
TRAFFIC & PARKING STUDY

BETHANY ARTS COMMUNITY

**40 SOMERSTOWN ROAD
TOWN OF OSSINING, NEW YORK**

Prepared for:

Bethany Arts Community
40 Somerstown Road
Ossining, NY 10562

Prepared by:



120 Bedford Road
Armonk, NY 10504
JMC Project **16146**

Date:

August 22, 2016

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I. INTRODUCTION

This Traffic Study has been prepared to assess existing conditions as well as future traffic operations in association with the proposed Bethany Arts Community redevelopment located at 40 Somerstown Road in the Town of Ossining, NY. The location of the site is illustrated on the figures included in Appendix B.

The proposed redevelopment incorporates the re-utilization of an existing three story building located on the property. The redevelopment proposes a mediation trail around the property as well as 98 parking spaces.

Access to the property is currently provided via a two one-way full movement driveways from Somerstown Road. Site Driveway A is an entrance only driveway while Site Driveway B is an exit only driveway. The applicant proposes to re-utilize the existing driveway locations and reconstruct Site Driveway B to provide two-way traffic with one lane in each direction (entering and exiting traffic).

II. EXISTING CONDITIONS

A. Existing Roadway Network

JMC performed field reconnaissance at the site and adjoining roadway network in order to gather existing conditions data. The field work included a determination of lane widths, striping, horizontal and vertical alignments, signs, speed limits, pedestrian activities, traffic flows, on street parking, sidewalks, curbing, etc.

Somerstown Road (NY 133) is generally an east/west roadway under the jurisdiction of the New York State Department of Transportation (NYSDOT). Somerstown Road provides one travel lane in each direction in the study area. It has a posted speed limit of 35 mph and on-street parking is prohibited within the study area.

In order to evaluate the changes in traffic associated with the proposed redevelopment, the following intersections have been analyzed:

1. Somerstown Road & Site Driveway A
2. Somerstown Road & Site Driveway B

The intersection of Somerstown Road and Site Driveway A is a three-legged unsignalized intersection. The Somerstown Road approaches provide one through lane with shared turning movements in both directions. Site Driveway A is an entrance only driveway into the subject property.

Site Driveway B intersects Somerstown Road at a three-legged unsignalized intersection. The Somerstown Road approaches provide one through lane in both directions. Site Driveway B is an exit only driveway which provide one travel lane with shared turning movements onto Somerstown Road. Under proposed conditions, Site Driveway B will provide two-way traffic and Somerstown Road will provide shared turning movements into the site driveway via the existing travel lanes.

B. Existing Volumes

Traffic counts were performed at the studied intersections in order to quantify and analyze existing peak hour volumes as well as to establish base conditions for projecting future operations. The counts included pedestrian activities and truck traffic.

Traffic counts were conducted from 7:00 – 9:00 AM and 4:00 – 6:00 PM for the Site Driveway A intersection on Thursday, July 21, 2016. The Site Driveway A intersection were also counted from 11:00 – 2:00 PM and 6:00 – 9:00 PM on Saturday, July 23, 2016. This study analyzes four different peak hours which include peak weekday AM, weekday PM hours, Saturday midday as well as a peak Saturday PM hour. The peak hour volumes occurred between 7:15-8:15 AM during the weekday morning, 4:30-5:30 PM during the weekday PM, 12:45-1:45 PM during the Saturday midday, and 6:45-7:45 PM during the

Saturday PM. The intersection traffic count data is included in Appendix D.

There was no traffic volume entering or exiting the subject property. The peak hour volumes are shown on Figures 1 through 4 "2016 Existing Volumes". All figures are included in Appendix B.

Our office also requested accident reports for the studied intersections for the last three years. There was only one accident which occurred at Site Driveway A. The accident involved a distracted driver who was attempting to remove a cobweb from the passenger side of their vehicle which cause them to swerve and hit a mailbox. The accident report data has been tabulated and depicted in Table AR1 located in Appendix A.

C. Intersection Analysis Methodology

The intersections have been analyzed based on the methodologies of the 2010 Highway Capacity Manual. Information derived from the manual relative to the level of service criteria is provided below.

