.0	0.250	7.3	LOS A	1.1	28.5	0.57	0.52	0.57	32.8
Approach		197	4.2	0.250	7.3	LOS A	1.1	28.5	0.57	0.52	0.57	33.5
West: Burkhalter Rd												
5	L2	86	0.0	0.476	9.2	LOS A	2.9	74.4	0.56	0.44	0.56	32.7
2	T1	300	4.0	0.476	9.3	LOS A	2.9	74.4	0.56	0.44	0.56	32.5
12	R2	85	0.0	0.476	9.2	LOS A	2.9	74.4	0.56	0.44	0.56	31.7
Approach		471	2.5	0.476	9.3	LOS A	2.9	74.4	0.56	0.44	0.56	32.4
All Vehicles		1470	3.0	0.501	9.7	LOS A	3.5	89.6	0.61	0.59	0.71	32.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: P:\24-21 Burkhalter Development REVISION\Sidra\Roundabout Analysis.sip8

HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Projected w/ Other Developments

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	61	108	32	100	137	110	435	15	41	204	46
Future Volume (veh/h)	102	61	108	32	100	137	110	435	15	41	204	46
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1796	1856	1796	1826	1900	1841	1841	1826	1633	1826	1722	1796
Adj Flow Rate, veh/h	132	84	142	45	128	161	143	494	22	67	212	51
Peak Hour Factor	0.77	0.73	0.76	0.71	0.78	0.85	0.77	0.88	0.69	0.61	0.96	0.91
Percent Heavy Veh, %	7	3	7	5	0	4	4	5	18	5	12	7
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	368	195	412	152	191	210	534	700	531	341	660	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.38	0.38	0.38	0.38	0.38	0.38
Unsig. Movement Delay												
Ln Grp Delay, s/veh	11.0	0.0	10.7	12.6	0.0	0.0	10.1	10.3	6.7	13.7	7.8	6.9
Ln Grp LOS	B	A	B	B	A	A	B	B	A	B	A	A
Approach Vol, veh/h	358			334			659			330		
Approach Delay, s/veh	10.9			12.6			10.2			8.9		
Approach LOS	B			B			B			A		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	2			4			6			8		
Case No	5.0			7.0			5.0			8.0		
Phs Duration (G+Y+Rc), s	19.3			15.4			19.3			15.4		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green (Gmax), s	20.0			13.0			20.0			13.0		
Max Allow Headway (MAH), s	4.7			4.8			4.6			5.1		
Max Q Clear (g_c+I1), s	12.4			6.0			9.9			8.7		
Green Ext Time (g_e), s	0.9			1.0			2.4			0.7		
Prob of Phs Call (p_c)	1.00			1.00			1.00			1.00		
Prob of Max Out (p_x)	0.29			0.42			0.27			1.00		
Left-Turn Movement Data												
Assigned Mvmt	5			7			1			3		
Mvmt Sat Flow, veh/h	864			742			1099			125		
Through Movement Data												
Assigned Mvmt	2			4			6			8		
Mvmt Sat Flow, veh/h	1722			721			1826			708		
Right-Turn Movement Data												
Assigned Mvmt	12			14			16			18		
Mvmt Sat Flow, veh/h	1522			1522			1384			776		
Left Lane Group Data												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment	L			L+T			L			L+T+R		

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Projected w/ Other Developments
AM Peak Hour

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	67	0	216	0	143	0	334
Grp Sat Flow (s), veh/h/ln	0	864	0	1462	0	1099	0	1610
Q Serve Time (g_s), s	0.0	2.5	0.0	0.0	0.0	3.6	0.0	2.7
Cycle Q Clear Time (g_c), s	0.0	10.4	0.0	4.0	0.0	6.6	0.0	6.7
Perm LT Sat Flow (s_l), veh/h/ln	0	864	0	1107	0	1099	0	1173
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1457	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	13.3	0.0	9.4	0.0	13.3	0.0	9.4
Perm LT Serve Time (g_u), s	0.0	5.4	0.0	2.7	0.0	10.3	0.0	5.4
Perm LT Q Serve Time (g_ps), s	0.0	2.5	0.0	0.0	0.0	3.6	0.0	2.7
Time to First Blk (g_f), s	0.0	0.0	0.0	1.3	0.0	0.0	0.0	3.6
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.3	0.0	0.0	0.0	3.6
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.61	0.00	1.00	0.00	0.13
Lane Grp Cap (c), veh/h	0	341	0	563	0	534	0	553
V/C Ratio (X)	0.00	0.20	0.00	0.38	0.00	0.27	0.00	0.60
Avail Cap (c_a), veh/h	0	509	0	698	0	746	0	723
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.4	0.0	10.6	0.0	9.8	0.0	11.6
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.4	0.0	0.3	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	13.7	0.0	11.0	0.0	10.1	0.0	12.6
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.8	0.0	0.4	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.9	0.0	0.5	0.0	1.6
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.02	0.00	0.04	0.00	0.08
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	212	0	0	0	494	0	0
Grp Sat Flow (s), veh/h/ln	0	1722	0	0	0	1826	0	0
Q Serve Time (g_s), s	0.0	3.0	0.0	0.0	0.0	7.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	3.0	0.0	0.0	0.0	7.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	660	0	0	0	700	0	0
V/C Ratio (X)	0.00	0.32	0.00	0.00	0.00	0.71	0.00	0.00
Avail Cap (c_a), veh/h	0	994	0	0	0	1053	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.5	0.0	0.0	0.0	9.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	1.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	7.8	0.0	0.0	0.0	10.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	1.3	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.3	0.0	0.0

M&W

Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis 5: US 80/SR 26 & Burkhalter Rd

Projected w/ Other Developments
AM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.5	0.0	0.0	0.0	1.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.00	0.00	0.07	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	R		R		R			
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	51	0	142	0	22	0	0
Grp Sat Flow (s), veh/h/ln	0	1522	0	1522	0	1384	0	0
Q Serve Time (g_s), s	0.0	0.7	0.0	2.6	0.0	0.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	0.7	0.0	2.6	0.0	0.3	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.48
Lane Grp Cap (c), veh/h	0	584	0	412	0	531	0	0
V/C Ratio (X)	0.00	0.09	0.00	0.35	0.00	0.04	0.00	0.00
Avail Cap (c_a), veh/h	0	878	0	571	0	798	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	6.8	0.0	10.2	0.0	6.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.5	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.9	0.0	10.7	0.0	6.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.1	0.0	0.5	0.0	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.1	0.0	0.6	0.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.01	0.00	0.14	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

HCM 6th TWSC
10: Driveway 1 & Burkhalter Rd

Projected w/ Other Developments
AM Peak Hour

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	403	18	2	525	2	54	0	9	7	0	34
Future Vol, veh/h	10	403	18	2	525	2	54	0	9	7	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	235	-	175	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	438	20	2	571	2	59	0	10	8	0	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	573	0	0	458	0	0	1055	1037	438	1051	1056	572
Stage 1	-	-	-	-	-	-	460	460	-	576	576	-
Stage 2	-	-	-	-	-	-	595	577	-	475	480	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1000	-	-	1103	-	-	204	231	619	205	225	520
Stage 1	-	-	-	-	-	-	581	566	-	503	502	-
Stage 2	-	-	-	-	-	-	491	502	-	570	554	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1000	-	-	1103	-	-	188	228	619	200	222	520
Mov Cap-2 Maneuver	-	-	-	-	-	-	188	228	-	200	222	-
Stage 1	-	-	-	-	-	-	575	560	-	497	501	-
Stage 2	-	-	-	-	-	-	455	501	-	555	548	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	30.4	14.9
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	209	1000	-	-	1103	-	-	408
HCM Lane V/C Ratio	0.328	0.011	-	-	0.002	-	-	0.109
HCM Control Delay (s)	30.4	8.6	-	-	8.3	-	-	14.9
HCM Lane LOS	D	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.4	0	-	-	0	-	-	0.4

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Synchro 11 Report

HCM 6th TWSC
20: Burkhalter Rd & Driveway 2

Projected w/ Other Developments
AM Peak Hour

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	416	521	9	27	8
Future Vol, veh/h	3	416	521	9	27	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	175	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	452	566	10	29	9
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	576	0	-	0	1024	566
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	458	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	997	-	-	-	261	524
Stage 1	-	-	-	-	568	-
Stage 2	-	-	-	-	637	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	997	-	-	-	260	524
Mov Cap-2 Maneuver	-	-	-	-	260	-
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	637	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		19.1		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	997	-	-	-	294	
HCM Lane V/C Ratio	0.003	-	-	-	0.129	
HCM Control Delay (s)	8.6	0	-	-	19.1	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.4	

HCM 6th TWSC
40: Herman Rushing Rd & Driveway 4

Projected w/ Other Developments
AM Peak Hour

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	0	0	0	0	72	0	92	0	24	25	8
Future Vol, veh/h	24	0	0	0	0	72	0	92	0	24	25	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	0	0	0	0	78	0	100	0	26	27	9
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	218	179	27	184	188	100	36	0	0	100	0	0
Stage 1	79	79	-	100	100	-	-	-	-	-	-	-
Stage 2	139	100	-	84	88	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	738	715	1048	777	707	956	1575	-	-	1493	-	-
Stage 1	930	829	-	906	812	-	-	-	-	-	-	-
Stage 2	864	812	-	924	822	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	669	703	1048	767	695	956	1575	-	-	1493	-	-
Mov Cap-2 Maneuver	669	703	-	767	695	-	-	-	-	-	-	-
Stage 1	930	815	-	906	812	-	-	-	-	-	-	-
Stage 2	793	812	-	908	808	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.6		9.1		0		3.1					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1575	-	-	669	956	1493	-	-				
HCM Lane V/C Ratio	-	-	-	0.039	0.082	0.017	-	-				
HCM Control Delay (s)	0	-	-	10.6	9.1	7.5	-	-				
HCM Lane LOS	A	-	-	B	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.1	-	-				

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Synchro 11 Report

HCM 6th TWSC
50: Burkhalter Rd & Driveway 5

Projected w/ Other Developments
AM Peak Hour

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	323	338	2	5	34
Future Vol, veh/h	11	323	338	2	5	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	351	367	2	5	37
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	369	0	-	0	743	368
Stage 1	-	-	-	-	368	-
Stage 2	-	-	-	-	375	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1190	-	-	-	383	677
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	695	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1190	-	-	-	379	677
Mov Cap-2 Maneuver	-	-	-	-	379	-
Stage 1	-	-	-	-	693	-
Stage 2	-	-	-	-	695	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.3	0		11.3		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1190	-	-	-	615	
HCM Lane V/C Ratio	0.01	-	-	-	0.069	
HCM Control Delay (s)	8.1	-	-	-	11.3	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

HCM 6th TWSC
60: Burkhalter Rd & Driveway 6

Projected w/ Other Developments
AM Peak Hour

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	325	332	7	22	8
Future Vol, veh/h	3	325	332	7	22	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	200	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	353	361	8	24	9
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	369	0	-	0	720	361
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	359	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1190	-	-	-	395	684
Stage 1	-	-	-	-	705	-
Stage 2	-	-	-	-	707	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1190	-	-	-	394	684
Mov Cap-2 Maneuver	-	-	-	-	394	-
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	707	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		13.8		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1190	-	-	-	444	
HCM Lane V/C Ratio	0.003	-	-	-	0.073	
HCM Control Delay (s)	8	0	-	-	13.8	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Projected w/ Other Developments

