



# Traffic Impact Study

South Windsor High School  
South Windsor, Connecticut

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Prepared for:

South Windsor Public Schools



Prepared by:

KWH Enterprise, LLC  
March 2024 Revised

**Traffic Impact Study  
South Windsor High School  
South Windsor, Connecticut**

This study examines the traffic impact of connecting two driveways on Ayers Road to the South Windsor High School in South Windsor, Connecticut. Levels of Service (LOS) for traffic flows under 2020 existing and 2025 no-build and build traffic conditions were analyzed to identify any deficiencies in the existing and future traffic operations at area intersections. For the purpose of this traffic study, 2025 was assumed to be the year during which the construction is completed.

**I. Summary**

- The two new high school driveways on Ayers Road will improve access to the school during the peak school hours.
- Delays and queuing will remain for the eastbound approach of Ayers Road at the Nevers Road intersection during the weekday morning and afternoon peak hours and for traffic exiting the existing high school driveway on Ayers Road during the weekday morning peak hour.

**II. Project Description**

The proposed improvements will include connecting two driveways on Ayers Road to the existing South Windsor High School to improve access and traffic circulation.

**III. Existing Traffic Conditions**

For the evaluation of the quality of traffic operation in the vicinity of the development, the following unsignalized intersections were analyzed for the study:

- Nevers Road and Collins Crossing;
- Nevers Road and Ayers Road;
- Nevers Road, the existing high school exit driveway, and the senior center driveway;
- The existing high school driveway and Ayers Road;
- New high school driveway (west), Sunset Terrace, and Ayers Road; and
- New high school driveway (east) and Ayers Road.

The 2020 traffic volumes used for the analyses (Figures 1 and 2 of the Appendices) were from a memorandum prepared by Milone & MacBroom (SLR Consulting) and dated March 10, 2020. All intersection approach volumes including those for the school driveways were increased by 0.6 percent per year, or 3.0 percent over five years, to generate the 2025 traffic volumes. The 0.6 percent annual traffic growth for South Windsor was recommended by CTDOT.

## Capacity Analysis

To assess the quality of traffic flow, intersection capacity analysis was conducted for the existing, future no-build, and future build traffic conditions. Capacity analysis provides an indication of how well roadway facilities serve the traffic demands placed upon them. Synchro 12, a software package that includes the evaluation criteria of the *Highway Capacity Manual, 7th Edition*, was used to analyze the intersections.

Level of service (LOS) is the term used to describe the different operating conditions that occur on a given roadway segment or intersection under various traffic conditions. It is a qualitative measure of the effects of a number of factors including roadway geometry, speed, travel delay, freedom to maneuver, and safety. Six levels of service can be defined for each type of facility. Each level of service (LOS) is given a letter designation from A to F, with LOS A representing the best operating conditions and LOS F representing the worst.

Table 1 that follows shows the capacity analysis and queue results for the analyzed intersections under the 2020 existing traffic conditions. The traffic approaches with delays and queuing issues during the two peak hours are as follows:

- Eastbound Ayers Road at the Nevers Road intersection;
- Eastbound right lane of the existing high school exit driveway on Nevers Road;
- Northbound lane of the existing high school driveway on Ayers Road; and
- Westbound Ayers Road left-turn movement into the existing high school driveway.

These are the traffic approaches with LOS E or F, moderate queues (95<sup>th</sup>-percentile queues of more than five and fewer than ten vehicles), or long queues (95<sup>th</sup>-percentile queues of ten vehicles or more). Please note that the traffic analyses are approximations of the traffic operation; the delays and queuing conditions may not exactly match the field conditions.

The delays and queuing under the existing conditions can be attributed to the limited number of driveways for the high school during the peak hours, an issue that this project attempts to address by adding two additional driveways to provide improved access to the school.

**Table 1 Capacity Analyses for Existing Conditions**

Intersection	2020 Existing Conditions	
	Weekday Morning Peak Hour of School	Weekday Afternoon Peak Hour of School
	LOS and Queue	LOS and Queue
Nevers Road and Collins Crossing		
NB Nevers Road Left Turn	A	A
NB Nevers Road Through	A	A
EB Collins Crossing	C	B
Nevers Road and Ayers Road		
NB Nevers Road Left Turn	B	A
WB Nevers Road Through	A	A
EB Ayers Road	F, Moderate Queues	E, Moderate Queues
Nevers Road, High School Exit Driveway, and Senior Center Driveway		
EB High School Exit Driveway Left Lane	D	C
EB High School Exit Driveway Right Lane	C, Moderate Queues	B
WB Senior Center Driveway	E	C
SB Nevers Road Left Turn	A	A
SB Nevers Road Through	A	A
High School Driveway and Ayers Road		
NB High School Driveway	A	F, Long Queues
WB Ayers Road Left Turn	F, Long Queues	A
WB Ayers Road Through	A	A
Sunset Terrace and Ayers Road		
EB Ayers Road Left Turn	A	A
EB Ayers Road Through	A	A
SB Sunset Terrace	B	B

EB      Eastbound  
 WB      Westbound  
 NB      Northbound  
 SB      Southbound  
 LOS     Level of Service

#### **IV. Future Traffic Conditions**

For the purpose of this traffic impact study, it was assumed that the construction will be completed in 2025.

As a comparison for demonstrating the traffic impact of the project, a 2025 no-build scenario is included in the study. Figures 3 and 4 of the Appendices show the 2025 no-build traffic volumes, which were generated by using an annual traffic growth rate of 0.6 percent between 2020 and 2025.

Table 2 details the capacity analysis results for the 2025 no-build traffic conditions. There will be some increases in average delays and queuing during the two peak hours. The only change in LOS is for the eastbound Ayers Road approach at the Nevers Road intersection, which will drop to a LOS F from the existing LOS E.

**Table 2 Capacity Analyses for No-Build Conditions**

Intersection	2025 No-Build Conditions	
	Weekday Morning Peak Hour of School	Weekday Afternoon Peak Hour of School
	LOS and Queue	LOS and Queue
Nevers Road and Collins Crossing		
NB Nevers Road Left Turn	A	A
NB Nevers Road Through	A	A
EB Collins Crossing	C	B
Nevers Road and Ayers Road		
NB Nevers Road Left Turn	B	A
WB Nevers Road Through	A	A
EB Ayers Road	F, Moderate Queues	F, Moderate Queues
Nevers Road, High School Exit Driveway, and Senior Center Driveway		
EB High School Exit Driveway Left Lane	E	C
EB High School Exit Driveway Right Lane	C, Moderate Queues	B
WB Senior Center Driveway	E	C
SB Nevers Road Left Turn	A	A
SB Nevers Road Through	A	A
High School Driveway and Ayers Road		
NB High School Driveway	A	F, Long Queues
WB Ayers Road Left Turn	F, Long Queues	A
WB Ayers Road Through	A	A
Sunset Terrace and Ayers Road		
EB Ayers Road Left Turn	A	A
EB Ayers Road Through	A	A
SB Sunset Terrace	B	B

EB      Eastbound  
 WB      Westbound  
 NB      Northbound  
 SB      Southbound  
 LOS     Level of Service

### Traffic Diversions

With the addition of the two new driveways on Ayers Road, existing peak-hour entry and exit traffic volumes were redistributed among the four driveways. The estimated traffic diversions are shown in Figure 5.

## Capacity Analysis

Table 3 shows the capacity analysis and queuing results for the 2025 build traffic conditions when the new high school driveways are in place. The project will result in the following changes when compared with the 2025 no-build conditions:

- The eastbound Ayers Road approach at the Nevers Road intersection will experience longer delays and queuing during both peak hours because of the increased high school traffic using Ayers Road;
- The queues for the school driveway on Nevers Road will become shorter. The left lane of the school driveway will drop to a LOS E from a LOS D, a result of increased southbound Nevers Road traffic north of the driveway intersection;
- The westbound queues on Ayers Road will become shorter as a result of the three driveways for the entry traffic on Ayers Road instead of the one driveway under the existing and no-build conditions;
- Traffic exiting the existing high school driveway on Ayers Road will continue to experience delays and queuing during the morning peak hour.

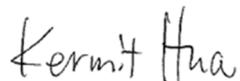
**Table 3 Capacity Analyses for Build Conditions**

Intersection	2025 Build Conditions	
	Weekday Morning Peak Hour of School	Weekday Afternoon Peak Hour of School
	LOS and Queue	LOS and Queue
Nevers Road and Collins Crossing		
NB Nevers Road Left Turn	A	A
NB Nevers Road Through	A	A
EB Collins Crossing	C	B
Nevers Road and Ayers Road		
NB Nevers Road Left Turn	B	A
WB Nevers Road Through	A	A
EB Ayers Road	F, Long Queues	F, Moderate Queues
Nevers Road, High School Exit Driveway, and Senior Center Driveway		
EB High School Exit Driveway Left Lane	E	C
EB High School Exit Driveway Right Lane	C	B
WB Senior Center Driveway	E	C
SB Nevers Road Left Turn	A	A
SB Nevers Road Through	A	A
High School Driveway and Ayers Road		
NB High School Driveway	F, Long Queues	C
WB Ayers Road Left Turn	B	A
WB Ayers Road Through	A	A
New High School Driveway (West), Sunset Terrace, and Ayers		
EB Ayers Road Left Turn	A	A
EB Ayers Road Through and Right Turn	A	A
WB Ayers Road Left Turn	C	A
WB Ayers Road Through and Right Turn	A	A
SB Sunset Terrace	F	C
New High School Driveway (East) and Ayers Road		
NB New High School Driveway (East)	D	B
WB Ayers Road Left Turn	A	A
WB Ayers Road Through	A	A

EB      Eastbound  
 WB      Westbound  
 NB      Northbound  
 SB      Southbound  
 LOS     Level of Service