1. Level of Service for Unsignalized Intersections

The Levels of Service (LOS) for Two Way Stop Control (TWSC) and All Way Stop Control (AWSC) intersections are determined by the computed or measured control delay and are defined for each minor movement. LOS is not defined for the intersection as a whole for TWSC intersections. LOS criteria are presented below.

<i>Unsignalized Level of Service Criteria</i>	
Level of Service	Delay Range (Seconds/Vehicle)
A	≤ 10
B	>10 and ≤ 15
C	>15 and ≤ 25
D	>25 and ≤ 35
E	>35 and ≤ 50
F	>50

Average control delay less than 10 seconds/vehicle are defined as LOS A. Follow-up times of less than 5 seconds/vehicle have been measured when there is no conflicting traffic, so control delays of less than 10 seconds/vehicle are appropriate for low flow conditions.

The LOS criteria for unsignalized intersections are somewhat different than the criteria used for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. A number of driver behavior considerations combine to make delays at signalized intersections less onerous than delays at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, whereas drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at an unsignalized intersections versus that at signalized intersections. For these reasons, it is considered that the control delay threshold for any given LOS would be less for an unsignalized intersection than it would be for a signalized intersection.

D. Existing Operations

The intersection capacity analyses based on existing volumes and conditions are shown on Tables 2 through 5. The specific volume/capacity ratios, delay for average vehicle in seconds and the associated levels of service are summarized for each lane group as applicable on Tables 2 through 5. All tables are included in Appendix A.

The studied intersections operate at a level of service A since there were no traffic volumes turning into or out of the property.

III. PROJECTED CONDITIONS

A. No-Build Volumes

In order to project future traffic increases to the 2021 design year, the existing volumes were increased by a general growth rate of 1% per year compounded annually. Based on discussions with the Town's Building Inspector, we have incorporated the traffic volumes associated with the potential Highview Farms development located at on Tavano Road which is a 24 Lot subdivision. The resulting 2021 no-build volumes represent traffic operations in 2021 without the redevelopment of the site.

Under no-build conditions, the intersections operate at the same levels of service as existing conditions.

B. Build Volumes

The projected traffic associated with the proposed redevelopment is based on information published by the Institute of Transportation Engineers (ITE) in its publication "Trip Generation Manual, 9th Edition." Table 1 shows the traffic volumes associated with the proposed redevelopment.

The net additional driveway volumes were routed through the studied intersections based on existing traffic volumes as well as consideration of the arrival & departure patterns of the site traffic. Adding the proposed redevelopment related traffic results in 2021 Build Volumes which reflect projected volumes after the completion of the redevelopment.

C. Sight Distance

Additionally, our office reviewed the egress site driveway location as it relates to sight distances. Tables S-1 and S-2 contained in Appendix A depict the observed travel speeds on Somerstown Road as well as the posted and 85th percentile speed. The tables calculate the desirable stopping and intersection sight distances based on the 85th percentile speed. The sight distance calculations are based on information contained in the American Association of State Highway and Transportation Officials (AASHTO) publication “A Policy on Geometric Design of Highways and Streets, 6th Edition” which is utilized by the New York State Department of Transportation. For the vehicles turning right out of the site, the available sight distance can accommodate the desirable intersection sight distance. For vehicles turning left out of the site, there is existing trees/vegetation within the State’s right-of-way which encroaches into the sight distance. In order to achieve the intersection sight distance, the existing vegetation/trees located between Site Driveway B and Tavano Road on the east side of Somerstown Road should be removed/trimmed. If the vegetation is not removed/trimmed, we would recommend that left turns out of the driveway be prohibited.

D. Parking

Our office performed a shared parking analysis as it relates to the proposed uses for the proposed redevelopment. The development proposes uses which have varying hours of peak parking demand. The site plan proposes 98 parking spaces for the various uses on the property. The shared parking analysis incorporates the proposed uses and considers that the proposed uses have different parking demands during different times which allows for parking spaces to be utilized for two different uses during different times of the day. In our parking analysis, we assumed the proposed community center and museum uses as an office

use since it would be representative of their parking demands. Our shared parking analysis is contained within Appendix E. Based on our analysis, the peak parking demand on a weekday is 80 parking spaces and on a weekend the demand is 82 parking spaces. Since the redevelopment proposes 98 parking spaces, the redevelopment can accommodate the shared parking demand mentioned in our analysis.