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	238	111	310	206	99	219	834	482	165	948	118
Future Volume (veh/h)	70	238	111	310	206	99	219	834	482	165	948	118
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1885	1885	1885	1856	1900	1885	1885	1900	1856	1870	1885
Adj Flow Rate, veh/h	74	264	152	365	275	130	235	959	502	214	1042	146
Peak Hour Factor	0.95	0.90	0.73	0.85	0.75	0.76	0.93	0.87	0.96	0.77	0.91	0.81
Percent Heavy Veh, %	0	1	1	1	3	0	1	1	0	3	2	1
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	523	584	336	258	168	79	168	672	344	166	918	129
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.03	0.52	0.52	0.45	0.45	0.45	0.07	0.29	0.29	0.07	0.29	0.29
Unsig. Movement Delay												
Ln Grp Delay, s/veh	20.2	0.0	22.9	294.5	0.0	0.0	253.6	251.9	270.5	209.0	134.8	135.5
Ln Grp LOS	C	A	C	F	A	A	F	F	F	F	F	F
Approach Vol, veh/h	490			770			1696			1402		
Approach Delay, s/veh	22.5			294.5			260.0			146.4		
Approach LOS	C			F			F			F		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			4	5	6	7	8			
Case No	1.1	4.0			4.0	1.1	4.0	1.2	8.3			
Phs Duration (G+Y+Rc), s	16.0	50.0			84.0	16.0	50.0	11.0	73.0			
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0	6.0	6.0	6.0			
Max Green (Gmax), s	10.0	44.0			78.0	10.0	44.0	5.0	67.0			
Max Allow Headway (MAH), s	3.7	4.9			5.0	3.7	5.0	3.7	5.7			
Max Q Clear (g_c+1), s	12.0	46.0			24.1	12.0	46.0	5.2	69.0			
Green Ext Time (g_e), s	0.0	0.0			2.7	0.0	0.0	0.0	0.0			
Prob of Phs Call (p_c)	1.00	1.00			1.00	1.00	1.00	0.95	1.00			
Prob of Max Out (p_x)	1.00	1.00			0.00	1.00	1.00	1.00	1.00			
Left-Turn Movement Data												
Assigned Mvmt	1					5			7	3		
Mvmt Sat Flow, veh/h	1795					1767			1810	499		
Through Movement Data												
Assigned Mvmt				2			4			6		
Mvmt Sat Flow, veh/h				3130			1123			2292		
Right-Turn Movement Data												
Assigned Mvmt				12			14			16		
Mvmt Sat Flow, veh/h				438			646			1173		
Left Lane Group Data												
Assigned Mvmt	1	0	0	0	5	0	7	3				
Lane Assignment	L (Pr/Pm)			L (Pr/Pm)			L (Pr/Pm)		L+T+R			

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Projected w/ Other Developments
PM Peak Hour

Lanes in Grp	1	0	0	0	1	0	1	1
Grp Vol (v), veh/h	235	0	0	0	214	0	74	770
Grp Sat Flow (s), veh/h/ln	1795	0	0	0	1767	0	1810	1052
Q Serve Time (g_s), s	10.0	0.0	0.0	0.0	10.0	0.0	3.2	55.9
Cycle Q Clear Time (g_c), s	10.0	0.0	0.0	0.0	10.0	0.0	3.2	67.0
Perm LT Sat Flow (s_l), veh/h/ln	475	0	0	0	360	0	996	986
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	901	0
Perm LT Eff Green (g_p), s	44.0	0.0	0.0	0.0	44.0	0.0	69.0	67.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.9
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.9
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.47
Lane Grp Cap (c), veh/h	168	0	0	0	166	0	523	505
V/C Ratio (X)	1.40	0.00	0.00	0.00	1.29	0.00	0.14	1.52
Avail Cap (c_a), veh/h	168	0	0	0	166	0	523	505
Upstream Filter (I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d1), s/veh	41.1	0.0	0.0	0.0	40.8	0.0	20.1	49.0
Incr Delay (d2), s/veh	212.5	0.0	0.0	0.0	168.2	0.0	0.1	245.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	253.6	0.0	0.0	0.0	209.0	0.0	20.2	294.5
1st-Term Q (Q1), veh/ln	4.3	0.0	0.0	0.0	4.2	0.0	1.3	19.4
2nd-Term Q (Q2), veh/ln	9.9	0.0	0.0	0.0	7.7	0.0	0.0	34.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00
%ile Back of Q (50%), veh/ln	14.2	0.0	0.0	0.0	12.0	0.0	1.4	53.9
%ile Storage Ratio (RQ%)	4.76	0.00	0.00	0.00	4.08	0.00	0.27	1.32
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	16.8	0.0	0.0	0.0	12.0	0.0	0.0	66.1
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.4	0.0	0.0	0.0	0.3	0.0	0.0	0.4

Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	591	0	0	0	745	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1791	0	0
Q Serve Time (g_s), s	0.0	44.0	0.0	0.0	0.0	44.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	44.0	0.0	0.0	0.0	44.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	521	0	0	0	525	0	0
V/C Ratio (X)	0.00	1.13	0.00	0.00	0.00	1.42	0.00	0.00
Avail Cap (c_a), veh/h	0	521	0	0	0	525	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	53.0	0.0	0.0	0.0	53.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	81.8	0.0	0.0	0.0	198.9	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	134.8	0.0	0.0	0.0	251.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	19.1	0.0	0.0	0.0	19.2	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	11.8	0.0	0.0	0.0	29.0	0.0	0.0

M&W

Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

Projected w/ Other Developments
PM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	30.9	0.0	0.0	0.0	48.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.95	0.00	0.00	0.00	2.89	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	17.4	0.0	0.0	0.0	54.8	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.4	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R			
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	597	0	416	0	716	0	0
Grp Sat Flow (s), veh/h/ln	0	1792	0	1769	0	1674	0	0
Q Serve Time (g_s), s	0.0	44.0	0.0	22.1	0.0	44.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	44.0	0.0	22.1	0.0	44.0	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.24	0.00	0.37	0.00	0.70	0.00	0.17
Lane Grp Cap (c), veh/h	0	526	0	920	0	491	0	0
V/C Ratio (X)	0.00	1.14	0.00	0.45	0.00	1.46	0.00	0.00
Avail Cap (c_a), veh/h	0	526	0	920	0	491	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	53.0	0.0	22.6	0.0	53.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	82.5	0.0	0.3	0.0	217.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	135.5	0.0	22.9	0.0	270.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	19.2	0.0	8.9	0.0	18.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	12.0	0.0	0.1	0.0	29.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	31.3	0.0	9.0	0.0	47.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.98	0.00	0.66	0.00	2.85	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	17.9	0.0	0.0	0.0	56.3	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.4	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	202.8
HCM 6th LOS	F

HCM 6th TWSC
2: Driveway 3/Cawana Rd & Burkhalter Rd

Projected w/ Other Developments
PM Peak Hour

Intersection												
Int Delay, s/veh	30											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	160	476	32	48	362	44	22	5	28	46	9	138
Future Vol, veh/h	160	476	32	48	362	44	22	5	28	46	9	138
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	175	235	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	90	92	92	94	73	92	92	92	70	92	79
Heavy Vehicles, %	1	2	2	2	1	0	2	2	2	0	2	1
Mvmt Flow	188	529	35	52	385	60	24	5	30	66	10	175

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	445	0	0	564	0	0	1517	1454	529	1459	1459	415
Stage 1	-	-	-	-	-	-	905	905	-	519	519	-
Stage 2	-	-	-	-	-	-	612	549	-	940	940	-
Critical Hdwy	4.11	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.52	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.52	-
Follow-up Hdwy	2.209	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.309
Pot Cap-1 Maneuver	1121	-	-	1008	-	-	98	130	550	108	129	640
Stage 1	-	-	-	-	-	-	331	355	-	544	533	-
Stage 2	-	-	-	-	-	-	480	516	-	319	342	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1121	-	-	1008	-	-	55	103	550	82	102	640
Mov Cap-2 Maneuver	-	-	-	-	-	-	55	103	-	82	102	-
Stage 1	-	-	-	-	-	-	275	295	-	453	505	-
Stage 2	-	-	-	-	-	-	325	489	-	246	285	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.2	0.9	71.2	161.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	110	1121	-	-	1008	-	-	214
HCM Lane V/C Ratio	0.543	0.168	-	-	0.052	-	-	1.169
HCM Control Delay (s)	71.2	8.9	-	-	8.8	-	-	161.3
HCM Lane LOS	F	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	2.5	0.6	-	-	0.2	-	-	12.2

HCM 6th TWSC
3: Herman Rushing Rd & Burkhalter Rd

Projected w/ Other Developments
PM Peak Hour

Intersection						
Int Delay, s/veh	4.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	438	110	56	368	81	31
Future Vol, veh/h	438	110	56	368	81	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	73	75	95	78	63
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	471	151	75	387	104	49
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	622	0	1084	547
Stage 1	-	-	-	-	547	-
Stage 2	-	-	-	-	537	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	969	-	242	541
Stage 1	-	-	-	-	584	-
Stage 2	-	-	-	-	590	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	969	-	218	541
Mov Cap-2 Maneuver	-	-	-	-	218	-
Stage 1	-	-	-	-	584	-
Stage 2	-	-	-	-	532	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.5		34.5	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	270	-	-	969	-	
HCM Lane V/C Ratio	0.567	-	-	0.077	-	
HCM Control Delay (s)	34.5	-	-	9	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	3.2	-	-	0.2	-	

MOVEMENT SUMMARY

 **Site: 4 [Projected W/ Other PM]**

Site Category: -
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Rushing Rd												
3	L2	80	2.0	0.302	7.7	LOS A	1.3	33.8	0.58	0.55	0.58	33.1
8	T1	173	0.0	0.302	7.6	LOS A	1.3	33.8	0.58	0.55	0.58	33.0
18	R2	40	0.0	0.045	4.4	LOS A	0.2	4.2	0.46	0.34	0.46	34.5
Approach		293	0.5	0.302	7.2	LOS A	1.3	33.8	0.56	0.52	0.56	33.2
East: Burkhalter Rd												
1	L2	52	0.0	0.482	9.9	LOS A	3.0	78.5	0.62	0.56	0.67	32.5
6	T1	329	6.0	0.482	10.1	LOS B	3.0	78.5	0.62	0.56	0.67	32.3
16	R2	52	0.0	0.482	9.9	LOS A	3.0	78.5	0.62	0.56	0.67	31.5
Approach		433	4.6	0.482	10.1	LOS B	3.0	78.5	0.62	0.56	0.67	32.2
North: Pretoria Rushing Rd												
7	L2	44	0.0	0.396	9.6	LOS A	2.2	54.2	0.66	0.67	0.72	32.7
4	T1	189	0.0	0.396	9.6	LOS A	2.2	54.2	0.66	0.67	0.72	32.6
14	R2	78	0.0	0.396	9.6	LOS A	2.2	54.2	0.66	0.67	0.72	31.7
Approach		311	0.0	0.396	9.6	LOS A	2.2	54.2	0.66	0.67	0.72	32.4
West: Burkhalter Rd												
5	L2	59	0.0	0.559	11.2	LOS B	5.0	125.3	0.66	0.64	0.83	32.0
2	T1	384	2.0	0.559	11.3	LOS B	5.0	125.3	0.66	0.64	0.83	31.9
12	R2	92	0.0	0.559	11.2	LOS B	5.0	125.3	0.66	0.64	0.83	31.0
Approach		534	1.4	0.559	11.2	LOS B	5.0	125.3	0.66	0.64	0.83	31.7
All Vehicles		1571	1.8	0.559	9.8	LOS A	5.0	125.3	0.63	0.60	0.72	32.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: P:\24-21 Burkhalter Development REVISION\Sidra\Roundabout Analysis.sip8

HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Projected w/ Other Developments