## **V. Conclusions**

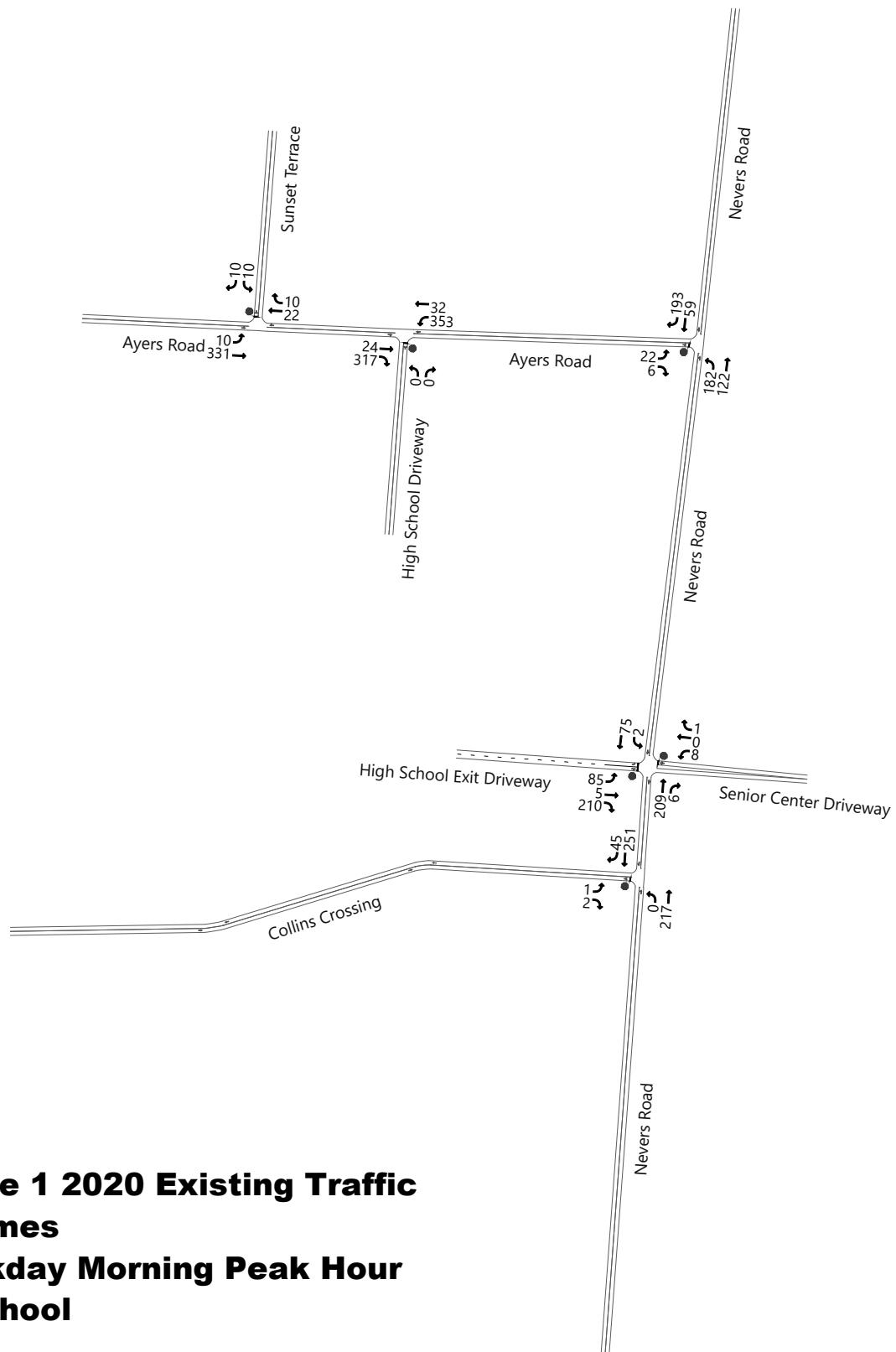
Area traffic operation was analyzed for the addition of two driveways on Ayers Road for the South Windsor High School. Overall, the project will improve access to the school during the peak hours. Delays and queuing will remain for the eastbound approach of Ayers Road at the Nevers Road intersection during both peak hours and for traffic exiting the existing high school driveway on Ayers Road during the weekday morning peak hour.



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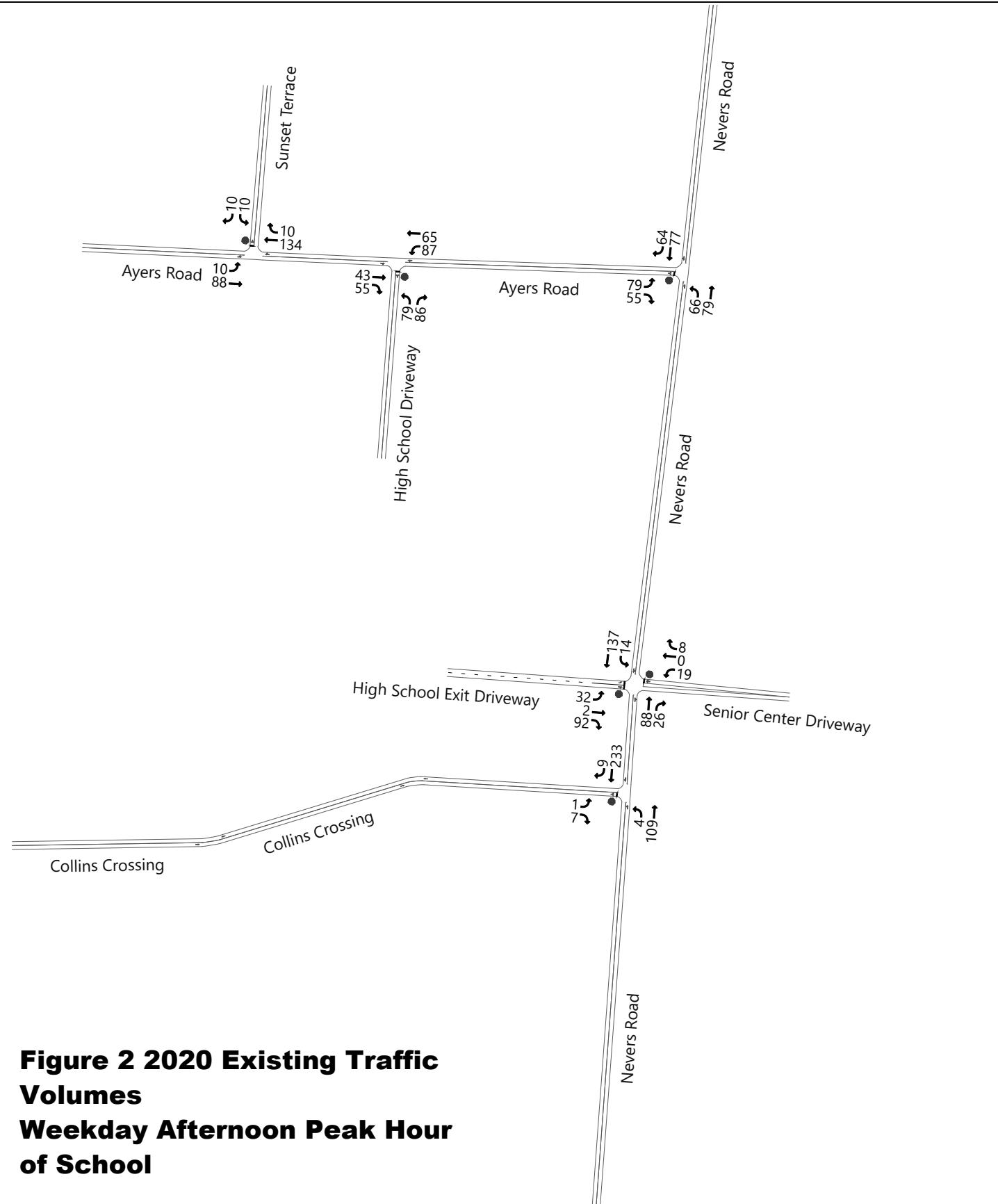
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## **Technical Appendices**



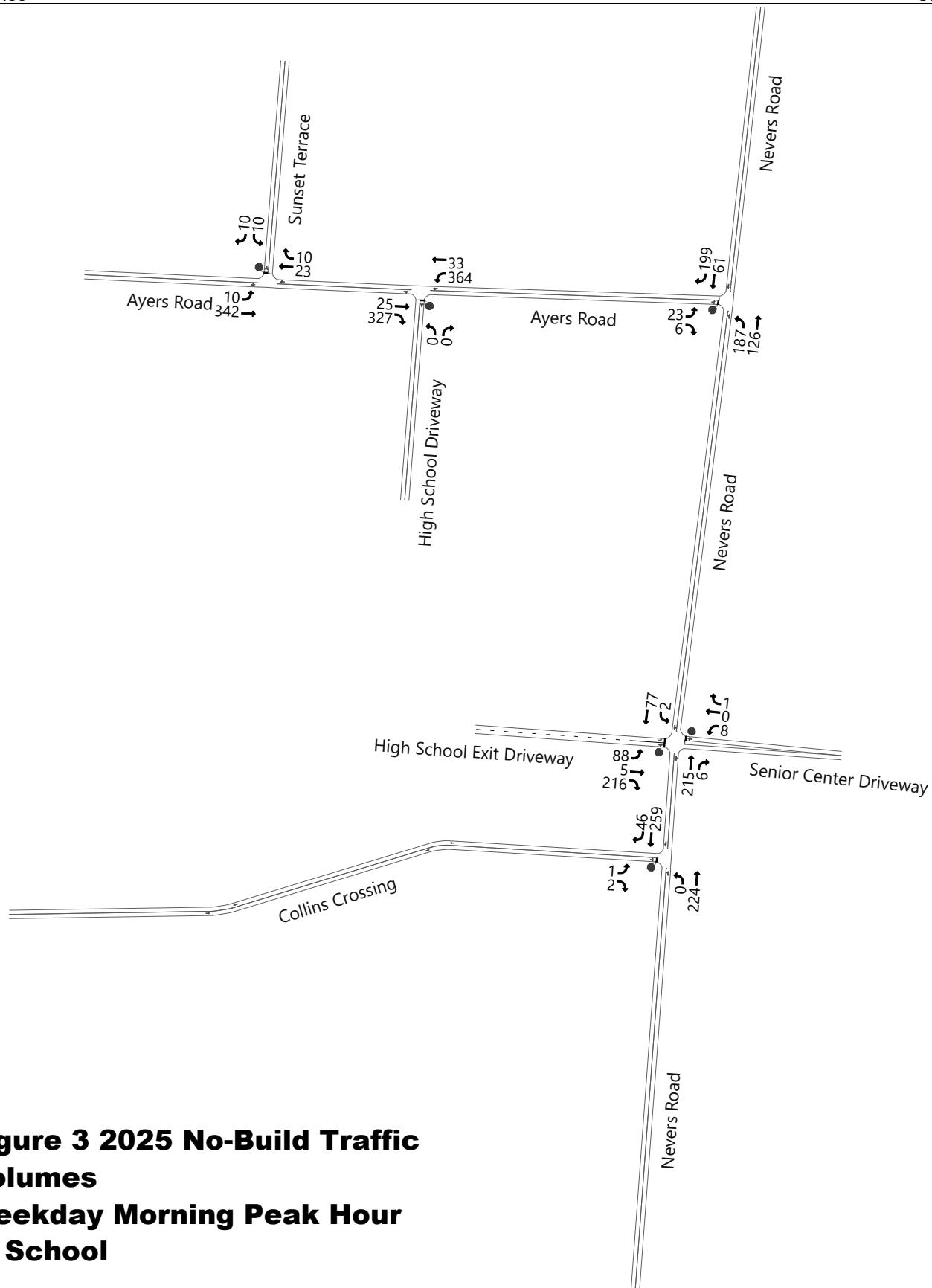
**Figure 1 2020 Existing Traffic  
Volumes  
Weekday Morning Peak Hour  
of School**