IV. **FINDINGS & CONCLUSION**

Intersection capacity analysis computed based on the Build Volumes indicate that the intersections will essentially operate at the same levels of service as projected for the No-Build Volumes. Projected operations with the proposed redevelopment are shown on Tables 2 through 5.

Site Driveway B is projected to operate at a level of service B during all studied peak hours except for the peak Saturday PM hour which is projected to operate at a level of service A. Somerstown Road is projected to operate at a level of service A during all studied hours at both site driveways.

Based on the above, it is the professional opinion of JMC that the redevelopment of the site will not have a significant impact on traffic operations in the study area.

Respectfully submitted,

JMC Planning Engineering Landscape Architecture & Land Surveying, PLLC

A blue ink signature of Richard J. Pearson, consisting of a series of fluid, overlapping strokes.

Richard J. Pearson, PE, PTOE
Senior Associate Principal

A blue ink signature of Marc Petraro, featuring a stylized 'M' followed by a series of loops and a long horizontal stroke.

Marc Petraro, PE
Project Manager

APPENDIX A

TABLES

TABLE 1**PROPOSED DEVELOPMENT VOLUMES⁽¹⁾**

LAND USE	PEAK WEEKDAY AM HOUR			PEAK WEEKDAY PM HOUR			PEAK SATURDAY MIDDAY HOUR			PEAK SATURDAY PM HOUR		
	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
a. Proposed 25 Unit Apartment Building Driveway Volumes (ITE Code 220)	3	13	16	10	6	16	7	6	13	7	6	13
b. Proposed 100 Seat Theater Driveway Volumes (ITE Code 443)	0	0	0	27	5	32	31	5	36	31	5	36
c . Proposed 2,800 s.f. Community Center Driveway Volumes (ITE Code 495)	4	2	6	4	4	8	2	1	3	1	2	3
d . Proposed 1,250 s.f. Museum Driveway Volumes (ITE Code 580)	1	0	1	0	1	1	1	0	1	0	1	1
e . Proposed 2,000 s.f. Office Building Driveway Volumes (ITE Code 710)	3	0	3	1	2	3	1	0	1	1	0	1
f. Total Development Volumes	11	15	26	42	18	60	42	12	54	40	14	54

Notes:

(1) The projected traffic is based on ITE (Institute of Transportation Engineers) Trip Generation Manual, 9th Edition.

TABLE 2**INTERSECTION OPERATIONS-PEAK WEEKDAY AM HOUR**

INTERSECTION	APPROACH	LANE GROUP	2015 EXISTING			2022 NO BUILD			2022 BUILD		
			V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾
1. Somerstown Road & Site Driveway A (Unsignalized)	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	-	-	A	-	-	A	0.00	8.8	A
2. Somerstown Road & Site Driveway B (Unsignalized)	WESTBOUND	LEFT/RIGHT	-	-	A	-	-	A			
	NORTHBOUND	THRU	-	-	-	-	-	-		N/A	
	SOUTHBOUND	THRU	-	-	-	-	-	-			
2a. Somerstown Road & Site Driveway B (Unsignalized)	WESTBOUND	LEFT/RIGHT							0.04	13.9	B
	NORTHBOUND	THRU/RIGHT		N/A			N/A		-	-	-
	SOUTHBOUND	LEFT/THRU							0.01	8.9	A

TABLE 3**INTERSECTION OPERATIONS-PEAK WEEKDAY PM HOUR**

INTERSECTION	APPROACH	LANE GROUP	2015 EXISTING			2022 NO BUILD			2022 BUILD		
			V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾
1. Somerstown Road & Site Driveway A (Unsignalized)	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	-	-	A	-	-	A	0.01	7.7	A
2. Somerstown Road & Site Driveway B (Unsignalized)	WESTBOUND	LEFT/RIGHT	-	-	A	-	-	A			
	NORTHBOUND	THRU	-	-	-	-	-	-		N/A	
	SOUTHBOUND	THRU	-	-	-	-	-	-			
2a. Somerstown Road & Site Driveway B (Unsignalized)	WESTBOUND	LEFT/RIGHT							0.03	10.8	B
	NORTHBOUND	THRU/RIGHT		N/A			N/A		-	-	-
	SOUTHBOUND	LEFT/THRU							0.02	7.7	A