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	101	126	29	82	80	122	393	36	134	443	97
Future Volume (veh/h)	68	101	126	29	82	80	122	393	36	134	443	97
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1870	1856	1826	1856	1900	1870	1796	1781	1856	1841	1870
Adj Flow Rate, veh/h	85	125	143	33	109	107	172	427	48	154	521	135
Peak Hour Factor	0.80	0.81	0.88	0.88	0.75	0.75	0.71	0.92	0.75	0.87	0.85	0.72
Percent Heavy Veh, %	0	2	3	5	3	0	2	7	8	3	4	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	241	251	342	125	165	142	396	867	729	473	889	765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.48	0.48	0.48	0.48	0.48	0.48
Unsig. Movement Delay												
Ln Grp Delay, s/veh	14.4	0.0	14.3	15.8	0.0	0.0	14.1	7.5	5.6	11.5	8.3	6.0
Ln Grp LOS	B	A	B	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h	353			249			647			810		
Approach Delay, s/veh	14.4			15.8			9.1			8.5		
Approach LOS	B			B			A			A		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	2			4			6			8		
Case No	5.0			7.0			5.0			8.0		
Phs Duration (G+Y+Rc), s	25.3			14.7			25.3			14.7		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green (Gmax), s	21.0			12.0			21.0			12.0		
Max Allow Headway (MAH), s	4.7			4.7			4.9			5.1		
Max Q Clear (g_c+I1), s	14.0			6.2			18.4			8.3		
Green Ext Time (g_e), s	2.4			0.8			0.9			0.4		
Prob of Phs Call (p_c)	1.00			1.00			1.00			1.00		
Prob of Max Out (p_x)	0.64			0.62			1.00			1.00		
Left-Turn Movement Data												
Assigned Mvmt	5			7			1			3		
Mvmt Sat Flow, veh/h	912			529			777			109		
Through Movement Data												
Assigned Mvmt	2			4			6			8		
Mvmt Sat Flow, veh/h	1841			1151			1796			756		
Right-Turn Movement Data												
Assigned Mvmt	12			14			16			18		
Mvmt Sat Flow, veh/h	1585			1572			1510			651		
Left Lane Group Data												
Assigned Mvmt	0	5	0	7	0	1	0	3				
Lane Assignment	L			L+T			L			L+T+R		

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

5: US 80/SR 26 & Burkhalter Rd

Projected w/ Other Developments
PM Peak Hour

Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	154	0	210	0	172	0	249
Grp Sat Flow (s), veh/h/ln	0	912	0	1680	0	777	0	1516
Q Serve Time (g_s), s	0.0	5.5	0.0	0.0	0.0	8.2	0.0	2.1
Cycle Q Clear Time (g_c), s	0.0	12.0	0.0	4.2	0.0	16.4	0.0	6.3
Perm LT Sat Flow (s_l), veh/h/ln	0	912	0	1184	0	777	0	1129
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	1702	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	19.3	0.0	8.7	0.0	19.3	0.0	8.7
Perm LT Serve Time (g_u), s	0.0	12.9	0.0	2.4	0.0	11.2	0.0	4.5
Perm LT Q Serve Time (g_ps), s	0.0	5.5	0.0	0.0	0.0	8.2	0.0	2.1
Time to First Blk (g_f), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	3.5
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	1.7	0.0	0.0	0.0	3.5
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	0.40	0.00	1.00	0.00	0.13
Lane Grp Cap (c), veh/h	0	473	0	492	0	396	0	432
V/C Ratio (X)	0.00	0.33	0.00	0.43	0.00	0.43	0.00	0.58
Avail Cap (c_a), veh/h	0	511	0	615	0	428	0	562
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	11.1	0.0	13.9	0.0	13.4	0.0	14.6
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.6	0.0	0.8	0.0	1.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.5	0.0	14.4	0.0	14.1	0.0	15.8
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	1.2	0.0	0.9	0.0	1.5
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	1.3	0.0	1.0	0.0	1.6
%ile Storage Ratio (RQ%)	0.00	0.07	0.00	0.03	0.00	0.08	0.00	0.08
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	521	0	0	0	427	0	0
Grp Sat Flow (s), veh/h/ln	0	1841	0	0	0	1796	0	0
Q Serve Time (g_s), s	0.0	8.2	0.0	0.0	0.0	6.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	8.2	0.0	0.0	0.0	6.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	889	0	0	0	867	0	0
V/C Ratio (X)	0.00	0.59	0.00	0.00	0.00	0.49	0.00	0.00
Avail Cap (c_a), veh/h	0	965	0	0	0	942	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	7.5	0.0	0.0	0.0	7.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	8.3	0.0	0.0	0.0	7.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	1.3	0.0	0.0	0.0	1.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis 5: US 80/SR 26 & Burkhalter Rd

Projected w/ Other Developments
PM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.5	0.0	0.0	0.0	1.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.07	0.00	0.00	0.00	0.05	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	R		R		R			
Lanes in Grp	0	1	0	1	0	1	0	0
Grp Vol (v), veh/h	0	135	0	143	0	48	0	0
Grp Sat Flow (s), veh/h/ln	0	1585	0	1572	0	1510	0	0
Q Serve Time (g_s), s	0.0	1.9	0.0	3.1	0.0	0.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	1.9	0.0	3.1	0.0	0.7	0.0	0.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.43
Lane Grp Cap (c), veh/h	0	765	0	342	0	729	0	0
V/C Ratio (X)	0.00	0.18	0.00	0.42	0.00	0.07	0.00	0.00
Avail Cap (c_a), veh/h	0	831	0	471	0	791	0	0
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	5.9	0.0	13.5	0.0	5.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.0	0.8	0.0	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	6.0	0.0	14.3	0.0	5.6	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	0.3	0.0	0.8	0.0	0.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.3	0.0	0.9	0.0	0.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.03	0.00	0.21	0.00	0.01	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

HCM 6th TWSC
10: Driveway 1 & Burkhalter Rd

Projected w/ Other Developments
PM Peak Hour

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	650	61	9	481	7	36	0	6	4	0	21
Future Vol, veh/h	35	650	61	9	481	7	36	0	6	4	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	235	-	175	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	707	66	10	523	8	39	0	7	4	0	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	531	0	0	773	0	0	1342	1334	707	1367	1396	527
Stage 1	-	-	-	-	-	-	783	783	-	547	547	-
Stage 2	-	-	-	-	-	-	559	551	-	820	849	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1036	-	-	842	-	-	129	154	435	124	141	551
Stage 1	-	-	-	-	-	-	387	404	-	521	517	-
Stage 2	-	-	-	-	-	-	513	515	-	369	377	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1036	-	-	842	-	-	119	146	435	118	134	551
Mov Cap-2 Maneuver	-	-	-	-	-	-	119	146	-	118	134	-
Stage 1	-	-	-	-	-	-	373	389	-	502	511	-
Stage 2	-	-	-	-	-	-	486	509	-	350	363	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.2	45.6	16.3
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	133	1036	-	-	842	-	-	347
HCM Lane V/C Ratio	0.343	0.037	-	-	0.012	-	-	0.078
HCM Control Delay (s)	45.6	8.6	-	-	9.3	-	-	16.3
HCM Lane LOS	E	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0	-	-	0.3

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Synchro 11 Report

HCM 6th TWSC
20: Burkhalter Rd & Driveway 2

Projected w/ Other Developments
PM Peak Hour

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	651	492	30	17	5
Future Vol, veh/h	9	651	492	30	17	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	175	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	708	535	33	18	5
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	568	0	-	0	1263	535
Stage 1	-	-	-	-	535	-
Stage 2	-	-	-	-	728	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1004	-	-	-	187	545
Stage 1	-	-	-	-	587	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1004	-	-	-	184	545
Mov Cap-2 Maneuver	-	-	-	-	184	-
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	478	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.1	0		23.6		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1004	-	-	-	217	
HCM Lane V/C Ratio	0.01	-	-	-	0.11	
HCM Control Delay (s)	8.6	0	-	-	23.6	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.4	

HCM 6th TWSC
40: Herman Rushing Rd & Driveway 4

Projected w/ Other Developments
PM Peak Hour

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	↕
Traffic Vol, veh/h	17	0	0	0	0	47	0	48	0	67	76	23
Future Vol, veh/h	17	0	0	0	0	47	0	48	0	67	76	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	0	0	0	0	51	0	52	0	73	83	25
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	307	281	83	294	306	52	108	0	0	52	0	0
Stage 1	229	229	-	52	52	-	-	-	-	-	-	-
Stage 2	78	52	-	242	254	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	645	627	976	658	608	1016	1483	-	-	1554	-	-
Stage 1	774	715	-	961	852	-	-	-	-	-	-	-
Stage 2	931	852	-	762	697	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	591	598	976	634	579	1016	1483	-	-	1554	-	-
Mov Cap-2 Maneuver	591	598	-	634	579	-	-	-	-	-	-	-
Stage 1	774	681	-	961	852	-	-	-	-	-	-	-
Stage 2	884	852	-	726	664	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.3		8.7		0		3					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1483	-	-	591	1016	1554	-	-				
HCM Lane V/C Ratio	-	-	-	0.031	0.05	0.047	-	-				
HCM Control Delay (s)	0	-	-	11.3	8.7	7.4	-	-				
HCM Lane LOS	A	-	-	B	A	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0.1	-	-				

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Synchro 11 Report

HCM 6th TWSC
50: Burkhalter Rd & Driveway 5

Projected w/ Other Developments
PM Peak Hour

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	32	419	400	5	3	22
Future Vol, veh/h	32	419	400	5	3	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	455	435	5	3	24

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	440	0	0 963 438
Stage 1	-	-	- 438 -
Stage 2	-	-	- 525 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1120	-	- 284 619
Stage 1	-	-	- 651 -
Stage 2	-	-	- 593 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1120	-	- 275 619
Mov Cap-2 Maneuver	-	-	- 275 -
Stage 1	-	-	- 631 -
Stage 2	-	-	- 593 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	12
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1120	-	-	-	538
HCM Lane V/C Ratio	0.031	-	-	-	0.051
HCM Control Delay (s)	8.3	-	-	-	12
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	414	399	19	14	6
Future Vol, veh/h	8	414	399	19	14	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	200	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	450	434	21	15	7
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	455	0	-	0	902	434
Stage 1	-	-	-	-	434	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1106	-	-	-	308	622
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	630	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1106	-	-	-	305	622
Mov Cap-2 Maneuver	-	-	-	-	305	-
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	630	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		15.6		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1106	-	-	-	360	
HCM Lane V/C Ratio	0.008	-	-	-	0.06	
HCM Control Delay (s)	8.3	0	-	-	15.6	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Appendix H:

Capacity Analysis Reports

SR 67 & Burkhalter Road/Harville Road Mitigations

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 1
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	160	154	371	195	166	114	705	106	100	811	51
Future Volume (veh/h)	64	160	154	371	195	166	114	705	106	100	811	51
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1826	1870	1885	1811	1870	1870	1826	1796	1856	1841	1796
Adj Flow Rate, veh/h	107	186	214	431	257	255	146	775	145	145	932	59
Peak Hour Factor	0.60	0.86	0.72	0.86	0.76	0.65	0.78	0.91	0.73	0.69	0.87	0.87
Percent Heavy Veh, %	2	5	2	1	6	2	2	5	7	3	4	7
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	226	163	188	419	287	285	179	810	152	188	928	59
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.21	0.21	0.19	0.34	0.34	0.06	0.28	0.28	0.06	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	28.6	0.0	126.3	76.4	0.0	44.4	50.8	62.1	62.2	44.0	74.5	73.9
Ln Grp LOS	C	A	F	F	A	D	D	E	E	D	F	F
Approach Vol, veh/h	507			943			1066			1136		
Approach Delay, s/veh	105.7			59.0			60.6			70.3		
Approach LOS	F			E			E			E		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0				
Phs Duration (G+Y+Rc), s	11.0	31.0	23.0	25.0	11.0	31.0	11.0	37.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green (Gmax), s	5.0	25.0	17.0	19.0	5.0	25.0	5.0	31.0				
Max Allow Headway (MAH), s	3.7	4.9	3.8	5.1	3.7	5.0	3.7	5.3				
Max Q Clear (g_c+I1), s	7.0	27.0	19.0	21.0	7.0	25.5	6.2	28.3				
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9				
Prob of Phs Call (p_c)	0.97	1.00	1.00	1.00	0.97	1.00	0.93	1.00				
Prob of Max Out (p_x)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Left-Turn Movement Data												
Assigned Mvmt	1	3	5	7								
Mvmt Sat Flow, veh/h	1781	1795	1767	1781								
Through Movement Data												
Assigned Mvmt	2	4	6	8								
Mvmt Sat Flow, veh/h	3340	774	2917	834								
Right-Turn Movement Data												
Assigned Mvmt	12	14	16	18								
Mvmt Sat Flow, veh/h	211	891	546	828								
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				
Lane Assignment	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)								