South Windsor High School, Weekday Morning Peak Hour of School, 2020 Existing Conditions  
KWH Enterprise, LLC



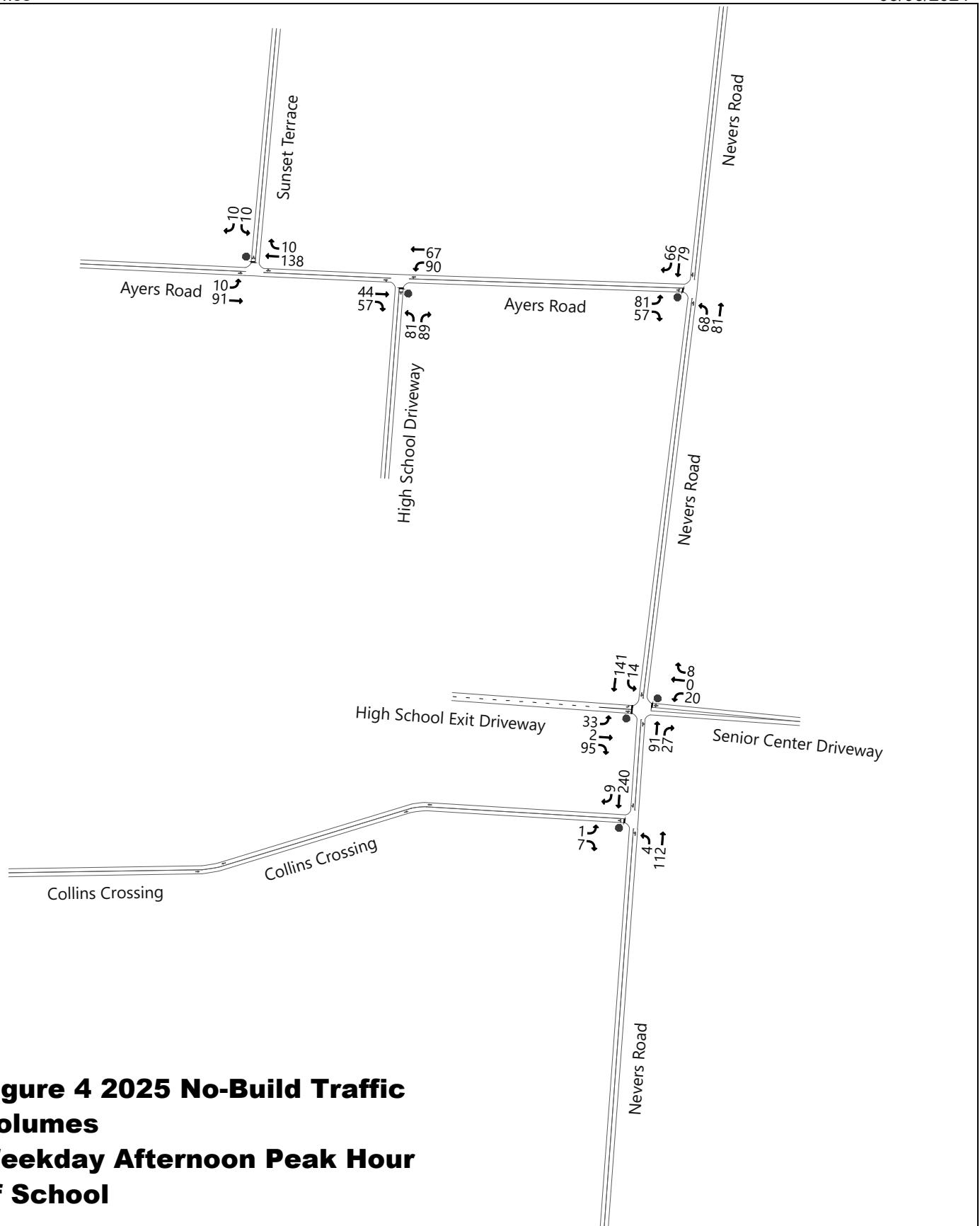
**Figure 2 2020 Existing Traffic  
Volumes  
Weekday Afternoon Peak Hour  
of School**

South Windsor High School, Weekday Afternoon Peak Hour of School, 2020 Existing Conditions  
KWH Enterprise, LLC



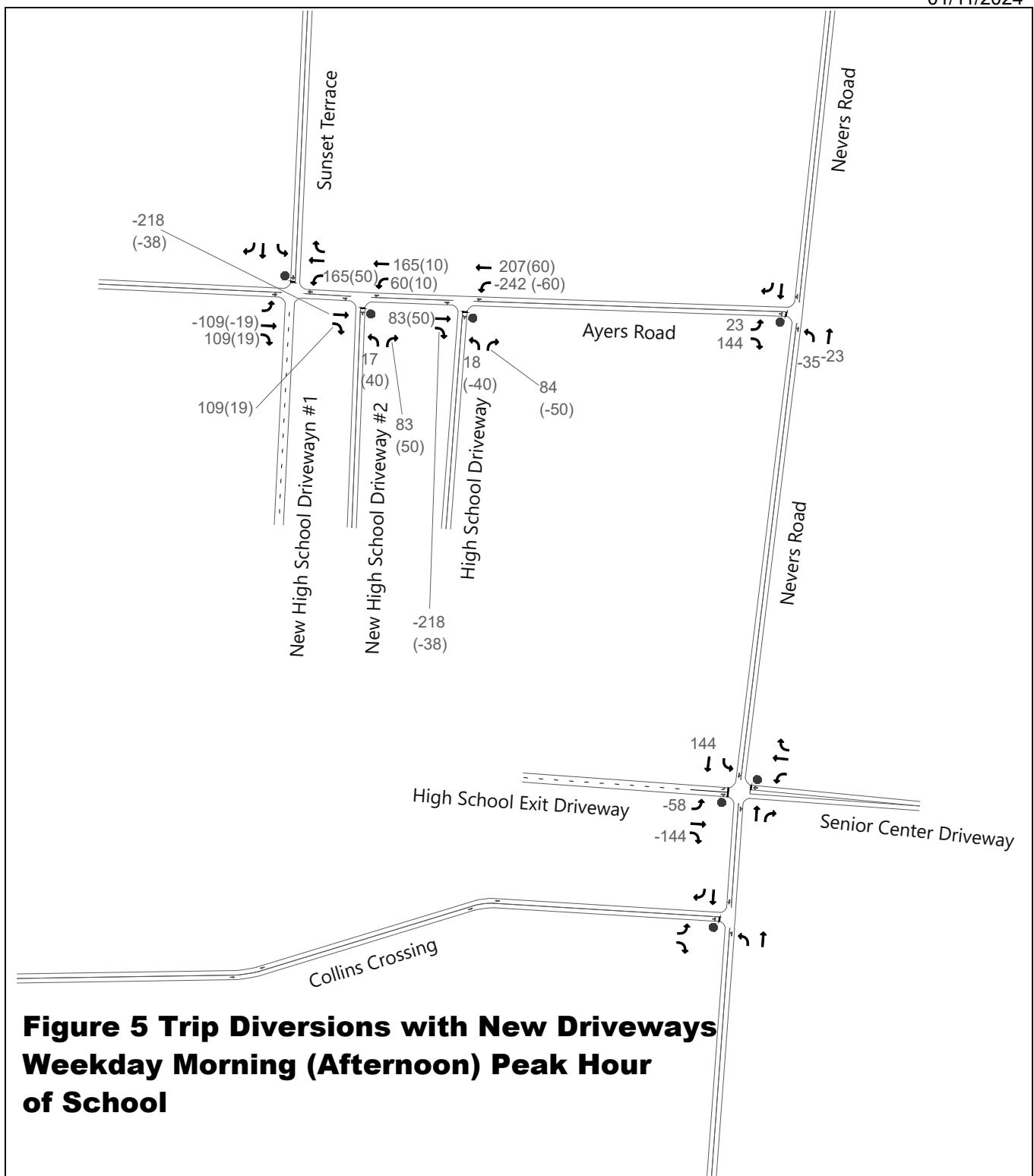
**Figure 3 2025 No-Build Traffic  
Volumes  
Weekday Morning Peak Hour  
of School**