Notes:

- (1) V/C represents volume/capacity ratio
(2) Delay is average seconds delay per vehicle
(3) LOS represents level of service

TABLE 4**INTERSECTION OPERATIONS-PEAK SATURDAY MIDDAY HOUR**

INTERSECTION	APPROACH	LANE GROUP	2015 EXISTING			2022 NO BUILD			2022 BUILD		
			V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾
1. Somerstown Road & Site Driveway A (Unsignalized)	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	-	-	A	-	-	A	0.01	7.8	A
2. Somerstown Road & Site Driveway B (Unsignalized)	WESTBOUND	LEFT/RIGHT	-	-	A	-	-	A			
	NORTHBOUND	THRU	-	-	-	-	-	-		N/A	
	SOUTHBOUND	THRU	-	-	-	-	-	-			
2a. Somerstown Road & Site Driveway B (Unsignalized)	WESTBOUND	LEFT/RIGHT							0.02	10.4	B
	NORTHBOUND	THRU/RIGHT		N/A			N/A		-	-	-
	SOUTHBOUND	LEFT/THRU							0.02	7.8	A

TABLE 5**INTERSECTION OPERATIONS-PEAK SATURDAY PM HOUR**

INTERSECTION	APPROACH	LANE GROUP	2015 EXISTING			2022 NO BUILD			2022 BUILD		
			V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾	V/C ⁽¹⁾	DELAY ⁽²⁾	LOS ⁽³⁾
1. Somerstown Road & Site Driveway A (Unsignalized)	NORTHBOUND	THRU/RIGHT	-	-	-	-	-	-	-	-	-
	SOUTHBOUND	LEFT/THRU	-	-	A	-	-	A	0.01	7.6	A
2. Somerstown Road & Site Driveway B (Unsignalized)	WESTBOUND	LEFT/RIGHT	-	-	A	-	-	A			
	NORTHBOUND	THRU	-	-	-	-	-	-		N/A	
	SOUTHBOUND	THRU	-	-	-	-	-	-			
2a. Somerstown Road & Site Driveway B (Unsignalized)	WESTBOUND	LEFT/RIGHT							0.02	9.8	A
	NORTHBOUND	THRU/RIGHT		N/A			N/A		-	-	-
	SOUTHBOUND	LEFT/THRU							0.02	7.6	A

Notes:

- (1) V/C represents volume/capacity ratio
(2) Delay is average seconds delay per vehicle
(3) LOS represents level of service

TABLE AR1

INTERSECTION NAME: Somerstown Road & Site Driveway A

TOTAL ACCIDENTS: 1

INTERSECTION NUMBER: 1

TIME PERIOD: 07/21/2013 - 07/20/2016

Day of Week	Number	%
Sunday		
Monday		
Tuesday	1	100
Wednesday		
Thursday		
Friday		
Saturday		
Time of Day	Number	%
6 am-10 am		
10 am-4 pm	1	100
4 pm-7 pm		
7 pm-12 Mid		
12 Mid-6 am		
Weather	Number	%
Clear	1	100
Cloudy		
Fog		
Rain		
Sleet/Snow		
Pavement	Number	%
Dry	1	100
Snow/Ice		
Wet		
Light Conditions	Number	%
Day	1	100
Night		
Dawn/Dusk		

Accident Type	Number	%
Rear End		
Sideswipe		
Left Turn		
Right Turn		
Right Angle		
Head On		
Bicyclist		
Pedestrian		
Fixed Object (Mailbox)	1	100
Unknown		
Severity	Number	%
Fatal Injury		
Non-Fatal Injury		
Property-Damage Only	1	100
Time of Year	Number	%
Winter (Dec-Feb)		
Spring (Mar-May)		
Summer (June-Aug)	1	100
Fall (Sep-Nov)		
Contributing Factors	Number	%
Driver Inattention /Distraction	1.00	100
Following Too Closely		
Traffic Control Disregard		
Unsafe Speed		
Pavement Slippery		
Unknown		