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 1
AM Peak Hour

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	146	0	431	0	145	0	107	0
Grp Sat Flow (s), veh/h/ln	1781	0	1795	0	1767	0	1781	0
Q Serve Time (g_s), s	5.0	0.0	17.0	0.0	5.0	0.0	4.2	0.0
Cycle Q Clear Time (g_c), s	5.0	0.0	17.0	0.0	5.0	0.0	4.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	568	0	993	0	603	0	888	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	25.0	0.0	21.0	0.0	25.0	0.0	19.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	1.5	0.0	4.7	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	1.5	0.0	2.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	179	0	419	0	188	0	226	0
V/C Ratio (X)	0.82	0.00	1.03	0.00	0.77	0.00	0.47	0.00
Avail Cap (c_a), veh/h	179	0	419	0	188	0	226	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	26.4	0.0	25.0	0.0	26.3	0.0	27.0	0.0
Incr Delay (d2), s/veh	24.5	0.0	51.4	0.0	17.6	0.0	1.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	50.8	0.0	76.4	0.0	44.0	0.0	28.6	0.0
1st-Term Q (Q1), veh/ln	2.1	0.0	6.8	0.0	2.1	0.0	1.7	0.0
2nd-Term Q (Q2), veh/ln	1.2	0.0	6.0	0.0	0.9	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	3.3	0.0	12.7	0.0	3.0	0.0	1.8	0.0
%ile Storage Ratio (RQ%)	1.12	0.00	2.01	0.00	1.02	0.00	0.36	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	488	0	0	0	461	0	0
Grp Sat Flow (s), veh/h/ln	0	1749	0	0	0	1735	0	0
Q Serve Time (g_s), s	0.0	25.0	0.0	0.0	0.0	23.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	25.0	0.0	0.0	0.0	23.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	486	0	0	0	482	0	0
V/C Ratio (X)	0.00	1.00	0.00	0.00	0.00	0.96	0.00	0.00
Avail Cap (c_a), veh/h	0	486	0	0	0	482	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	32.5	0.0	0.0	0.0	32.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	42.0	0.0	0.0	0.0	30.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	74.5	0.0	0.0	0.0	62.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	9.7	0.0	0.0	0.0	9.1	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	5.7	0.0	0.0	0.0	4.0	0.0	0.0

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 1
AM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	15.4	0.0	0.0	0.0	13.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.99	0.00	0.00	0.00	0.81	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R		T+R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	503	0	400	0	459	0	512
Grp Sat Flow (s), veh/h/ln	0	1803	0	1666	0	1728	0	1662
Q Serve Time (g_s), s	0.0	25.0	0.0	19.0	0.0	23.5	0.0	26.3
Cycle Q Clear Time (g_c), s	0.0	25.0	0.0	19.0	0.0	23.5	0.0	26.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.12	0.00	0.54	0.00	0.32	0.00	0.50
Lane Grp Cap (c), veh/h	0	501	0	352	0	480	0	572
V/C Ratio (X)	0.00	1.00	0.00	1.14	0.00	0.96	0.00	0.89
Avail Cap (c_a), veh/h	0	501	0	352	0	480	0	572
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.5	0.0	35.5	0.0	32.0	0.0	27.9
Incr Delay (d2), s/veh	0.0	41.4	0.0	90.8	0.0	30.3	0.0	16.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	73.9	0.0	126.3	0.0	62.2	0.0	44.4
1st-Term Q (Q1), veh/ln	0.0	10.0	0.0	7.2	0.0	9.1	0.0	9.8
2nd-Term Q (Q2), veh/ln	0.0	5.8	0.0	8.9	0.0	4.0	0.0	2.6
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	15.8	0.0	16.1	0.0	13.1	0.0	12.4
%ile Storage Ratio (RQ%)	0.00	1.01	0.00	1.20	0.00	0.81	0.00	0.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.6	0.0	12.1	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	69.5
HCM 6th LOS	E

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 1
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	238	111	310	206	99	219	834	482	165	948	118
Future Volume (veh/h)	70	238	111	310	206	99	219	834	482	165	948	118
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1885	1885	1885	1856	1900	1885	1885	1900	1856	1870	1885
Adj Flow Rate, veh/h	74	264	152	365	275	130	235	959	502	214	1042	146
Peak Hour Factor	0.95	0.90	0.73	0.85	0.75	0.76	0.93	0.87	0.96	0.77	0.91	0.81
Percent Heavy Veh, %	0	1	1	1	3	0	1	1	0	3	2	1
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	198	202	116	305	314	149	253	917	469	160	1127	158
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.18	0.18	0.13	0.26	0.26	0.09	0.40	0.40	0.05	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	33.4	0.0	199.9	145.1	0.0	52.1	61.9	74.3	84.9	215.4	49.9	50.2
Ln Grp LOS	C	A	F	F	A	D	E	F	F	F	D	D
Approach Vol, veh/h	490			770			1696			1402		
Approach Delay, s/veh	174.7			96.2			77.1			75.3		
Approach LOS	F			F			E			E		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0				
Phs Duration (G+Y+Rc), s	15.0	42.0	19.0	24.0	11.0	46.0	10.6	32.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green (Gmax), s	9.0	36.0	13.0	18.0	5.0	40.0	5.0	26.0				
Max Allow Headway (MAH), s	3.7	4.9	3.8	5.0	3.7	5.0	3.7	5.2				
Max Q Clear (g_c+I1), s	10.3	34.0	15.0	20.0	7.0	42.0	5.3	24.1				
Green Ext Time (g_e), s	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.5				
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.87	1.00			
Prob of Max Out (p_x)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Left-Turn Movement Data												
Assigned Mvmt	1	3	5	7								
Mvmt Sat Flow, veh/h	1795	1795	1767	1810								
Through Movement Data												
Assigned Mvmt	2	4	6	8								
Mvmt Sat Flow, veh/h	3130	1123	2292	1191								
Right-Turn Movement Data												
Assigned Mvmt	12	14	16	18								
Mvmt Sat Flow, veh/h	438	646	1173	563								
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				
Lane Assignment	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)								

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 1
PM Peak Hour

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	235	0	365	0	214	0	74	0
Grp Sat Flow (s), veh/h/ln	1795	0	1795	0	1767	0	1810	0
Q Serve Time (g_s), s	8.3	0.0	13.0	0.0	5.0	0.0	3.3	0.0
Cycle Q Clear Time (g_c), s	8.3	0.0	13.0	0.0	5.0	0.0	3.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	475	0	978	0	360	0	996	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	36.0	0.0	20.0	0.0	36.0	0.0	18.0	0.0
Perm LT Serve Time (g_u), s	4.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0
Perm LT Q Serve Time (g_ps), s	4.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	253	0	305	0	160	0	198	0
V/C Ratio (X)	0.93	0.00	1.20	0.00	1.33	0.00	0.37	0.00
Avail Cap (c_a), veh/h	253	0	305	0	160	0	205	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	23.7	0.0	29.7	0.0	28.8	0.0	32.2	0.0
Incr Delay (d2), s/veh	38.2	0.0	115.3	0.0	186.6	0.0	1.2	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	61.9	0.0	145.1	0.0	215.4	0.0	33.4	0.0
1st-Term Q (Q1), veh/ln	3.2	0.0	5.7	0.0	2.2	0.0	1.4	0.0
2nd-Term Q (Q2), veh/ln	2.7	0.0	9.8	0.0	8.3	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	5.8	0.0	15.5	0.0	10.6	0.0	1.4	0.0
%ile Storage Ratio (RQ%)	1.96	0.00	2.44	0.00	3.61	0.00	0.29	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	14.9	0.0	13.4	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	591	0	0	0	745	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1791	0	0
Q Serve Time (g_s), s	0.0	31.9	0.0	0.0	0.0	40.0	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	31.9	0.0	0.0	0.0	40.0	0.0	0.0
Lane Grp Cap (c), veh/h	0	640	0	0	0	716	0	0
V/C Ratio (X)	0.00	0.92	0.00	0.00	0.00	1.04	0.00	0.00
Avail Cap (c_a), veh/h	0	640	0	0	0	716	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	30.7	0.0	0.0	0.0	30.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	19.2	0.0	0.0	0.0	44.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	49.9	0.0	0.0	0.0	74.3	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	12.6	0.0	0.0	0.0	15.6	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	3.4	0.0	0.0	0.0	8.8	0.0	0.0

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 1
PM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	16.0	0.0	0.0	0.0	24.5	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	1.01	0.00	0.00	0.00	1.46	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R		T+R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	597	0	416	0	716	0	405
Grp Sat Flow (s), veh/h/ln	0	1792	0	1769	0	1674	0	1754
Q Serve Time (g_s), s	0.0	32.0	0.0	18.0	0.0	40.0	0.0	22.1
Cycle Q Clear Time (g_c), s	0.0	32.0	0.0	18.0	0.0	40.0	0.0	22.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.24	0.00	0.37	0.00	0.70	0.00	0.32
Lane Grp Cap (c), veh/h	0	645	0	318	0	670	0	463
V/C Ratio (X)	0.00	0.93	0.00	1.31	0.00	1.07	0.00	0.88
Avail Cap (c_a), veh/h	0	645	0	318	0	670	0	463
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	30.7	0.0	41.0	0.0	30.0	0.0	35.2
Incr Delay (d2), s/veh	0.0	19.4	0.0	158.9	0.0	54.9	0.0	16.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	50.2	0.0	199.9	0.0	84.9	0.0	52.1
1st-Term Q (Q1), veh/ln	0.0	12.7	0.0	7.5	0.0	14.6	0.0	9.1
2nd-Term Q (Q2), veh/ln	0.0	3.5	0.0	14.1	0.0	10.2	0.0	2.2
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	16.2	0.0	21.5	0.0	24.8	0.0	11.3
%ile Storage Ratio (RQ%)	0.00	1.02	0.00	1.56	0.00	1.49	0.00	0.08
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	24.4	0.0	11.7	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	90.9
HCM 6th LOS	F

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 2

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	160	154	371	195	166	114	705	106	100	811	51
Future Volume (veh/h)	64	160	154	371	195	166	114	705	106	100	811	51
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1826	1870	1885	1811	1870	1870	1826	1796	1856	1841	1796
Adj Flow Rate, veh/h	107	186	214	431	257	255	146	775	145	145	932	59
Peak Hour Factor	0.60	0.86	0.72	0.86	0.76	0.65	0.78	0.91	0.73	0.69	0.87	0.87
Percent Heavy Veh, %	2	5	2	1	6	2	2	5	7	3	4	7
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	381	163	188	419	609	533	179	810	152	188	928	59
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.21	0.21	0.19	0.34	0.34	0.06	0.28	0.28	0.06	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	25.6	0.0	126.3	76.4	23.6	24.3	50.8	62.1	62.2	44.0	74.5	73.9
Ln Grp LOS	C	A	F	F	C	C	D	E	E	D	F	F
Approach Vol, veh/h	507			943			1066			1136		
Approach Delay, s/veh	105.0			47.9			60.6			70.3		
Approach LOS	F			D			E			E		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	3.0				
Phs Duration (G+Y+Rc), s	11.0	31.0	23.0	25.0	11.0	31.0	11.7	36.3				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green (Gmax), s	5.0	25.0	17.0	19.0	5.0	25.0	6.0	30.0				
Max Allow Headway (MAH), s	3.7	4.9	3.8	5.1	3.7	5.0	3.7	4.6				
Max Q Clear (g_c+I1), s	7.0	27.0	19.0	21.0	7.0	25.5	6.2	13.5				
Green Ext Time (g_e), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1				
Prob of Phs Call (p_c)	0.97	1.00	1.00	1.00	0.97	1.00	0.93	1.00				
Prob of Max Out (p_x)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.02			
Left-Turn Movement Data												
Assigned Mvmt	1	3	5	7								
Mvmt Sat Flow, veh/h	1781	1795	1767	1781								
Through Movement Data												
Assigned Mvmt	2	4	6	8								
Mvmt Sat Flow, veh/h	3340	774	2917	1811								
Right-Turn Movement Data												
Assigned Mvmt	12	14	16	18								
Mvmt Sat Flow, veh/h	211	891	546	1585								
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				
Lane Assignment	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)								