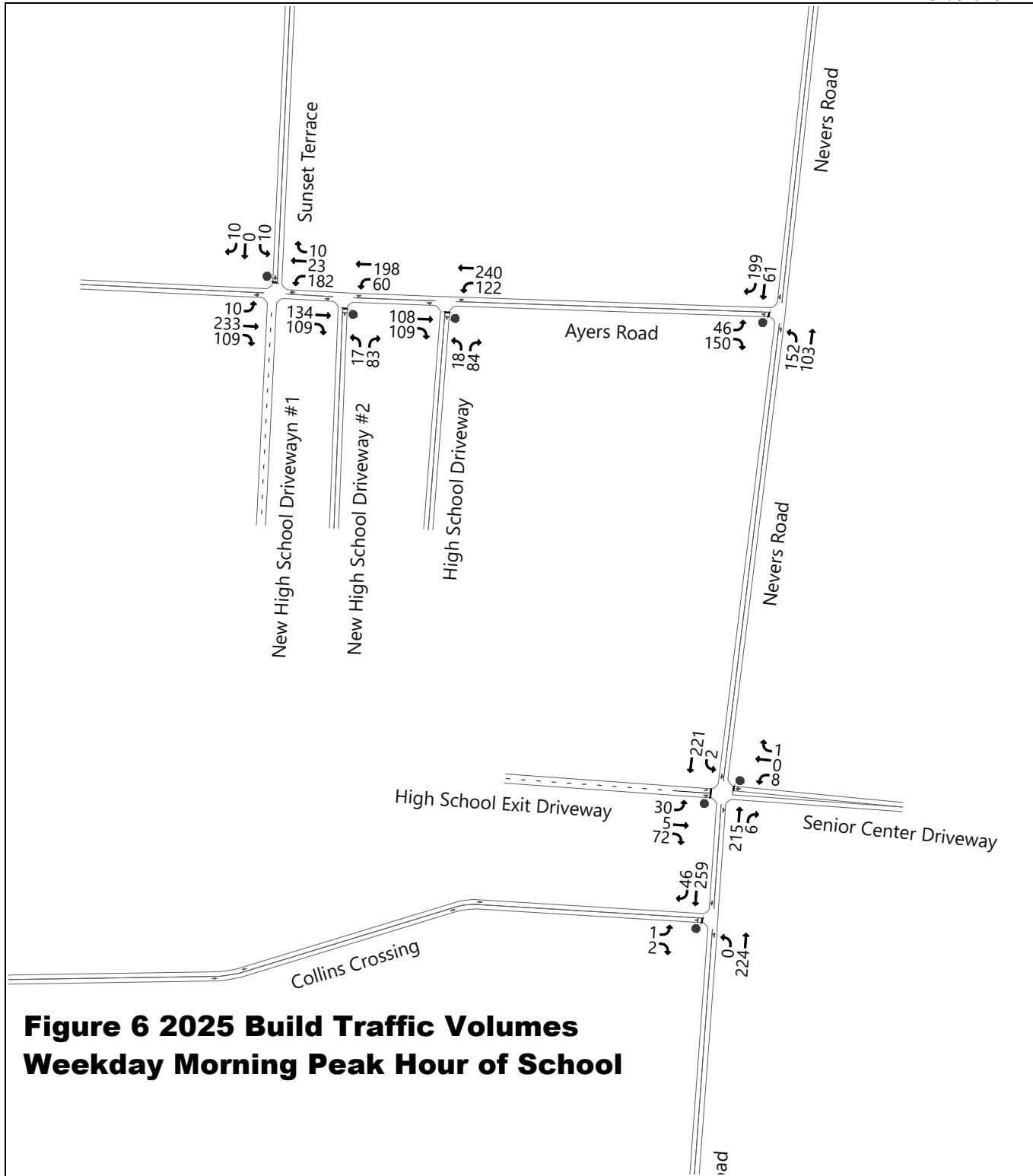
South Windsor High School, Weekday Morning Peak Hour of School, 2025 No-Build Conditions  
KWH Enterprise, LLC



**Figure 4 2025 No-Build Traffic Volumes  
Weekday Afternoon Peak Hour  
of School**

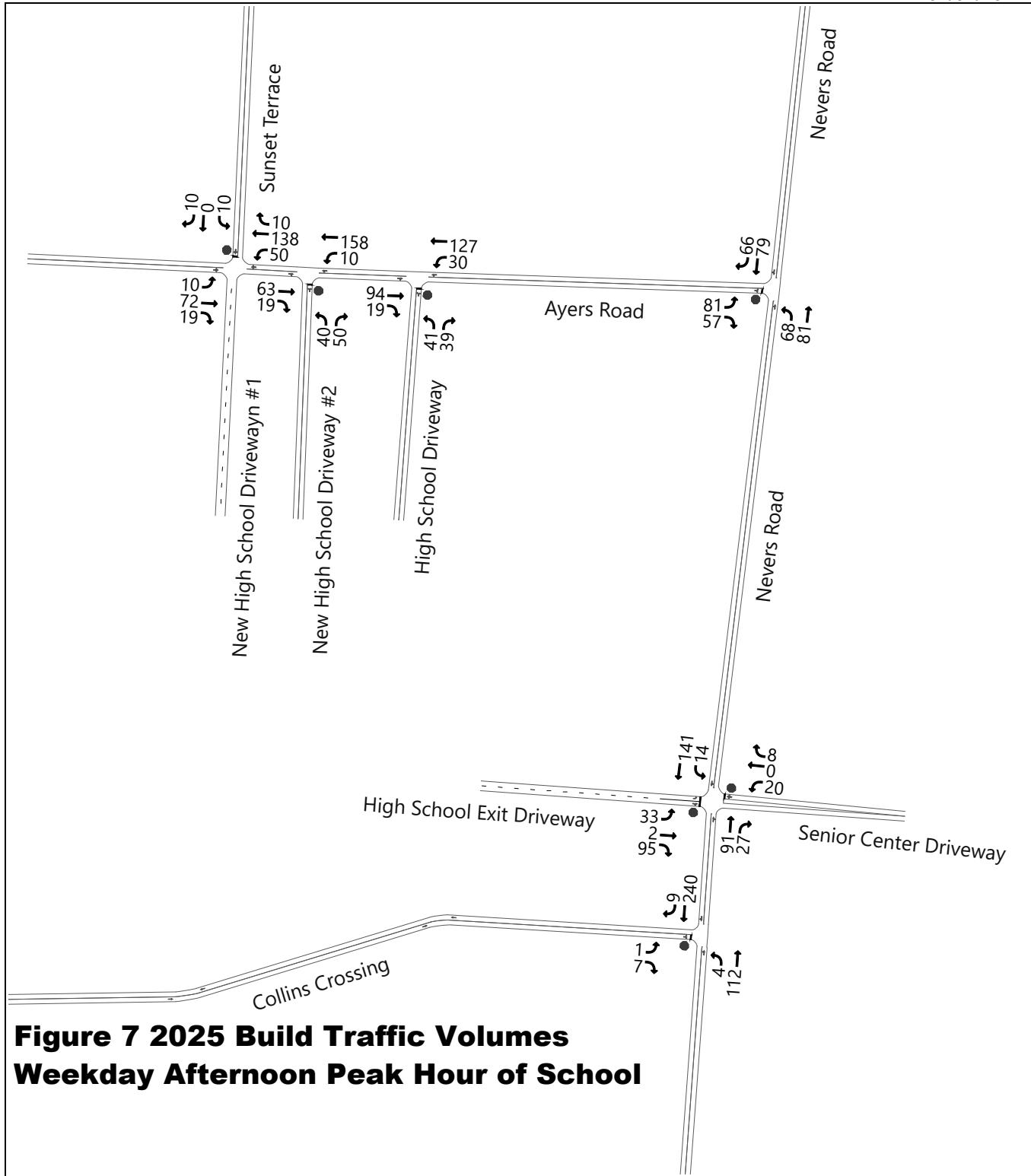
South Windsor High School, Weekday Afternoon Peak Hour of School, 2025 No-Build Conditions  
KWH Enterprise, LLC





**Figure 6 2025 Build Traffic Volumes  
Weekday Morning Peak Hour of School**

South Windsor High School, Weekday Morning Peak Hour of School, 2025 Build Conditions  
KWH Enterprise, LLC



**Figure 7 2025 Build Traffic Volumes  
Weekday Afternoon Peak Hour of School**

South Windsor High School, Weekday Afternoon Peak Hour of School, 2025 Build Conditions  
KWH Enterprise, LLC

**Intersection**

Int Delay, s/veh 0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	1	2	0	217	251	45
Future Vol, veh/h	1	2	0	217	251	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	0	0	0	4	2	0
Mvmt Flow	3	5	0	543	628	113

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	1226	684	740	0	-	0
Stage 1	684	-	-	-	-	-
Stage 2	543	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	199	452	876	-	-	-
Stage 1	505	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	199	452	876	-	-	-
Mov Cap-2 Maneuver	199	-	-	-	-	-
Stage 1	505	-	-	-	-	-
Stage 2	587	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s/v16.61 0 0

HCM LOS C

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	876	-	318	-	-
HCM Lane V/C Ratio	-	-	0.024	-	-
HCM Control Delay (s/veh)	0	-	16.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

**Intersection**

Int Delay, s/veh 18.6

Movement	EBL	EBC	NBL	NBT	SBT	SBR
<b>Lane Configurations</b>						
Traffic Vol, veh/h	22	6	182	122	59	193
Future Vol, veh/h	22	6	182	122	59	193
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	9	0	5	6	0	2
Mvmt Flow	55	15	455	305	148	483

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1605	390	631	0	-
Stage 1	390	-	-	-	-
Stage 2	1215	-	-	-	-
Critical Hdwy	6.49	6.2	4.15	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-
Follow-up Hdwy	3.581	3.3	2.245	-	-
Pot Cap-1 Maneuver	112	663	937	-	-
Stage 1	669	-	-	-	-
Stage 2	272	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	~ 46	662	936	-	-
Mov Cap-2 Maneuver	~ 46	-	-	-	-
Stage 1	277	-	-	-	-
Stage 2	271	-	-	-	-

Approach	EB	NB	SB	
HCM Control Delay, \$/306.26		7.44	0	
HCM LOS	F			

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	778	-	58	-	-
HCM Lane V/C Ratio	0.486	-	1.214	-	-
HCM Control Delay (s/veh)	12.4	\$ 306.3	-	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	2.7	-	6	-	-