Accident Rate Calculations

Total Volume:	6,480	vehicles per day (AADT Source: JMC base counts)
	2.37	Million Vehicles per Year
	0.3	Average number of accidents per year
	0.14	Accident Rate in accidents per Million entering vehicles (MEV)
	0.16	NYSDOT Mean collision rate (Urban 3-leg unsignalized intersection)

TABLE S-1

TRAVEL SPEED SURVEY

LOCATION: Somertown Road (NY 133)

DATE: 7/21/2016

AT: 40 Somertown Road Driveway

DIRECTION: Southbound

TIME: 9:00 - 9:50 AM

#	MPH	#	MPH	#	MPH	#	MPH
1	41	26	18	51	42	76	42
2	38	27	45	52	42	77	42
3	42	28	46	53	41	78	39
4	42	29	52	54	39	79	35
5	42	30	43	55	42	80	41
6	39	31	43	56	44	81	40
7	40	32	39	57	43	82	42
8	40	33	41	58	44	83	43
9	39	34	42	59	39	84	48
10	39	35	42	60	35	85	49
11	45	36	38	61	36	86	53
12	43	37	39	62	48	87	42
13	41	38	40	63	44	88	42
14	42	39	41	64	37	89	43
15	38	40	42	65	38	90	42
16	38	41	42	66	41	91	42
17	39	42	41	67	40	92	38
18	43	43	43	68	40	93	39
19	43	44	44	69	42	94	42
20	38	45	39	70	40	95	44
21	41	46	39	71	41	96	42
22	45	47	41	72	42	97	41
23	47	48	43	73	46	98	38
24	37	49	42	74	46	99	39
25	38	50	44	75	41	100	43

Posted Speed Limit: 35 mph

85th Percentile Speed: 44 mph

Desirable Stopping Sight Distance for Left Turn from Stop:

$$SSD = 1.47 V t + (1.075 V^2 / a) = 1.47 (44) (2.5) + (1.075 (44)^2 / 11.2) = 348 \text{ ft}$$

Desirable Intersection Sight Distance for Left Turn from Stop:

$$ISD = 1.47 V_{\text{major}} T_g = 1.47 (44) (6.5) = 485 \text{ ft}$$

Approximate Available Sight Distance for Left Turn from Stop: 170 ft

TABLE S-2

TRAVEL SPEED SURVEY

LOCATION: Somertown Road (NY 133)

DATE: 7/21/2016

AT: 40 Somertown Road Driveway

DIRECTION: Northbound

TIME: 10:00 - 10:30 AM

#	MPH	#	MPH	#	MPH	#	MPH
1	41	26	42	51	40	76	41
2	41	27	38	52	38	77	42
3	44	28	39	53	43	78	42
4	43	29	39	54	39	79	44
5	43	30	41	55	41	80	39
6	38	31	44	56	42	81	36
7	39	32	58	57	39	82	40
8	38	33	56	58	40	83	42
9	42	34	48	59	41	84	39
10	42	35	38	60	44	85	41
11	44	36	39	61	43	86	43
12	41	37	37	62	47	87	42
13	41	38	37	63	47	88	42
14	42	39	41	64	42	89	43
15	44	40	42	65	43	90	42
16	42	41	41	66	42	91	42
17	43	42	41	67	38	92	39
18	41	43	46	68	41	93	41
19	40	44	46	69	42	94	38
20	40	45	45	70	41	95	42
21	43	46	43	71	40	96	46
22	42	47	43	72	46	97	45
23	40	48	42	73	45	98	42
24	40	49	41	74	45	99	43
25	40	50	41	75	42	100	43

Posted Speed Limit: 35 mph

85th Percentile Speed: 44 mph

Desirable Stopping Sight Distance for Right Turn from Stop:

$$SSD = 1.47 V t + (1.075 V^2 / a) = 1.47 (44) (2.5) + (1.075 (44)^2 / 11.2) = 348 \text{ ft}$$

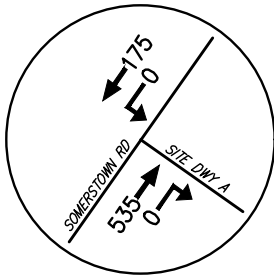
Desirable Intersection Sight Distance for Right Turn from Stop:

$$ISD = 1.47 V_{\text{major}} T_g = 1.47 (44) (7.5) = 420 \text{ ft}$$

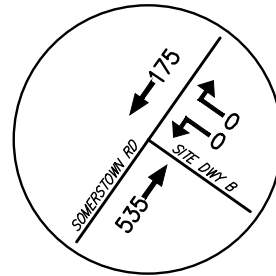
Approximate Available Sight Distance for Right Turn from Stop: 550 ft