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 2
AM Peak Hour

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	146	0	431	0	145	0	107	0
Grp Sat Flow (s), veh/h/ln	1781	0	1795	0	1767	0	1781	0
Q Serve Time (g_s), s	5.0	0.0	17.0	0.0	5.0	0.0	4.2	0.0
Cycle Q Clear Time (g_c), s	5.0	0.0	17.0	0.0	5.0	0.0	4.2	0.0
Perm LT Sat Flow (s_l), veh/h/ln	568	0	993	0	603	0	888	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	25.0	0.0	21.0	0.0	25.0	0.0	19.0	0.0
Perm LT Serve Time (g_u), s	0.0	0.0	0.0	0.0	1.5	0.0	19.0	0.0
Perm LT Q Serve Time (g_ps), s	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	179	0	419	0	188	0	381	0
V/C Ratio (X)	0.82	0.00	1.03	0.00	0.77	0.00	0.28	0.00
Avail Cap (c_a), veh/h	179	0	419	0	188	0	386	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	26.4	0.0	25.0	0.0	26.3	0.0	25.2	0.0
Incr Delay (d2), s/veh	24.5	0.0	51.4	0.0	17.6	0.0	0.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	50.8	0.0	76.4	0.0	44.0	0.0	25.6	0.0
1st-Term Q (Q1), veh/ln	2.1	0.0	6.8	0.0	2.1	0.0	1.7	0.0
2nd-Term Q (Q2), veh/ln	1.2	0.0	6.0	0.0	0.9	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	3.3	0.0	12.7	0.0	3.0	0.0	1.7	0.0
%ile Storage Ratio (RQ%)	1.12	0.00	2.01	0.00	1.02	0.00	0.34	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T		T	
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	488	0	0	0	461	0	257
Grp Sat Flow (s), veh/h/ln	0	1749	0	0	0	1735	0	1811
Q Serve Time (g_s), s	0.0	25.0	0.0	0.0	0.0	23.5	0.0	9.9
Cycle Q Clear Time (g_c), s	0.0	25.0	0.0	0.0	0.0	23.5	0.0	9.9
Lane Grp Cap (c), veh/h	0	486	0	0	0	482	0	609
V/C Ratio (X)	0.00	1.00	0.00	0.00	0.00	0.96	0.00	0.42
Avail Cap (c_a), veh/h	0	486	0	0	0	482	0	609
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.5	0.0	0.0	0.0	32.0	0.0	23.1
Incr Delay (d2), s/veh	0.0	42.0	0.0	0.0	0.0	30.1	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	74.5	0.0	0.0	0.0	62.1	0.0	23.6
1st-Term Q (Q1), veh/ln	0.0	9.7	0.0	0.0	0.0	9.1	0.0	4.0
2nd-Term Q (Q2), veh/ln	0.0	5.7	0.0	0.0	0.0	4.0	0.0	0.1

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 2
AM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	15.4	0.0	0.0	0.0	13.1	0.0	4.1
%ile Storage Ratio (RQ%)	0.00	1.02	0.00	0.00	0.00	0.81	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	503	0	400	0	459	0	255
Grp Sat Flow (s), veh/h/ln	0	1803	0	1666	0	1728	0	1585
Q Serve Time (g_s), s	0.0	25.0	0.0	19.0	0.0	23.5	0.0	11.5
Cycle Q Clear Time (g_c), s	0.0	25.0	0.0	19.0	0.0	23.5	0.0	11.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.12	0.00	0.54	0.00	0.32	0.00	1.00
Lane Grp Cap (c), veh/h	0	501	0	352	0	480	0	533
V/C Ratio (X)	0.00	1.00	0.00	1.14	0.00	0.96	0.00	0.48
Avail Cap (c_a), veh/h	0	501	0	352	0	480	0	533
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	32.5	0.0	35.5	0.0	32.0	0.0	23.6
Incr Delay (d2), s/veh	0.0	41.4	0.0	90.8	0.0	30.3	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	73.9	0.0	126.3	0.0	62.2	0.0	24.3
1st-Term Q (Q1), veh/ln	0.0	10.0	0.0	7.2	0.0	9.1	0.0	4.1
2nd-Term Q (Q2), veh/ln	0.0	5.8	0.0	8.9	0.0	4.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	15.8	0.0	16.1	0.0	13.1	0.0	4.2
%ile Storage Ratio (RQ%)	0.00	1.04	0.00	1.20	0.00	0.81	0.00	1.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.6	0.0	12.1	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	66.5
HCM 6th LOS	E

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 2
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	238	111	310	206	99	219	834	482	165	948	118
Future Volume (veh/h)	70	238	111	310	206	99	219	834	482	165	948	118
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1885	1885	1885	1856	1900	1885	1885	1900	1856	1870	1885
Adj Flow Rate, veh/h	74	264	152	365	275	130	235	959	502	214	1042	146
Peak Hour Factor	0.95	0.90	0.73	0.85	0.75	0.76	0.93	0.87	0.96	0.77	0.91	0.81
Percent Heavy Veh, %	0	1	1	1	3	0	1	1	0	3	2	1
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	291	202	116	305	489	425	253	917	469	160	1127	158
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.18	0.18	0.13	0.26	0.26	0.09	0.40	0.40	0.05	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	31.8	0.0	199.9	145.1	33.3	29.9	61.9	74.3	84.9	215.4	49.9	50.2
Ln Grp LOS	C	A	F	F	C	C	E	F	F	F	D	D
Approach Vol, veh/h	490			770			1696			1402		
Approach Delay, s/veh	174.5			85.7			77.1			75.3		
Approach LOS	F			F			E			E		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	3.0				
Phs Duration (G+Y+Rc), s	15.0	42.0	19.0	24.0	11.0	46.0	10.6	32.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green (Gmax), s	9.0	36.0	13.0	18.0	5.0	40.0	5.0	26.0				
Max Allow Headway (MAH), s	3.7	4.9	3.8	5.0	3.7	5.0	3.7	4.8				
Max Q Clear (g_c+I1), s	10.3	34.0	15.0	20.0	7.0	42.0	5.3	14.8				
Green Ext Time (g_e), s	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.5				
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.87	1.00			
Prob of Max Out (p_x)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.10			
Left-Turn Movement Data												
Assigned Mvmt	1	3	5	7								
Mvmt Sat Flow, veh/h	1795	1795	1767	1810								
Through Movement Data												
Assigned Mvmt	2	4	6	8								
Mvmt Sat Flow, veh/h	3130	1123	2292	1856								
Right-Turn Movement Data												
Assigned Mvmt	12	14	16	18								
Mvmt Sat Flow, veh/h	438	646	1173	1610								
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				
Lane Assignment	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)								

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 2
PM Peak Hour

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	235	0	365	0	214	0	74	0
Grp Sat Flow (s), veh/h/ln	1795	0	1795	0	1767	0	1810	0
Q Serve Time (g_s), s	8.3	0.0	13.0	0.0	5.0	0.0	3.3	0.0
Cycle Q Clear Time (g_c), s	8.3	0.0	13.0	0.0	5.0	0.0	3.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	475	0	978	0	360	0	996	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	36.0	0.0	20.0	0.0	36.0	0.0	18.0	0.0
Perm LT Serve Time (g_u), s	4.0	0.0	0.0	0.0	0.0	0.0	13.6	0.0
Perm LT Q Serve Time (g_ps), s	4.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	253	0	305	0	160	0	291	0
V/C Ratio (X)	0.93	0.00	1.20	0.00	1.33	0.00	0.25	0.00
Avail Cap (c_a), veh/h	253	0	305	0	160	0	298	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	23.7	0.0	29.7	0.0	28.8	0.0	31.3	0.0
Incr Delay (d2), s/veh	38.2	0.0	115.3	0.0	186.6	0.0	0.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	61.9	0.0	145.1	0.0	215.4	0.0	31.8	0.0
1st-Term Q (Q1), veh/ln	3.2	0.0	5.7	0.0	2.2	0.0	1.4	0.0
2nd-Term Q (Q2), veh/ln	2.7	0.0	9.8	0.0	8.3	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	5.8	0.0	15.5	0.0	10.6	0.0	1.4	0.0
%ile Storage Ratio (RQ%)	1.96	0.00	2.44	0.00	3.61	0.00	0.28	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	14.9	0.0	13.4	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.3	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T		T	
Lanes in Grp	0	1	0	0	0	1	0	1
Grp Vol (v), veh/h	0	591	0	0	0	745	0	275
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1791	0	1856
Q Serve Time (g_s), s	0.0	31.9	0.0	0.0	0.0	40.0	0.0	12.8
Cycle Q Clear Time (g_c), s	0.0	31.9	0.0	0.0	0.0	40.0	0.0	12.8
Lane Grp Cap (c), veh/h	0	640	0	0	0	716	0	489
V/C Ratio (X)	0.00	0.92	0.00	0.00	0.00	1.04	0.00	0.56
Avail Cap (c_a), veh/h	0	640	0	0	0	716	0	489
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	30.7	0.0	0.0	0.0	30.0	0.0	31.8
Incr Delay (d2), s/veh	0.0	19.2	0.0	0.0	0.0	44.3	0.0	1.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	49.9	0.0	0.0	0.0	74.3	0.0	33.3
1st-Term Q (Q1), veh/ln	0.0	12.6	0.0	0.0	0.0	15.6	0.0	5.6
2nd-Term Q (Q2), veh/ln	0.0	3.4	0.0	0.0	0.0	8.8	0.0	0.2

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 2
PM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	16.0	0.0	0.0	0.0	24.5	0.0	5.8
%ile Storage Ratio (RQ%)	0.00	1.04	0.00	0.00	0.00	1.46	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	597	0	416	0	716	0	130
Grp Sat Flow (s), veh/h/ln	0	1792	0	1769	0	1674	0	1610
Q Serve Time (g_s), s	0.0	32.0	0.0	18.0	0.0	40.0	0.0	6.5
Cycle Q Clear Time (g_c), s	0.0	32.0	0.0	18.0	0.0	40.0	0.0	6.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.24	0.00	0.37	0.00	0.70	0.00	1.00
Lane Grp Cap (c), veh/h	0	645	0	318	0	670	0	425
V/C Ratio (X)	0.00	0.93	0.00	1.31	0.00	1.07	0.00	0.31
Avail Cap (c_a), veh/h	0	645	0	318	0	670	0	425
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	30.7	0.0	41.0	0.0	30.0	0.0	29.5
Incr Delay (d2), s/veh	0.0	19.4	0.0	158.9	0.0	54.9	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	50.2	0.0	199.9	0.0	84.9	0.0	29.9
1st-Term Q (Q1), veh/ln	0.0	12.7	0.0	7.5	0.0	14.6	0.0	2.4
2nd-Term Q (Q2), veh/ln	0.0	3.5	0.0	14.1	0.0	10.2	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	16.2	0.0	21.5	0.0	24.8	0.0	2.5
%ile Storage Ratio (RQ%)	0.00	1.05	0.00	1.56	0.00	1.49	0.00	0.62
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	24.4	0.0	11.7	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.3	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	89.0
HCM 6th LOS	F