**Notes**

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

## Intersection

Int Delay, s/veh 11.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Lane Configurations</b>												
Traffic Vol, veh/h	85	5	210	8	0	1	0	209	6	2	75	0
Future Vol, veh/h	85	5	210	8	0	1	0	209	6	2	75	0
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	40	40	40	40	40	40	40	40	40	40	40
Heavy Vehicles, %	8	2	10	25	2	100	2	3	17	0	5	2
Mvmt Flow	213	13	525	20	0	3	0	523	15	5	188	0

Major/Minor	Minor2	Minor1			Major1		Major2		
Conflicting Flow All	720	735	188	734	728	530	-	0	0
Stage 1	198	198	-	530	530	-	-	-	-
Stage 2	523	538	-	204	198	-	-	-	-
Critical Hdwy	7.18	6.52	6.3	7.35	6.52	7.2	-	-	4.1
Critical Hdwy Stg 1	6.18	5.52	-	6.35	5.52	-	-	-	-
Critical Hdwy Stg 2	6.18	5.52	-	6.35	5.52	-	-	-	-
Follow-up Hdwy	3.572	4.018	3.39	3.725	4.018	4.2	-	-	2.2
Pot Cap-1 Maneuver	335	347	834	308	350	398	0	-	1041
Stage 1	791	737	-	493	527	-	0	-	0
Stage 2	527	523	-	748	737	-	0	-	0
Platoon blocked, %							-	-	-
Mov Cap-1 Maneuver	332	345	834	110	348	398	-	-	1041
Mov Cap-2 Maneuver	332	345	-	110	348	-	-	-	-
Stage 1	786	734	-	493	527	-	-	-	-
Stage 2	523	523	-	271	734	-	-	-	-

Approach	EB	WB			NB		SB	
HCM Control Delay, s/v22.24		42.09			0		0.22	
HCM LOS	C	E						
<hr/>								
Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	332	808	119	47	-	
HCM Lane V/C Ratio	-	-	0.641	0.665	0.189	0.005	-	
HCM Control Delay (s/veh)	-	-	33.3	17.9	42.1	8.5	0	
HCM Lane LOS	-	-	D	C	E	A	A	
HCM 95th %tile Q(veh)	-	-	4.2	5.2	0.7	0	-	

**Intersection**

Int Delay, s/veh 65.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	24	317	353	32	0	0
Future Vol, veh/h	24	317	353	32	0	0
Conflicting Peds, #/hr	0	46	46	0	46	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	8	6	3	1	2	2
Mvmt Flow	60	793	883	80	0	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	899	0	2393
Stage 1	-	-	-	-	502
Stage 2	-	-	-	-	1891
Critical Hdwy	-	-	4.13	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.227	-	3.518
Pot Cap-1 Maneuver	-	-	~ 752	-	37
Stage 1	-	-	-	-	608
Stage 2	-	-	-	-	130
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	~ 719	-	0
Mov Cap-2 Maneuver	-	-	-	-	0
Stage 1	-	-	-	-	581
Stage 2	-	-	-	-	0

Approach	EB	WB	NB
HCM Control Delay, s/v	0	123.52	0
HCM LOS		A	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	~ 687	-
HCM Lane V/C Ratio	-	-	-	1.228	-
HCM Control Delay (s/veh)	0	-	-	134.7	0
HCM Lane LOS	A	-	-	F	A
HCM 95th %tile Q(veh)	-	-	-	31.1	-

**Notes**

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

**Intersection**

Int Delay, s/veh 0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
<b>Lane Configurations</b>						
Traffic Vol, veh/h	10	331	22	10	10	10
Future Vol, veh/h	10	331	22	10	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	828	55	25	25	25

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	80	0	-	0	945	68
Stage 1	-	-	-	-	68	-
Stage 2	-	-	-	-	878	-
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	1518	-	-	-	291	996
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	407	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1518	-	-	-	282	996
Mov Cap-2 Maneuver	-	-	-	-	282	-
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	407	-

Approach	EB	WB	SB			
HCM Control Delay, s/v	0.22	0	14.25			
HCM LOS			B			

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	53	-	-	-	439	
HCM Lane V/C Ratio	0.016	-	-	-	0.114	
HCM Control Delay (s/veh)	7.4	0	-	-	14.2	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	

**Intersection**

Int Delay, s/veh 0.4

Movement	EBL	EBC	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	1	7	4	109	233	9
Future Vol, veh/h	1	7	4	109	233	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	18	10	273	583	23

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	886	594	605	0	-	0
Stage 1	594	-	-	-	-	-
Stage 2	293	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	315	505	973	-	-	-
Stage 1	552	-	-	-	-	-
Stage 2	757	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	311	505	973	-	-	-
Mov Cap-2 Maneuver	311	-	-	-	-	-
Stage 1	545	-	-	-	-	-
Stage 2	757	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s/v13.03 0.31 0

HCM LOS B

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	64	-	469	-	-
HCM Lane V/C Ratio	0.01	-	0.043	-	-
HCM Control Delay (s/veh)	8.7	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

**Intersection**

Int Delay, s/veh 16.6

Movement	EBL	EBC	NBL	NBT	SBT	SBR
<b>Lane Configurations</b>						
Traffic Vol, veh/h	79	55	66	79	77	64
Future Vol, veh/h	79	55	66	79	77	64
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	1	4	14	9	4	0
Mvmt Flow	198	138	165	198	193	160

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	801	274	354	0	-
Stage 1	274	-	-	-	-
Stage 2	528	-	-	-	-
Critical Hdwy	6.41	6.24	4.24	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.336	2.326	-	-
Pot Cap-1 Maneuver	355	760	1142	-	-
Stage 1	775	-	-	-	-
Stage 2	594	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	297	760	1141	-	-
Mov Cap-2 Maneuver	297	-	-	-	-
Stage 1	648	-	-	-	-
Stage 2	593	-	-	-	-

Approach	EB	NB	SB		
HCM Control Delay, s/v	47.8	3.96	0		
HCM LOS	E				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	819	-	396	-	-
HCM Lane V/C Ratio	0.145	-	0.846	-	-
HCM Control Delay (s/veh)	8.7	0	47.8	-	-
HCM Lane LOS	A	A	E	-	-
HCM 95th %tile Q(veh)	0.5	-	8	-	-

## Intersection

Int Delay, s/veh 6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Lane Configurations</b>												
Traffic Vol, veh/h	32	2	92	19	0	8	0	88	26	14	137	0
Future Vol, veh/h	32	2	92	19	0	8	0	88	26	14	137	0
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	40	40	40	40	40	40	40	40	40	40	40
Heavy Vehicles, %	38	0	22	0	0	0	0	0	0	0	0	0
Mvmt Flow	80	5	230	48	0	20	0	220	65	35	343	0

Major/Minor	Minor2	Minor1			Major1		Major2		
Conflicting Flow All	633	698	343	668	665	253	-	0	0
Stage 1	413	413	-	253	253	-	-	-	-
Stage 2	220	285	-	415	413	-	-	-	-
Critical Hdwy	7.48	6.5	6.42	7.1	6.5	6.2	-	-	4.1
Critical Hdwy Stg 1	6.48	5.5	-	6.1	5.5	-	-	-	-
Critical Hdwy Stg 2	6.48	5.5	-	6.1	5.5	-	-	-	-
Follow-up Hdwy	3.842	4	3.498	3.5	4	3.3	-	-	2.2
Pot Cap-1 Maneuver	346	367	657	375	383	791	0	-	1289
Stage 1	551	597	-	756	702	-	0	-	0
Stage 2	708	679	-	619	597	-	0	-	0
Platoon blocked, %							-	-	-
Mov Cap-1 Maneuver	326	355	657	232	370	791	-	-	1289
Mov Cap-2 Maneuver	326	355	-	232	370	-	-	-	-
Stage 1	533	577	-	756	702	-	-	-	-
Stage 2	690	679	-	385	577	-	-	-	-

Approach	EB	WB			NB		SB		
HCM Control Delay, s/v15.23		20.88			0		0.73		
HCM LOS	C	C			A		A		
<b>Minor Lane/Major Mvmt</b>									
Capacity (veh/h)	-	-	326	645	294	167	-	-	-
HCM Lane V/C Ratio	-	-	0.245	0.364	0.23	0.027	-	-	-
HCM Control Delay (s/veh)	-	-	19.6	13.7	20.9	7.9	0	-	-
HCM Lane LOS	-	-	C	B	C	A	A	-	-
HCM 95th %tile Q(veh)	-	-	0.9	1.7	0.9	0.1	-	-	-

**Intersection**

Int Delay, s/veh 46

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	43	55	87	65	79	86
Future Vol, veh/h	43	55	87	65	79	86
Conflicting Peds, #/hr	0	46	46	0	46	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	7	31	6	11	1	0
Mvmt Flow	108	138	218	163	198	215

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	291	0	866 222
Stage 1	-	-	-	-	222 -
Stage 2	-	-	-	-	644 -
Critical Hdwy	-	-	4.16	-	6.41 6.2
Critical Hdwy Stg 1	-	-	-	-	5.41 -
Critical Hdwy Stg 2	-	-	-	-	5.41 -
Follow-up Hdwy	-	-	2.254	-	3.509 3.3
Pot Cap-1 Maneuver	-	-	1248	-	325 822
Stage 1	-	-	-	-	817 -
Stage 2	-	-	-	-	525 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1193	-	238 786
Mov Cap-2 Maneuver	-	-	-	-	238 -
Stage 1	-	-	-	-	781 -
Stage 2	-	-	-	-	402 -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	4.97	111.15
HCM LOS		F	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	374	-	-	1030	-
HCM Lane V/C Ratio	1.104	-	-	0.182	-
HCM Control Delay (s/veh)	111.1	-	-	8.7	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	15.1	-	-	0.7	-

**Intersection**

Int Delay, s/veh 1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
<b>Lane Configurations</b>						
Traffic Vol, veh/h	10	88	134	10	10	10
Future Vol, veh/h	10	88	134	10	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	220	335	25	25	25

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	360	0	-	0	618	348
Stage 1	-	-	-	-	348	-
Stage 2	-	-	-	-	270	-
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	1199	-	-	-	453	696
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	775	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1199	-	-	-	442	696
Mov Cap-2 Maneuver	-	-	-	-	442	-
Stage 1	-	-	-	-	698	-
Stage 2	-	-	-	-	775	-

Approach	EB	WB	SB			
HCM Control Delay, s/v	0.82	0	12.33			
HCM LOS			B			

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	184	-	-	-	541	
HCM Lane V/C Ratio	0.021	-	-	-	0.092	
HCM Control Delay (s/veh)	8.1	0	-	-	12.3	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	

**Intersection**

Int Delay, s/veh 0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
<b>Lane Configurations</b>						
Traffic Vol, veh/h	1	2	0	224	259	46
Future Vol, veh/h	1	2	0	224	259	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	0	0	0	4	2	0
Mvmt Flow	3	5	0	560	648	115

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1265	705	763	0	-
Stage 1	705	-	-	-	-
Stage 2	560	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	189	440	859	-	-
Stage 1	494	-	-	-	-
Stage 2	576	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	189	440	859	-	-
Mov Cap-2 Maneuver	189	-	-	-	-
Stage 1	494	-	-	-	-
Stage 2	576	-	-	-	-

Approach	EB	NB	SB		
HCM Control Delay, s/v17.12		0	0		
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	859	-	305	-	-
HCM Lane V/C Ratio	-	-	0.025	-	-
HCM Control Delay (s/veh)	0	-	17.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

**Intersection**

Int Delay, s/veh 24.4

Movement	EBL	EBC	NBL	NBT	SBT	SBR
<b>Lane Configurations</b>						
Traffic Vol, veh/h	23	6	187	126	61	199
Future Vol, veh/h	23	6	187	126	61	199
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	9	0	5	6	0	2
Mvmt Flow	58	15	468	315	153	498

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1652	402	651	0	-
Stage 1	402	-	-	-	-
Stage 2	1250	-	-	-	-
Critical Hdwy	6.49	6.2	4.15	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-
Follow-up Hdwy	3.581	3.3	2.245	-	-
Pot Cap-1 Maneuver	104	652	921	-	-
Stage 1	661	-	-	-	-
Stage 2	261	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	~ 40	652	920	-	-
Mov Cap-2 Maneuver	~ 40	-	-	-	-
Stage 1	254	-	-	-	-
Stage 2	261	-	-	-	-

Approach	EB	NB	SB	
HCM Control Delay, \$/423.65		7.69	0	
HCM LOS	F			

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	759	-	50	-	-
HCM Lane V/C Ratio	0.508	-	1.462	-	-
HCM Control Delay (s/veh)	12.9	\$ 423.7	-	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	2.9	-	6.8	-	-

**Notes**

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

## Intersection

Int Delay, s/veh 12.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Lane Configurations</b>												
Traffic Vol, veh/h	88	5	216	8	0	1	0	215	6	2	77	0
Future Vol, veh/h	88	5	216	8	0	1	0	215	6	2	77	0
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	40	40	40	40	40	40	40	40	40	40	40
Heavy Vehicles, %	8	2	10	25	2	100	2	3	17	0	5	2
Mvmt Flow	220	13	540	20	0	3	0	538	15	5	193	0

Major/Minor	Minor2	Minor1			Major1		Major2		
Conflicting Flow All	740	755	193	754	748	545	-	0	0
Stage 1	203	203	-	545	545	-	-	-	-
Stage 2	538	553	-	209	203	-	-	-	-
Critical Hdwy	7.18	6.52	6.3	7.35	6.52	7.2	-	-	4.1
Critical Hdwy Stg 1	6.18	5.52	-	6.35	5.52	-	-	-	-
Critical Hdwy Stg 2	6.18	5.52	-	6.35	5.52	-	-	-	-
Follow-up Hdwy	3.572	4.018	3.39	3.725	4.018	4.2	-	-	2.2
Pot Cap-1 Maneuver	325	338	829	299	341	389	0	-	1028
Stage 1	786	734	-	483	519	-	0	-	0
Stage 2	517	515	-	744	734	-	0	-	0
Platoon blocked, %							-	-	-
Mov Cap-1 Maneuver	321	336	829	100	339	389	-	-	1028
Mov Cap-2 Maneuver	321	336	-	100	339	-	-	-	-
Stage 1	782	730	-	483	519	-	-	-	-
Stage 2	514	515	-	253	730	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v24.08		46.55	0	0.22
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	321	802	109	46	-
HCM Lane V/C Ratio	-	-	0.685	0.689	0.207	0.005	-
HCM Control Delay (s/veh)	-	-	37.4	18.8	46.6	8.5	0
HCM Lane LOS	-	-	E	C	E	A	A
HCM 95th %tile Q(veh)	-	-	4.7	5.6	0.7	0	-

**Intersection**

Int Delay, s/veh 79.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
<b>Lane Configurations</b>						
Traffic Vol, veh/h	25	327	364	33	0	0
Future Vol, veh/h	25	327	364	33	0	0
Conflicting Peds, #/hr	0	46	46	0	46	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	8	6	3	1	2	2
Mvmt Flow	63	818	910	83	0	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	926	0	2466
Stage 1	-	-	-	-	517
Stage 2	-	-	-	-	1949
Critical Hdwy	-	-	4.13	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.227	-	3.518
Pot Cap-1 Maneuver	-	-	~ 734	-	33
Stage 1	-	-	-	-	598
Stage 2	-	-	-	-	122
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	~ 702	-	0
Mov Cap-2 Maneuver	-	-	-	-	0
Stage 1	-	-	-	-	572
Stage 2	-	-	-	-	0

Approach	EB	WB	NB
HCM Control Delay, s/v	0	149.6	0
HCM LOS		A	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	~ 670	-
HCM Lane V/C Ratio	-	-	-	1.297	-
HCM Control Delay (s/veh)	0	-	-	163.2	0
HCM Lane LOS	A	-	-	F	A
HCM 95th %tile Q(veh)	-	-	-	35.6	-

**Notes**

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

**Intersection**

Int Delay, s/veh 0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
<b>Lane Configurations</b>						
Traffic Vol, veh/h	10	342	23	10	10	10
Future Vol, veh/h	10	342	23	10	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	855	58	25	25	25

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	83	0	-	0	975	70
Stage 1	-	-	-	-	70	-
Stage 2	-	-	-	-	905	-
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	1515	-	-	-	279	993
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	395	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1515	-	-	-	270	993
Mov Cap-2 Maneuver	-	-	-	-	270	-
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	395	-

Approach	EB	WB	SB			
HCM Control Delay, s/v	0.21	0	14.6			
HCM LOS			B			

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	51	-	-	-	425	
HCM Lane V/C Ratio	0.017	-	-	-	0.118	
HCM Control Delay (s/veh)	7.4	0	-	-	14.6	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	

**Intersection**

Int Delay, s/veh 0.4

Movement	EBL	EBC	NBL	NBT	SBT	SBR
<b>Lane Configurations</b>						
Traffic Vol, veh/h	1	7	4	112	240	9
Future Vol, veh/h	1	7	4	112	240	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	18	10	280	600	23

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	911	611	623	0	-
Stage 1	611	-	-	-	-
Stage 2	300	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	304	494	958	-	-
Stage 1	542	-	-	-	-
Stage 2	752	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	301	494	958	-	-
Mov Cap-2 Maneuver	301	-	-	-	-
Stage 1	535	-	-	-	-
Stage 2	752	-	-	-	-

Approach	EB	NB	SB	
HCM Control Delay, s/v13.24	0.3	0		
HCM LOS	B			

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	62	-	457	-	-
HCM Lane V/C Ratio	0.01	-	0.044	-	-
HCM Control Delay (s/veh)	8.8	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

**Intersection**

Int Delay, s/veh 19.7

Movement	EBL	EBC	NBL	NBT	SBT	SBR
Lane Configurations	W		C	R		
Traffic Vol, veh/h	81	57	68	81	79	66
Future Vol, veh/h	81	57	68	81	79	66
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	1	4	14	9	4	0
Mvmt Flow	203	143	170	203	198	165

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	824	281	364	0	-	0
Stage 1	281	-	-	-	-	-
Stage 2	543	-	-	-	-	-
Critical Hdwy	6.41	6.24	4.24	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.336	2.326	-	-	-
Pot Cap-1 Maneuver	344	753	1132	-	-	-
Stage 1	769	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	285	752	1131	-	-	-
Mov Cap-2 Maneuver	285	-	-	-	-	-
Stage 1	638	-	-	-	-	-
Stage 2	584	-	-	-	-	-

Approach	EB	NB	SB			
HCM Control Delay, s/v57.25		3.99	0			
HCM LOS	F					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	821	-	384	-	-	
HCM Lane V/C Ratio	0.15	-	0.899	-	-	
HCM Control Delay (s/veh)	8.7	0	57.3	-	-	
HCM Lane LOS	A	A	F	-	-	
HCM 95th %tile Q(veh)	0.5	-	9.2	-	-	

## Intersection

Int Delay, s/veh 6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Lane Configurations</b>												
Traffic Vol, veh/h	33	2	95	20	0	8	0	91	27	14	141	0
Future Vol, veh/h	33	2	95	20	0	8	0	91	27	14	141	0
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	40	40	40	40	40	40	40	40	40	40	40
Heavy Vehicles, %	38	0	22	0	0	0	0	0	0	0	0	0
Mvmt Flow	83	5	238	50	0	20	0	228	68	35	353	0