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 3

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	160	154	371	195	166	114	705	106	100	811	51
Future Volume (veh/h)	64	160	154	371	195	166	114	705	106	100	811	51
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1826	1870	1885	1811	1870	1870	1826	1796	1856	1841	1796
Adj Flow Rate, veh/h	107	186	214	431	257	255	146	775	145	145	932	59
Peak Hour Factor	0.60	0.86	0.72	0.86	0.76	0.65	0.78	0.91	0.73	0.69	0.87	0.87
Percent Heavy Veh, %	2	5	2	1	6	2	2	5	7	3	4	7
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	320	234	203	489	487	426	223	946	177	235	1084	69
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.07	0.13	0.13	0.21	0.27	0.27	0.06	0.32	0.32	0.06	0.32	0.32
Unsig. Movement Delay												
Ln Grp Delay, s/veh	30.1	53.4	115.5	40.8	27.8	29.6	28.3	34.0	34.0	26.0	37.3	37.1
Ln Grp LOS	C	D	F	D	C	C	C	C	C	C	D	D
Approach Vol, veh/h	507			943			1066			1136		
Approach Delay, s/veh	74.7			34.2			33.2			35.8		
Approach LOS	E			C			C			D		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	4.0	1.1	3.0	1.1	4.0	1.1	3.0				
Phs Duration (G+Y+Rc), s	11.0	33.9	24.0	17.0	11.0	33.9	11.9	29.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green (Gmax), s	5.0	32.0	18.0	11.0	5.0	32.0	6.0	23.0				
Max Allow Headway (MAH), s	3.7	4.9	3.8	4.4	3.7	5.0	3.7	4.6				
Max Q Clear (g_c+I1), s	6.7	24.4	19.3	13.0	6.7	23.0	6.4	14.0				
Green Ext Time (g_e), s	0.0	3.4	0.0	0.0	0.0	3.6	0.0	1.6				
Prob of Phs Call (p_c)	0.97	1.00	1.00	1.00	0.97	1.00	0.92	1.00				
Prob of Max Out (p_x)	1.00	0.72	1.00	1.00	1.00	1.00	0.57	1.00	0.25			
Left-Turn Movement Data												
Assigned Mvmt	1	3	5	7								
Mvmt Sat Flow, veh/h	1781	1795	1767	1781								
Through Movement Data												
Assigned Mvmt	2	4	6	8								
Mvmt Sat Flow, veh/h	3340	1826	2917	1811								
Right-Turn Movement Data												
Assigned Mvmt	12	14	16	18								
Mvmt Sat Flow, veh/h	211	1585	546	1585								
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				
Lane Assignment	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)								

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis
1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 3
AM Peak Hour

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	146	0	431	0	145	0	107	0
Grp Sat Flow (s), veh/h/ln	1781	0	1795	0	1767	0	1781	0
Q Serve Time (g_s), s	4.7	0.0	17.3	0.0	4.7	0.0	4.4	0.0
Cycle Q Clear Time (g_c), s	4.7	0.0	17.3	0.0	4.7	0.0	4.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	568	0	993	0	603	0	888	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	27.9	0.0	13.0	0.0	27.9	0.0	11.0	0.0
Perm LT Serve Time (g_u), s	5.4	0.0	2.5	0.0	6.9	0.0	11.0	0.0
Perm LT Q Serve Time (g_ps), s	5.4	0.0	2.5	0.0	6.7	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	223	0	489	0	235	0	320	0
V/C Ratio (X)	0.65	0.00	0.88	0.00	0.62	0.00	0.33	0.00
Avail Cap (c_a), veh/h	223	0	489	0	235	0	322	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	21.7	0.0	24.0	0.0	21.2	0.0	29.5	0.0
Incr Delay (d2), s/veh	6.7	0.0	16.8	0.0	4.8	0.0	0.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	28.3	0.0	40.8	0.0	26.0	0.0	30.1	0.0
1st-Term Q (Q1), veh/ln	1.8	0.0	6.9	0.0	1.8	0.0	1.8	0.0
2nd-Term Q (Q2), veh/ln	0.4	0.0	2.3	0.0	0.3	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	2.2	0.0	9.1	0.0	2.1	0.0	1.8	0.0
%ile Storage Ratio (RQ%)	0.74	0.00	1.44	0.00	0.71	0.00	0.37	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T		T		T		T	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	488	0	186	0	461	0	257
Grp Sat Flow (s), veh/h/ln	0	1749	0	1826	0	1735	0	1811
Q Serve Time (g_s), s	0.0	22.4	0.0	8.5	0.0	21.0	0.0	10.4
Cycle Q Clear Time (g_c), s	0.0	22.4	0.0	8.5	0.0	21.0	0.0	10.4
Lane Grp Cap (c), veh/h	0	567	0	234	0	563	0	487
V/C Ratio (X)	0.00	0.86	0.00	0.80	0.00	0.82	0.00	0.53
Avail Cap (c_a), veh/h	0	652	0	234	0	646	0	487
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.2	0.0	36.3	0.0	26.7	0.0	26.7
Incr Delay (d2), s/veh	0.0	10.2	0.0	17.1	0.0	7.3	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	37.3	0.0	53.4	0.0	34.0	0.0	27.8
1st-Term Q (Q1), veh/ln	0.0	8.5	0.0	3.6	0.0	7.9	0.0	4.3
2nd-Term Q (Q2), veh/ln	0.0	1.6	0.0	1.1	0.0	1.1	0.0	0.1

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 3
AM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	10.1	0.0	4.7	0.0	9.0	0.0	4.4
%ile Storage Ratio (RQ%)	0.00	0.67	0.00	0.35	0.00	0.57	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	503	0	214	0	459	0	255
Grp Sat Flow (s), veh/h/ln	0	1803	0	1585	0	1728	0	1585
Q Serve Time (g_s), s	0.0	22.4	0.0	11.0	0.0	21.0	0.0	12.0
Cycle Q Clear Time (g_c), s	0.0	22.4	0.0	11.0	0.0	21.0	0.0	12.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.12	0.00	1.00	0.00	0.32	0.00	1.00
Lane Grp Cap (c), veh/h	0	585	0	203	0	561	0	426
V/C Ratio (X)	0.00	0.86	0.00	1.05	0.00	0.82	0.00	0.60
Avail Cap (c_a), veh/h	0	672	0	203	0	644	0	426
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.2	0.0	37.4	0.0	26.7	0.0	27.3
Incr Delay (d2), s/veh	0.0	9.9	0.0	78.1	0.0	7.3	0.0	2.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	37.1	0.0	115.5	0.0	34.0	0.0	29.6
1st-Term Q (Q1), veh/ln	0.0	8.7	0.0	4.1	0.0	7.8	0.0	4.3
2nd-Term Q (Q2), veh/ln	0.0	1.6	0.0	4.4	0.0	1.1	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	10.3	0.0	8.5	0.0	9.0	0.0	4.6
%ile Storage Ratio (RQ%)	0.00	0.68	0.00	1.24	0.00	0.57	0.00	1.17
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	40.0
HCM 6th LOS	D

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 3
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	238	111	310	206	99	219	834	482	165	948	118
Future Volume (veh/h)	70	238	111	310	206	99	219	834	482	165	948	118
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No				No				No	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1885	1885	1885	1856	1900	1885	1885	1900	1856	1870	1885
Adj Flow Rate, veh/h	74	264	152	365	275	130	235	959	502	214	1042	146
Peak Hour Factor	0.95	0.90	0.73	0.85	0.75	0.76	0.93	0.87	0.96	0.77	0.91	0.81
Percent Heavy Veh, %	0	1	1	1	3	0	1	1	0	3	2	1
Opposing Right Turn Influence	Yes	Yes			Yes			Yes				
Cap, veh/h	248	261	221	332	471	409	288	987	505	220	1357	190
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.04	0.14	0.14	0.15	0.25	0.25	0.09	0.43	0.43	0.09	0.43	0.43
Unsig. Movement Delay												
Ln Grp Delay, s/veh	46.6	114.6	61.9	119.3	44.3	39.8	38.3	60.2	68.6	92.9	35.9	36.0
Ln Grp LOS	D	F	E	F	D	D	D	E	E	F	D	D
Approach Vol, veh/h	490		770				1696				1402	
Approach Delay, s/veh	88.0		79.1				60.7				44.7	
Approach LOS	F		E				E				D	
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	4.0	1.1	3.0	1.1	4.0	1.1	3.0				
Phs Duration (G+Y+Rc), s	17.7	62.3	26.0	24.0	18.0	62.0	11.0	39.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green (Gmax), s	16.0	52.0	20.0	18.0	12.0	56.0	5.0	33.0				
Max Allow Headway (MAH), s	3.7	4.9	3.8	4.6	3.7	5.0	3.7	4.8				
Max Q Clear (g_c+I1), s	11.4	38.8	22.0	20.0	13.5	57.3	6.6	18.9				
Green Ext Time (g_e), s	0.3	6.0	0.0	0.0	0.0	0.0	0.0	1.7				
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	1.00			
Prob of Max Out (p_x)	0.51	0.46	1.00	1.00	1.00	1.00	1.00	1.00	0.03			
Left-Turn Movement Data												
Assigned Mvmt	1	3	5	7								
Mvmt Sat Flow, veh/h	1795	1795	1767	1810								
Through Movement Data												
Assigned Mvmt	2	4	6	8								
Mvmt Sat Flow, veh/h	3130	1885	2292	1856								
Right-Turn Movement Data												
Assigned Mvmt	12	14	16	18								
Mvmt Sat Flow, veh/h	438	1598	1173	1610								
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				
Lane Assignment	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)								

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 3
PM Peak Hour

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	235	0	365	0	214	0	74	0
Grp Sat Flow (s), veh/h/ln	1795	0	1795	0	1767	0	1810	0
Q Serve Time (g_s), s	9.4	0.0	20.0	0.0	11.5	0.0	4.6	0.0
Cycle Q Clear Time (g_c), s	9.4	0.0	20.0	0.0	11.5	0.0	4.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	475	0	978	0	360	0	996	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	56.0	0.0	20.0	0.0	56.0	0.0	18.0	0.0
Perm LT Serve Time (g_u), s	19.5	0.0	0.0	0.0	0.7	0.0	16.1	0.0
Perm LT Q Serve Time (g_ps), s	19.5	0.0	0.0	0.0	0.7	0.0	0.2	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	288	0	332	0	220	0	248	0
V/C Ratio (X)	0.82	0.00	1.10	0.00	0.97	0.00	0.30	0.00
Avail Cap (c_a), veh/h	348	0	332	0	220	0	248	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	26.3	0.0	40.0	0.0	40.7	0.0	45.9	0.0
Incr Delay (d2), s/veh	12.0	0.0	79.3	0.0	52.3	0.0	0.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	38.3	0.0	119.3	0.0	92.9	0.0	46.6	0.0
1st-Term Q (Q1), veh/ln	3.7	0.0	8.9	0.0	3.3	0.0	2.0	0.0
2nd-Term Q (Q2), veh/ln	1.0	0.0	7.3	0.0	3.2	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	4.7	0.0	16.2	0.0	6.5	0.0	2.1	0.0
%ile Storage Ratio (RQ%)	1.57	0.00	2.55	0.00	2.22	0.00	0.41	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	8.3	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T		T		T		T	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	591	0	264	0	745	0	275
Grp Sat Flow (s), veh/h/ln	0	1777	0	1885	0	1791	0	1856
Q Serve Time (g_s), s	0.0	36.7	0.0	18.0	0.0	52.7	0.0	16.9
Cycle Q Clear Time (g_c), s	0.0	36.7	0.0	18.0	0.0	52.7	0.0	16.9
Lane Grp Cap (c), veh/h	0	770	0	261	0	771	0	471
V/C Ratio (X)	0.00	0.77	0.00	1.01	0.00	0.97	0.00	0.58
Avail Cap (c_a), veh/h	0	770	0	261	0	771	0	471
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.3	0.0	56.0	0.0	36.1	0.0	42.5
Incr Delay (d2), s/veh	0.0	4.7	0.0	58.6	0.0	24.1	0.0	1.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	35.9	0.0	114.6	0.0	60.2	0.0	44.3
1st-Term Q (Q1), veh/ln	0.0	15.0	0.0	8.3	0.0	21.7	0.0	7.7
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	4.3	0.0	5.2	0.0	0.2