Major/Minor	Minor2	Minor1			Major1		Major2		
Conflicting Flow All	650	718	353	686	684	261	-	0	0
Stage 1	423	423	-	261	261	-	-	-	-
Stage 2	228	295	-	425	423	-	-	-	-
Critical Hdwy	7.48	6.5	6.42	7.1	6.5	6.2	-	-	4.1
Critical Hdwy Stg 1	6.48	5.5	-	6.1	5.5	-	-	-	-
Critical Hdwy Stg 2	6.48	5.5	-	6.1	5.5	-	-	-	-
Follow-up Hdwy	3.842	4	3.498	3.5	4	3.3	-	-	2.2
Pot Cap-1 Maneuver	337	358	648	364	374	782	0	-	1278
Stage 1	544	591	-	748	696	-	0	-	0
Stage 2	701	673	-	611	591	-	0	-	0
Platoon blocked, %							-	-	-
Mov Cap-1 Maneuver	317	345	648	220	361	782	-	-	1278
Mov Cap-2 Maneuver	317	345	-	220	361	-	-	-	-
Stage 1	526	571	-	748	696	-	-	-	-
Stage 2	683	673	-	371	571	-	-	-	-

Approach	EB	WB			NB		SB	
HCM Control Delay, s/v15.67		22.37			0		0.71	
HCM LOS	C	C			A		A	
<b>Minor Lane/Major Mvmt</b>								
Capacity (veh/h)	-	-	317	637	277	163	-	-
HCM Lane V/C Ratio	-	-	0.26	0.381	0.253	0.027	-	-
HCM Control Delay (s/veh)	-	-	20.3	14.1	22.4	7.9	0	-
HCM Lane LOS	-	-	C	B	C	A	A	-
HCM 95th %tile Q(veh)	-	-	1	1.8	1	0.1	-	-

**Intersection**

Int Delay, s/veh 56.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	44	57	90	67	81	89
Future Vol, veh/h	44	57	90	67	81	89
Conflicting Peds, #/hr	0	46	46	0	46	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	7	31	6	11	1	0
Mvmt Flow	110	143	225	168	203	223

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	299	0	891
Stage 1	-	-	-	-	227
Stage 2	-	-	-	-	664
Critical Hdwy	-	-	4.16	-	6.41
Critical Hdwy Stg 1	-	-	-	-	5.41
Critical Hdwy Stg 2	-	-	-	-	5.41
Follow-up Hdwy	-	-	2.254	-	3.509
Pot Cap-1 Maneuver	-	-	1240	-	817
Stage 1	-	-	-	-	813
Stage 2	-	-	-	-	514
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1186	-	227
Mov Cap-2 Maneuver	-	-	-	-	781
Stage 1	-	-	-	-	227
Stage 2	-	-	-	-	777
					-
					-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	5.01	137.26
HCM LOS		F	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	361	-	-	1032	-
HCM Lane V/C Ratio	1.176	-	-	0.19	-
HCM Control Delay (s/veh)	137.3	-	-	8.7	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	17.2	-	-	0.7	-

**Intersection**

Int Delay, s/veh 1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
<b>Lane Configurations</b>						
Traffic Vol, veh/h	10	91	138	10	10	10
Future Vol, veh/h	10	91	138	10	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	228	345	25	25	25

Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	370	0	-	0	635	358
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	278	-
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	1189	-	-	-	443	687
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	769	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1189	-	-	-	432	687
Mov Cap-2 Maneuver	-	-	-	-	432	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	769	-

Approach	EB	WB	SB			
HCM Control Delay, s/v	0.8	0	12.49			
HCM LOS			B			

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	178	-	-	-	530	
HCM Lane V/C Ratio	0.021	-	-	-	0.094	
HCM Control Delay (s/veh)	8.1	0	-	-	12.5	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	

**Intersection**

Int Delay, s/veh 0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
<b>Lane Configurations</b>						
Traffic Vol, veh/h	1	2	0	224	259	46
Future Vol, veh/h	1	2	0	224	259	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	0	0	0	4	2	0
Mvmt Flow	3	5	0	560	648	115

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1265	705	763	0	-
Stage 1	705	-	-	-	-
Stage 2	560	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	189	440	859	-	-
Stage 1	494	-	-	-	-
Stage 2	576	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	189	440	859	-	-
Mov Cap-2 Maneuver	189	-	-	-	-
Stage 1	494	-	-	-	-
Stage 2	576	-	-	-	-

Approach	EB	NB	SB		
HCM Control Delay, s/v17.12		0	0		
HCM LOS	C				

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	859	-	305	-	-
HCM Lane V/C Ratio	-	-	0.025	-	-
HCM Control Delay (s/veh)	0	-	17.1	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

**Intersection**

Int Delay, s/veh 150.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		↔	↑		
Traffic Vol, veh/h	46	150	152	103	61	199
Future Vol, veh/h	46	150	152	103	61	199
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	115	375	380	258	153	498

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1420	402	651	0	-
Stage 1	402	-	-	-	-
Stage 2	1018	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-
Pot Cap-1 Maneuver	148	642	921	-	-
Stage 1	669	-	-	-	-
Stage 2	345	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	~ 77	641	920	-	-
Mov Cap-2 Maneuver	~ 77	-	-	-	-
Stage 1	346	-	-	-	-
Stage 2	344	-	-	-	-

Approach	EB	NB	SB	
HCM Control Delay, \$/536.81		6.94	0	
HCM LOS	F			

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	789	-	235	-	-
HCM Lane V/C Ratio	0.413	-	2.086	-	-
HCM Control Delay (s/veh)	11.6	\$ 536.8	-	-	
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	2	-	36.9	-	-

**Notes**

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

## Intersection

Int Delay, s/veh 5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Lane Configurations</b>												
Traffic Vol, veh/h	30	5	72	8	0	1	0	215	6	2	221	0
Future Vol, veh/h	30	5	72	8	0	1	0	215	6	2	221	0
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	40	40	40	40	40	40	40	40	40	40	40
Heavy Vehicles, %	8	2	10	25	2	100	2	3	17	0	5	2
Mvmt Flow	75	13	180	20	0	3	0	538	15	5	553	0

Major/Minor	Minor2	Minor1			Major1		Major2					
Conflicting Flow All	1100	1115	553	1114	1108	545	-	0	0	553	0	0
Stage 1	563	563	-	545	545	-	-	-	-	-	-	-
Stage 2	538	553	-	569	563	-	-	-	-	-	-	-
Critical Hdwy	7.18	6.52	6.3	7.35	6.52	7.2	-	-	-	4.1	-	-
Critical Hdwy Stg 1	6.18	5.52	-	6.35	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.18	5.52	-	6.35	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.572	4.018	3.39	3.725	4.018	4.2	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	185	208	518	168	210	389	0	-	-	1028	-	0
Stage 1	501	509	-	483	519	-	0	-	-	-	-	0
Stage 2	517	515	-	469	509	-	0	-	-	-	-	0
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	182	206	518	102	209	389	-	-	-	1028	-	-
Mov Cap-2 Maneuver	182	206	-	102	209	-	-	-	-	-	-	-
Stage 1	497	506	-	483	519	-	-	-	-	-	-	-
Stage 2	514	515	-	296	506	-	-	-	-	-	-	-

Approach	EB	WB			NB		SB				
HCM Control Delay, s/v23.44		45.44			0		0.08				
HCM LOS	C	E			A		A				
<hr/>											
Minor Lane/Major Mvmt	NBT	NBR	EBln1	EBln2	WBln1	SBL	SBT				
Capacity (veh/h)	-	-	182	472	111	16	-				
HCM Lane V/C Ratio	-	-	0.412	0.408	0.202	0.005	-				
HCM Control Delay (s/veh)	-	-	37.9	17.8	45.4	8.5	0				
HCM Lane LOS	-	-	E	C	E	A	A				
HCM 95th %tile Q(veh)	-	-	1.8	2	0.7	0	-				

**Intersection**

Int Delay, s/veh 37.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
<b>Lane Configurations</b>						
Traffic Vol, veh/h	108	109	122	240	18	84
Future Vol, veh/h	108	109	122	240	18	84
Conflicting Peds, #/hr	0	46	46	0	46	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	270	273	305	600	45	210

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	589	0	1708 452
Stage 1	-	-	-	-	452 -
Stage 2	-	-	-	-	1256 -
Critical Hdwy	-	-	4.15	-	6.45 6.25
Critical Hdwy Stg 1	-	-	-	-	5.45 -
Critical Hdwy Stg 2	-	-	-	-	5.45 -
Follow-up Hdwy	-	-	2.245	-	3.545 3.345
Pot Cap-1 Maneuver	-	-	972	-	98 601
Stage 1	-	-	-	-	635 -
Stage 2	-	-	-	-	264 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	930	-	46 575
Mov Cap-2 Maneuver	-	-	-	-	46 -
Stage 1	-	-	-	-	607 -
Stage 2	-	-	-	-	128 -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	3.62	236.58
HCM LOS		F	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	189	-	-	607	-
HCM Lane V/C Ratio	1.351	-	-	0.328	-
HCM Control Delay (s/veh)	236.6	-	-	10.8	0
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	14.8	-	-	1.4	-

## Intersection

Int Delay, s/veh 8.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Lane Configurations</b>												
Traffic Vol, veh/h	10	233	109	182	23	10	0	0	0	10	0	10
Future Vol, veh/h	10	233	109	182	23	10	0	0	0	10	0	10
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	40	40	40	40	40	40	40	40	40	40	40
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	25	583	273	455	58	25	0	0	0	25	0	25

Major/Minor	Major1	Major2				Minor2		
Conflicting Flow All	83	0	0	855	0	0	1613 1885	
Stage 1	-	-	-	-	-	-	980	980
Stage 2	-	-	-	-	-	-	633	905
Critical Hdwy	4.15	-	-	4.15	-	-	6.45	6.55
Critical Hdwy Stg 1	-	-	-	-	-	-	5.45	5.55
Critical Hdwy Stg 2	-	-	-	-	-	-	5.45	5.55
Follow-up Hdwy	2.245	-	-	2.245	-	-	3.545	4.045
Pot Cap-1 Maneuver	1496	-	-	772	-	-	113	69
Stage 1	-	-	-	-	-	-	359	324
Stage 2	-	-	-	-	-	-	524	351
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1496	-	-	772	-	-	41	0
Mov Cap-2 Maneuver	-	-	-	-	-	-	41	0
Stage 1	-	-	-	-	-	-	347	0
Stage 2	-	-	-	-	-	-	199	0