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 3
PM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	16.0	0.0	12.6	0.0	26.8	0.0	7.9
%ile Storage Ratio (RQ%)	0.00	1.04	0.00	0.91	0.00	1.65	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	597	0	152	0	716	0	130
Grp Sat Flow (s), veh/h/ln	0	1792	0	1598	0	1674	0	1610
Q Serve Time (g_s), s	0.0	36.8	0.0	11.8	0.0	55.3	0.0	8.5
Cycle Q Clear Time (g_c), s	0.0	36.8	0.0	11.8	0.0	55.3	0.0	8.5
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.24	0.00	1.00	0.00	0.70	0.00	1.00
Lane Grp Cap (c), veh/h	0	777	0	221	0	721	0	409
V/C Ratio (X)	0.00	0.77	0.00	0.69	0.00	0.99	0.00	0.32
Avail Cap (c_a), veh/h	0	777	0	221	0	721	0	409
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	31.3	0.0	53.3	0.0	36.8	0.0	39.4
Incr Delay (d2), s/veh	0.0	4.7	0.0	8.6	0.0	31.8	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	36.0	0.0	61.9	0.0	68.6	0.0	39.8
1st-Term Q (Q1), veh/ln	0.0	15.1	0.0	4.7	0.0	21.3	0.0	3.4
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	0.5	0.0	6.4	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	16.1	0.0	5.2	0.0	27.6	0.0	3.4
%ile Storage Ratio (RQ%)	0.00	1.05	0.00	0.75	0.00	1.70	0.00	0.85
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	61.9
HCM 6th LOS	E

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 4
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	160	154	371	195	166	114	705	106	100	811	51
Future Volume (veh/h)	64	160	154	371	195	166	114	705	106	100	811	51
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1826	1870	1885	1811	1870	1870	1826	1796	1856	1841	1796
Adj Flow Rate, veh/h	107	186	214	431	257	255	146	775	145	145	932	59
Peak Hour Factor	0.60	0.86	0.72	0.86	0.76	0.65	0.78	0.91	0.73	0.69	0.87	0.87
Percent Heavy Veh, %	2	5	2	1	6	2	2	5	7	3	4	7
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	309	211	183	476	465	407	238	1021	448	284	1075	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.06	0.12	0.12	0.21	0.26	0.26	0.06	0.29	0.29	0.08	0.31	0.31
Unsig. Movement Delay												
Ln Grp Delay, s/veh	28.6	66.3	154.0	43.5	26.5	28.7	25.0	27.8	21.9	20.4	32.2	19.6
Ln Grp LOS	C	E	F	D	C	C	C	C	C	C	C	B
Approach Vol, veh/h	507			943			1066			1136		
Approach Delay, s/veh	95.4			34.9			26.6			30.1		
Approach LOS	F			C			C			C		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0				
Phs Duration (G+Y+Rc), s	11.0	30.0	22.0	15.0	12.0	29.0	11.0	26.0				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green (Gmax), s	5.0	26.0	16.0	9.0	6.0	25.0	5.0	20.0				
Max Allow Headway (MAH), s	3.7	4.9	3.8	4.4	3.7	4.8	3.7	4.6				
Max Q Clear (g_c+I1), s	6.5	21.6	18.0	11.0	6.4	17.8	6.1	13.1				
Green Ext Time (g_e), s	0.0	2.3	0.0	0.0	0.0	3.1	0.0	1.4				
Prob of Phs Call (p_c)	0.96	1.00	1.00	1.00	0.96	1.00	0.90	1.00				
Prob of Max Out (p_x)	1.00	1.00	1.00	1.00	1.00	1.00	0.67	1.00	0.48			
Left-Turn Movement Data												
Assigned Mvmt	1	3	5	7								
Mvmt Sat Flow, veh/h	1781	1795	1767	1781								
Through Movement Data												
Assigned Mvmt	2	4	6	8								
Mvmt Sat Flow, veh/h	3497	1826	3469	1811								
Right-Turn Movement Data												
Assigned Mvmt	12	14	16	18								
Mvmt Sat Flow, veh/h	1522	1585	1522	1585								
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				
Lane Assignment	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)								

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 4
AM Peak Hour

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	146	0	431	0	145	0	107	0
Grp Sat Flow (s), veh/h/ln	1781	0	1795	0	1767	0	1781	0
Q Serve Time (g_s), s	4.5	0.0	16.0	0.0	4.4	0.0	4.1	0.0
Cycle Q Clear Time (g_c), s	4.5	0.0	16.0	0.0	4.4	0.0	4.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	568	0	993	0	603	0	888	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	23.0	0.0	11.0	0.0	23.0	0.0	9.0	0.0
Perm LT Serve Time (g_u), s	4.3	0.0	1.2	0.0	7.1	0.0	9.0	0.0
Perm LT Q Serve Time (g_ps), s	4.3	0.0	1.2	0.0	5.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	238	0	476	0	284	0	309	0
V/C Ratio (X)	0.61	0.00	0.91	0.00	0.51	0.00	0.35	0.00
Avail Cap (c_a), veh/h	238	0	476	0	284	0	309	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	20.4	0.0	22.7	0.0	18.9	0.0	27.9	0.0
Incr Delay (d2), s/veh	4.6	0.0	20.8	0.0	1.5	0.0	0.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	25.0	0.0	43.5	0.0	20.4	0.0	28.6	0.0
1st-Term Q (Q1), veh/ln	1.6	0.0	6.2	0.0	1.6	0.0	1.6	0.0
2nd-Term Q (Q2), veh/ln	0.3	0.0	2.7	0.0	0.1	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	1.9	0.0	9.0	0.0	1.7	0.0	1.7	0.0
%ile Storage Ratio (RQ%)	0.66	0.00	1.42	0.00	0.58	0.00	0.34	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T		T		T		T	
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	932	0	186	0	775	0	257
Grp Sat Flow (s), veh/h/ln	0	1749	0	1826	0	1735	0	1811
Q Serve Time (g_s), s	0.0	19.6	0.0	7.8	0.0	15.8	0.0	9.6
Cycle Q Clear Time (g_c), s	0.0	19.6	0.0	7.8	0.0	15.8	0.0	9.6
Lane Grp Cap (c), veh/h	0	1075	0	211	0	1021	0	465
V/C Ratio (X)	0.00	0.87	0.00	0.88	0.00	0.76	0.00	0.55
Avail Cap (c_a), veh/h	0	1167	0	211	0	1113	0	465
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	25.5	0.0	34.0	0.0	25.0	0.0	25.1
Incr Delay (d2), s/veh	0.0	6.7	0.0	32.4	0.0	2.8	0.0	1.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	32.2	0.0	66.3	0.0	27.8	0.0	26.5
1st-Term Q (Q1), veh/ln	0.0	7.3	0.0	3.2	0.0	5.8	0.0	3.9
2nd-Term Q (Q2), veh/ln	0.0	1.0	0.0	1.9	0.0	0.4	0.0	0.2

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 4
AM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	8.3	0.0	5.1	0.0	6.2	0.0	4.1
%ile Storage Ratio (RQ%)	0.00	0.55	0.00	0.40	0.00	0.40	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	R		R		R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	59	0	214	0	145	0	255
Grp Sat Flow (s), veh/h/ln	0	1522	0	1585	0	1522	0	1585
Q Serve Time (g_s), s	0.0	2.2	0.0	9.0	0.0	5.8	0.0	11.1
Cycle Q Clear Time (g_c), s	0.0	2.2	0.0	9.0	0.0	5.8	0.0	11.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	468	0	183	0	448	0	407
V/C Ratio (X)	0.00	0.13	0.00	1.17	0.00	0.32	0.00	0.63
Avail Cap (c_a), veh/h	0	508	0	183	0	488	0	407
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	19.5	0.0	34.5	0.0	21.4	0.0	25.7
Incr Delay (d2), s/veh	0.0	0.1	0.0	119.5	0.0	0.4	0.0	3.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.6	0.0	154.0	0.0	21.9	0.0	28.7
1st-Term Q (Q1), veh/ln	0.0	0.7	0.0	3.3	0.0	1.9	0.0	3.9
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	6.1	0.0	0.1	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	0.7	0.0	9.4	0.0	2.0	0.0	4.3
%ile Storage Ratio (RQ%)	0.00	0.11	0.00	1.36	0.00	0.30	0.00	1.09
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	39.4
HCM 6th LOS	D

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 4
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	238	111	310	206	99	219	834	482	165	948	118
Future Volume (veh/h)	70	238	111	310	206	99	219	834	482	165	948	118
Number	7	4	14	3	8	18	1	6	16	5	2	12
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1900	1885	1885	1885	1856	1900	1885	1885	1900	1856	1870	1885
Adj Flow Rate, veh/h	74	264	152	365	275	130	235	959	502	214	1042	146
Peak Hour Factor	0.95	0.90	0.73	0.85	0.75	0.76	0.93	0.87	0.96	0.77	0.91	0.81
Percent Heavy Veh, %	0	1	1	1	3	0	1	1	0	3	2	1
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	291	274	232	368	472	410	273	1216	547	274	1207	543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.05	0.15	0.15	0.16	0.25	0.25	0.09	0.34	0.34	0.09	0.34	0.34
Unsig. Movement Delay												
Ln Grp Delay, s/veh	30.8	81.9	42.5	72.2	31.0	27.5	45.0	30.0	48.4	34.5	34.0	21.7
Ln Grp LOS	C	F	D	E	C	C	D	C	D	C	C	C
Approach Vol, veh/h	490			770			1696			1402		
Approach Delay, s/veh	61.9			49.9			37.5			32.8		
Approach LOS	E			D			D			C		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0				
Phs Duration (G+Y+Rc), s	14.0	36.3	20.0	19.0	14.0	36.3	10.3	28.7				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green (Gmax), s	8.0	31.0	14.0	13.0	8.0	31.0	5.0	22.0				
Max Allow Headway (MAH), s	3.7	4.8	3.8	4.6	3.7	4.6	3.7	4.8				
Max Q Clear (g_c+I1), s	9.7	26.5	16.0	14.4	9.0	28.7	5.1	13.6				
Green Ext Time (g_e), s	0.0	2.7	0.0	0.0	0.0	1.6	0.0	1.3				
Prob of Phs Call (p_c)	1.00	1.00	1.00	1.00	1.00	1.00	0.84	1.00				
Prob of Max Out (p_x)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.27				
Left-Turn Movement Data												
Assigned Mvmt	1	3	5	7								
Mvmt Sat Flow, veh/h	1795	1795	1767	1810								
Through Movement Data												
Assigned Mvmt	2	4	6	8								
Mvmt Sat Flow, veh/h	3554	1885	3582	1856								
Right-Turn Movement Data												
Assigned Mvmt	12	14	16	18								
Mvmt Sat Flow, veh/h	1598	1598	1610	1610								
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				
Lane Assignment	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)	L (Pr/Pm)								

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Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 4
PM Peak Hour

Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	235	0	365	0	214	0	74	0
Grp Sat Flow (s), veh/h/ln	1795	0	1795	0	1767	0	1810	0
Q Serve Time (g_s), s	7.7	0.0	14.0	0.0	7.0	0.0	3.1	0.0
Cycle Q Clear Time (g_c), s	7.7	0.0	14.0	0.0	7.0	0.0	3.1	0.0
Perm LT Sat Flow (s_l), veh/h/ln	475	0	978	0	360	0	996	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	30.3	0.0	15.0	0.0	30.3	0.0	13.0	0.0
Perm LT Serve Time (g_u), s	5.9	0.0	0.6	0.0	8.8	0.0	11.1	0.0
Perm LT Q Serve Time (g_ps), s	5.9	0.0	0.6	0.0	8.8	0.0	0.1	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	273	0	368	0	274	0	291	0
V/C Ratio (X)	0.86	0.00	0.99	0.00	0.78	0.00	0.25	0.00
Avail Cap (c_a), veh/h	273	0	368	0	274	0	306	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	21.5	0.0	27.7	0.0	21.0	0.0	30.3	0.0
Incr Delay (d2), s/veh	23.5	0.0	44.5	0.0	13.5	0.0	0.5	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	45.0	0.0	72.2	0.0	34.5	0.0	30.8	0.0
1st-Term Q (Q1), veh/ln	2.9	0.0	6.2	0.0	2.6	0.0	1.3	0.0
2nd-Term Q (Q2), veh/ln	1.8	0.0	4.6	0.0	1.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
%ile Back of Q (50%), veh/ln	4.6	0.0	10.8	0.0	3.6	0.0	1.3	0.0
%ile Storage Ratio (RQ%)	1.56	0.00	1.70	0.00	1.23	0.00	0.26	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T		T		T		T	
Lanes in Grp	0	2	0	1	0	2	0	1
Grp Vol (v), veh/h	0	1042	0	264	0	959	0	275
Grp Sat Flow (s), veh/h/ln	0	1777	0	1885	0	1791	0	1856
Q Serve Time (g_s), s	0.0	24.5	0.0	12.4	0.0	21.6	0.0	11.6
Cycle Q Clear Time (g_c), s	0.0	24.5	0.0	12.4	0.0	21.6	0.0	11.6
Lane Grp Cap (c), veh/h	0	1207	0	274	0	1216	0	472
V/C Ratio (X)	0.00	0.86	0.00	0.96	0.00	0.79	0.00	0.58
Avail Cap (c_a), veh/h	0	1233	0	274	0	1243	0	472
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	27.6	0.0	37.9	0.0	26.6	0.0	29.1
Incr Delay (d2), s/veh	0.0	6.5	0.0	44.0	0.0	3.4	0.0	1.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	34.0	0.0	81.9	0.0	30.0	0.0	31.0
1st-Term Q (Q1), veh/ln	0.0	9.4	0.0	5.4	0.0	8.4	0.0	5.0
2nd-Term Q (Q2), veh/ln	0.0	1.1	0.0	3.3	0.0	0.6	0.0	0.2

M&W

Synchro 11 Report

HCM 6th Signalized Intersection Capacity Analysis

1: SR 67 & Harville Rd/Burkhalter Rd

SR 67 & Burkhalter, Option 4
PM Peak Hour

3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	10.5	0.0	8.8	0.0	9.0	0.0	5.2
%ile Storage Ratio (RQ%)	0.00	0.69	0.00	0.66	0.00	0.55	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	R		R		R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	146	0	152	0	502	0	130
Grp Sat Flow (s), veh/h/ln	0	1598	0	1598	0	1610	0	1610
Q Serve Time (g_s), s	0.0	5.9	0.0	8.0	0.0	26.7	0.0	5.9
Cycle Q Clear Time (g_c), s	0.0	5.9	0.0	8.0	0.0	26.7	0.0	5.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	543	0	232	0	547	0	410
V/C Ratio (X)	0.00	0.27	0.00	0.65	0.00	0.92	0.00	0.32
Avail Cap (c_a), veh/h	0	554	0	232	0	559	0	410
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	21.4	0.0	36.0	0.0	28.3	0.0	27.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	6.4	0.0	20.1	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	21.7	0.0	42.5	0.0	48.4	0.0	27.5
1st-Term Q (Q1), veh/ln	0.0	2.1	0.0	3.0	0.0	9.7	0.0	2.2
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.4	0.0	3.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.2	0.0	3.5	0.0	12.7	0.0	2.2
%ile Storage Ratio (RQ%)	0.00	0.31	0.00	0.50	0.00	1.82	0.00	0.56
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	40.9
HCM 6th LOS	D

Appendix I:

Capacity Analysis Reports

Burkhalter Road & Cawana Road/Driveway 3 Mitigations

HCM 6th TWSC
2: Driveway 3/Cawana Rd & Burkhalter Rd

Turn Lanes at Cawana/Driveway 3
AM Peak Hour

Intersection												
Int Delay, s/veh	8.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	189	242	12	14	396	67	34	9	45	21	4	100
Future Vol, veh/h	189	242	12	14	396	67	34	9	45	21	4	100
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	175	235	-	-	-	-	100	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	79	92	92	94	64	92	92	92	88	92	69
Heavy Vehicles, %	3	3	2	2	3	4	2	2	2	0	2	4
Mvmt Flow	242	306	13	15	421	105	37	10	49	24	4	145
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	526	0	0	319	0	0	1368	1346	306	1330	1307	474
Stage 1	-	-	-	-	-	-	790	790	-	504	504	-
Stage 2	-	-	-	-	-	-	578	556	-	826	803	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.52	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.52	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.336
Pot Cap-1 Maneuver	1036	-	-	1241	-	-	124	151	734	133	160	586
Stage 1	-	-	-	-	-	-	383	402	-	554	541	-
Stage 2	-	-	-	-	-	-	501	513	-	369	396	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1036	-	-	1241	-	-	74	114	734	95	121	586
Mov Cap-2 Maneuver	-	-	-	-	-	-	74	114	-	95	121	-
Stage 1	-	-	-	-	-	-	293	308	-	424	535	-
Stage 2	-	-	-	-	-	-	370	507	-	256	303	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.1			0.2			54.1			20.2		
HCM LOS							F			C		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	80	734	1036	-	-	1241	-	-	98	586		
HCM Lane V/C Ratio	0.584	0.067	0.234	-	-	0.012	-	-	0.288	0.247		
HCM Control Delay (s)	99.9	10.3	9.5	-	-	7.9	-	-	56	13.2		
HCM Lane LOS	F	B	A	-	-	A	-	-	F	B		
HCM 95th %tile Q(veh)	2.6	0.2	0.9	-	-	0	-	-	1.1	1		

HCM 6th TWSC
2: Driveway 3/Cawana Rd & Burkhalter Rd

Turn Lanes at Cawana/Driveway 3
PM Peak Hour

Intersection												
Int Delay, s/veh	12.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	160	476	32	48	362	44	22	5	28	46	9	138
Future Vol, veh/h	160	476	32	48	362	44	22	5	28	46	9	138
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	175	235	-	-	-	-	100	-	-	100
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	90	92	92	94	73	92	92	92	70	92	79
Heavy Vehicles, %	1	2	2	2	1	0	2	2	2	0	2	1
Mvmt Flow	188	529	35	52	385	60	24	5	30	66	10	175
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	445	0	0	564	0	0	1517	1454	529	1459	1459	415
Stage 1	-	-	-	-	-	-	905	905	-	519	519	-
Stage 2	-	-	-	-	-	-	612	549	-	940	940	-
Critical Hdwy	4.11	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.52	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.52	-
Follow-up Hdwy	2.209	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4.018	3.309
Pot Cap-1 Maneuver	1121	-	-	1008	-	-	98	130	550	108	129	640
Stage 1	-	-	-	-	-	-	331	355	-	544	533	-
Stage 2	-	-	-	-	-	-	480	516	-	319	342	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1121	-	-	1008	-	-	55	103	550	82	102	640
Mov Cap-2 Maneuver	-	-	-	-	-	-	55	103	-	82	102	-
Stage 1	-	-	-	-	-	-	275	295	-	453	505	-
Stage 2	-	-	-	-	-	-	325	489	-	246	285	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.2			0.9			61.3			56.8		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2		
Capacity (veh/h)	60	550	1121	-	-	1008	-	-	84	640		
HCM Lane V/C Ratio	0.489	0.055	0.168	-	-	0.052	-	-	0.899	0.273		
HCM Control Delay (s)	112.6	11.9	8.9	-	-	8.8	-	-	158.7	12.7		
HCM Lane LOS	F	B	A	-	-	A	-	-	F	B		
HCM 95th %tile Q(veh)	1.9	0.2	0.6	-	-	0.2	-	-	4.8	1.1		

MOVEMENT SUMMARY

 **Site: 2 [Burkhalter Rd & Cawana Rd/Driveway 3 - AM]**

Site Category: -
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Driveway 3												
3	L2	37	0.0	0.121	5.8	LOS A	0.5	12.5	0.56	0.50	0.56	33.8
8	T1	10	0.0	0.121	5.8	LOS A	0.5	12.5	0.56	0.50	0.56	33.7
18	R2	49	0.0	0.121	5.8	LOS A	0.5	12.5	0.56	0.50	0.56	32.8
Approach		96	0.0	0.121	5.8	LOS A	0.5	12.5	0.56	0.50	0.56	33.2
East: Burkhalter Rd												
1	L2	15	0.0	0.547	10.6	LOS B	4.5	114.7	0.65	0.61	0.78	32.4
6	T1	421	3.0	0.547	10.7	LOS B	4.5	114.7	0.65	0.61	0.78	32.3
16	R2	105	4.0	0.547	10.7	LOS B	4.5	114.7	0.65	0.61	0.78	31.4
Approach		541	3.1	0.547	10.7	LOS B	4.5	114.7	0.65	0.61	0.78	32.1
North: Cawana Rd												
7	L2	24	0.0	0.213	6.5	LOS A	0.9	23.5	0.56	0.51	0.56	34.0
4	T1	4	0.0	0.213	6.5	LOS A	0.9	23.5	0.56	0.51	0.56	33.9
14	R2	145	4.0	0.213	6.7	LOS A	0.9	23.5	0.56	0.51	0.56	32.8
Approach		173	3.3	0.213	6.7	LOS A	0.9	23.5	0.56	0.51	0.56	33.0
West: Burkhalter Rd												
5	L2	242	3.0	0.406	6.7	LOS A	2.6	67.6	0.22	0.09	0.22	33.1
2	T1	263	3.0	0.406	6.7	LOS A	2.6	67.6	0.22	0.09	0.22	33.0
12	R2	15	0.0	0.406	6.7	LOS A	2.6	67.6	0.22	0.09	0.22	32.2
Approach		521	2.9	0.406	6.7	LOS A	2.6	67.6	0.22	0.09	0.22	33.0
All Vehicles		1331	2.8	0.547	8.3	LOS A	4.5	114.7	0.46	0.38	0.52	32.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: 2 [Burkhalter Rd & Cawana Rd/Driveway 3 - PM]**

Site Category: -
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Driveway 3												
3	L2	24	3.0	0.100	7.2	LOS A	0.4	9.7	0.62	0.62	0.62	33.0
8	T1	5	3.0	0.100	7.2	LOS A	0.4	9.7	0.62	0.62	0.62	32.9
18	R2	30	3.0	0.100	7.2	LOS A	0.4	9.7	0.62	0.62	0.62	32.0
Approach		60	3.0	0.100	7.2	LOS A	0.4	9.7	0.62	0.62	0.62	32.4
East: Burkhalter Rd												
1	L2	52	0.0	0.455	8.3	LOS A	2.9	72.1	0.53	0.39	0.53	33.4
6	T1	385	1.0	0.455	8.3	LOS A	2.9	72.1	0.53	0.39	0.53	33.3
16	R2	60	0.0	0.455	8.3	LOS A	2.9	72.1	0.53	0.39	0.53	32.4
Approach		498	0.8	0.455	8.3	LOS A	2.9	72.1	0.53	0.39	0.53	33.2
North: Cawana Rd												
7	L2	66	0.0	0.294	7.4	LOS A	1.4	35.0	0.59	0.55	0.59	33.3
4	T1	10	0.0	0.294	7.4	LOS A	1.4	35.0	0.59	0.55	0.59	33.2
14	R2	175	1.0	0.294	7.5	LOS A	1.4	35.0	0.59	0.55	0.59	32.2
Approach		250	0.7	0.294	7.4	LOS A	1.4	35.0	0.59	0.55	0.59	32.5
West: Burkhalter Rd												
5	L2	188	1.0	0.631	11.2	LOS B	5.6	142.3	0.55	0.34	0.55	31.6
2	T1	529	2.0	0.631	11.2	LOS B	5.6	142.3	0.55	0.34	0.55	31.6
12	R2	35	0.0	0.631	11.1	LOS B	5.6	142.3	0.55	0.34	0.55	30.8
Approach		752	1.7	0.631	11.2	LOS B	5.6	142.3	0.55	0.34	0.55	31.5
All Vehicles		1559	1.3	0.631	9.5	LOS A	5.6	142.3	0.55	0.40	0.55	32.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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