Approach	EB	WB				SB	
HCM Control Delay, s/v	0.21	13.65				107.29	
HCM LOS						F	
<b>Minor Lane/Major Mvmt</b>							
Capacity (veh/h)	48	-	-	735	-	-	80
HCM Lane V/C Ratio	0.017	-	-	0.589	-	-	0.628
HCM Control Delay (s/veh)	7.4	0	-	16.1	0	-	107.3
HCM Lane LOS	A	A	-	C	A	-	F
HCM 95th %tile Q(veh)	0.1	-	-	3.9	-	-	2.9

**Intersection**

Int Delay, s/veh 5.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
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Lane Configurations						
Traffic Vol, veh/h	134	109	60	198	17	83
Future Vol, veh/h	134	109	60	198	17	83
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	335	273	150	495	43	208

Major/Minor	Major1	Major2	Minor1	
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Conflicting Flow All	0	0	608	0	1266	471
Stage 1	-	-	-	-	471	-
Stage 2	-	-	-	-	795	-
Critical Hdwy	-	-	4.15	-	6.45	6.25
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.245	-	3.545	3.345
Pot Cap-1 Maneuver	-	-	956	-	184	586
Stage 1	-	-	-	-	622	-
Stage 2	-	-	-	-	439	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	956	-	144	586
Mov Cap-2 Maneuver	-	-	-	-	144	-
Stage 1	-	-	-	-	622	-
Stage 2	-	-	-	-	344	-

Approach	EB	WB	NB
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HCM Control Delay, s/v	0	2.2	30.05
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HCM LOS	D
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Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	385	-	-	419	-
HCM Lane V/C Ratio	0.649	-	-	0.157	-
HCM Control Delay (s/veh)	30.1	-	-	9.5	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	4.4	-	-	0.6	-

**Intersection**

Int Delay, s/veh 0.4

Movement	EBL	EBC	NBL	NBT	SBT	SBR
<b>Lane Configurations</b>						
Traffic Vol, veh/h	1	7	4	112	240	9
Future Vol, veh/h	1	7	4	112	240	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	0	0	0	4	2	0
Mvmt Flow	3	18	10	280	600	23

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	911	611	623	0	-
Stage 1	611	-	-	-	-
Stage 2	300	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	307	497	968	-	-
Stage 1	545	-	-	-	-
Stage 2	756	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	303	497	968	-	-
Mov Cap-2 Maneuver	303	-	-	-	-
Stage 1	539	-	-	-	-
Stage 2	756	-	-	-	-

Approach	EB	NB	SB	
HCM Control Delay, s/v13.17		0.3	0	
HCM LOS	B			

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	62	-	460	-	-
HCM Lane V/C Ratio	0.01	-	0.043	-	-
HCM Control Delay (s/veh)	8.8	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

**Intersection**

Int Delay, s/veh 20.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		↔	↑		
Traffic Vol, veh/h	81	57	68	81	79	66
Future Vol, veh/h	81	57	68	81	79	66
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	203	143	170	203	198	165

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	824	281	364	0	-	0
Stage 1	281	-	-	-	-	-
Stage 2	543	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.245	-	-	-
Pot Cap-1 Maneuver	339	751	1179	-	-	-
Stage 1	760	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	283	750	1178	-	-	-
Mov Cap-2 Maneuver	283	-	-	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	576	-	-	-	-	-

Approach	EB	NB	SB			
HCM Control Delay, s/v	58.62	3.91	0			
HCM LOS	F					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	821	-	381	-	-	
HCM Lane V/C Ratio	0.144	-	0.905	-	-	
HCM Control Delay (s/veh)	8.6	0	58.6	-	-	
HCM Lane LOS	A	A	F	-	-	
HCM 95th %tile Q(veh)	0.5	-	9.3	-	-	

## Intersection

Int Delay, s/veh 6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Lane Configurations</b>												
Traffic Vol, veh/h	33	2	95	20	0	8	0	91	27	14	141	0
Future Vol, veh/h	33	2	95	20	0	8	0	91	27	14	141	0
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	40	40	40	40	40	40	40	40	40	40	40
Heavy Vehicles, %	8	2	10	25	2	100	2	3	17	0	5	2
Mvmt Flow	83	5	238	50	0	20	0	228	68	35	353	0

Major/Minor	Minor2	Minor1			Major1		Major2		
Conflicting Flow All	650	718	353	686	684	261	-	0	0
Stage 1	423	423	-	261	261	-	-	-	-
Stage 2	228	295	-	425	423	-	-	-	-
Critical Hdwy	7.18	6.52	6.3	7.35	6.52	7.2	-	-	4.1
Critical Hdwy Stg 1	6.18	5.52	-	6.35	5.52	-	-	-	-
Critical Hdwy Stg 2	6.18	5.52	-	6.35	5.52	-	-	-	-
Follow-up Hdwy	3.572	4.018	3.39	3.725	4.018	4.2	-	-	2.2
Pot Cap-1 Maneuver	374	355	673	333	371	590	0	-	1278
Stage 1	597	588	-	696	692	-	0	-	0
Stage 2	762	669	-	564	588	-	0	-	0
Platoon blocked, %							-	-	-
Mov Cap-1 Maneuver	349	343	673	205	359	590	-	-	1278
Mov Cap-2 Maneuver	349	343	-	205	359	-	-	-	-
Stage 1	577	568	-	696	692	-	-	-	-
Stage 2	736	669	-	350	568	-	-	-	-

Approach	EB	WB			NB		SB		
HCM Control Delay, s/v14.82		24.7			0		0.71		
HCM LOS	B	C			A		A		
<hr/>									
Minor Lane/Major Mvmt	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	349	660	252	163	-		
HCM Lane V/C Ratio	-	-	0.236	0.367	0.278	0.027	-		
HCM Control Delay (s/veh)	-	-	18.5	13.6	24.7	7.9	0		
HCM Lane LOS	-	-	C	B	C	A	A		
HCM 95th %tile Q(veh)	-	-	0.9	1.7	1.1	0.1	-		

**Intersection**

Int Delay, s/veh 5.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	94	19	30	127	41	39
Future Vol, veh/h	94	19	30	127	41	39
Conflicting Peds, #/hr	0	46	46	0	46	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	235	48	75	318	103	98

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	329	0	818 305
Stage 1	-	-	-	-	305 -
Stage 2	-	-	-	-	514 -
Critical Hdwy	-	-	4.15	-	6.45 6.25
Critical Hdwy Stg 1	-	-	-	-	5.45 -
Critical Hdwy Stg 2	-	-	-	-	5.45 -
Follow-up Hdwy	-	-	2.245	-	3.545 3.345
Pot Cap-1 Maneuver	-	-	1214	-	341 728
Stage 1	-	-	-	-	741 -
Stage 2	-	-	-	-	595 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1161	-	288 696
Mov Cap-2 Maneuver	-	-	-	-	288 -
Stage 1	-	-	-	-	709 -
Stage 2	-	-	-	-	524 -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.59	22.42
HCM LOS		C	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	403	-	-	344	-
HCM Lane V/C Ratio	0.496	-	-	0.065	-
HCM Control Delay (s/veh)	22.4	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	2.7	-	-	0.2	-

## Intersection

Int Delay, s/veh 2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Lane Configurations</b>												
Traffic Vol, veh/h	10	72	19	50	138	10	0	0	0	10	0	10
Future Vol, veh/h	10	72	19	50	138	10	0	0	0	10	0	10
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									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	40	40	40	40	40	40	40	40	40	40	40	40
Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5
Mvmt Flow	25	180	48	125	345	25	0	0	0	25	0	25

Major/Minor	Major1	Major2				Minor2		
Conflicting Flow All	370	0	0	228	0	0	838 885	
Stage 1	-	-	-	-	-	-	608	608
Stage 2	-	-	-	-	-	-	230	278
Critical Hdwy	4.15	-	-	4.15	-	-	6.45	6.55
Critical Hdwy Stg 1	-	-	-	-	-	-	5.45	5.55
Critical Hdwy Stg 2	-	-	-	-	-	-	5.45	5.55
Follow-up Hdwy	2.245	-	-	2.245	-	-	3.545	4.045
Pot Cap-1 Maneuver	1172	-	-	1323	-	-	333	281
Stage 1	-	-	-	-	-	-	538	481
Stage 2	-	-	-	-	-	-	801	675
Platoon blocked, %	-	-	-	-	-	-		
Mov Cap-1 Maneuver	1172	-	-	1323	-	-	286	0
Mov Cap-2 Maneuver	-	-	-	-	-	-	286	0
Stage 1	-	-	-	-	-	-	525	0
Stage 2	-	-	-	-	-	-	706	0

Approach	EB	WB	SB
HCM Control Delay, s/v	0.81	2.02	15.21
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	171	-	-	448	-	-	402
HCM Lane V/C Ratio	0.021	-	-	0.094	-	-	0.124
HCM Control Delay (s/veh)	8.1	0	-	8	0	-	15.2
HCM Lane LOS	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	-	-	0.3	-	-	0.4

**Intersection**

Int Delay, s/veh 4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	63	19	10	158	40	50
Future Vol, veh/h	63	19	10	158	40	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	40	40	40	40	40	40
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	158	48	25	395	100	125

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	205	0	626 181
Stage 1	-	-	-	-	181 -
Stage 2	-	-	-	-	445 -
Critical Hdwy	-	-	4.15	-	6.45 6.25
Critical Hdwy Stg 1	-	-	-	-	5.45 -
Critical Hdwy Stg 2	-	-	-	-	5.45 -
Follow-up Hdwy	-	-	2.245	-	3.545 3.345
Pot Cap-1 Maneuver	-	-	1349	-	443 854
Stage 1	-	-	-	-	843 -
Stage 2	-	-	-	-	639 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1349	-	433 854
Mov Cap-2 Maneuver	-	-	-	-	433 -
Stage 1	-	-	-	-	843 -
Stage 2	-	-	-	-	624 -

Approach	EB	WB	NB	
HCM Control Delay, s/v	0	0.46	14.66	
HCM LOS		B		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	596	-	-	107	-
HCM Lane V/C Ratio	0.378	-	-	0.019	-
HCM Control Delay (s/veh)	14.7	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.8	-	-	0.1	-