APPENDIX B

FIGURES



1 SOMERSTOWN ROAD
& SITE DRIVEWAY A



2 SOMERSTOWN ROAD
& SITE DRIVEWAY B



BETHANY ARTS COMMUNITY

40 SOMERSTOWN ROAD

TOWN OF OSSINING, NEW YORK

2016 EXISTING VOLUMES

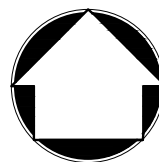
PEAK WEEKDAY AM HOUR (7:15 - 8:15)

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 01

SCALE: 1" = 500'



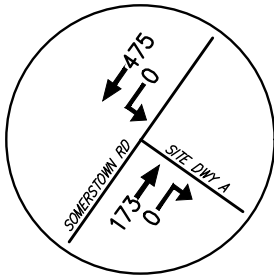
120 BEDFORD RD
ARMONK
NY 10504

(914) 273-5225
fax 273-2102

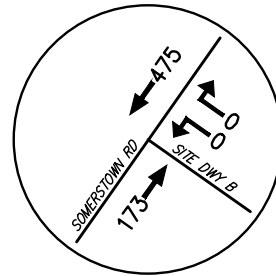
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1 SOMERSTOWN ROAD
& SITE DRIVEWAY A



2 SOMERSTOWN ROAD
& SITE DRIVEWAY B



BETHANY ARTS COMMUNITY

40 SOMERSTOWN ROAD

TOWN OF OSSINING, NEW YORK

2016 EXISTING VOLUMES

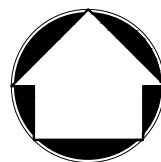
PEAK WEEKDAY PM HOUR (4:30 - 5:30)

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 02

SCALE: 1" = 500'



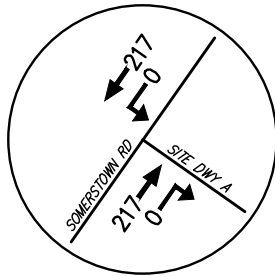
120 BEDFORD RD
ARMONK
NY 10504

(914) 273-5225
fax 273-2102

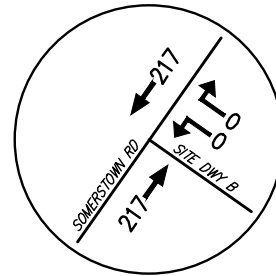
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TOWN OF OSSINING, NEW YORK

2016 EXISTING VOLUMES

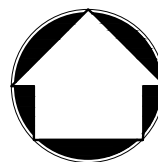
PEAK SATURDAY MIDDAY HOUR (12:45 - 1:45)

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 03

SCALE: 1" = 500'



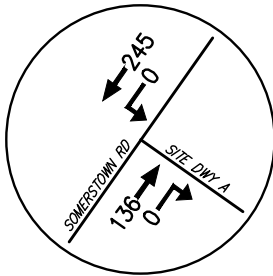
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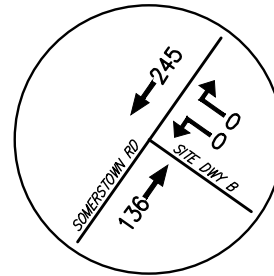
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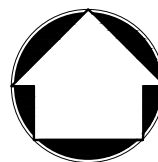
PEAK SATURDAY PM HOUR (6:45 - 7:45)

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 04

SCALE: 1" = 500'



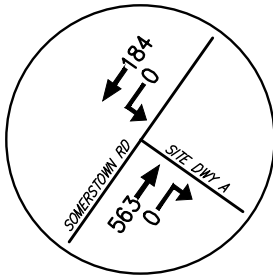
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NY 10504

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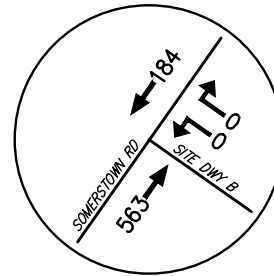
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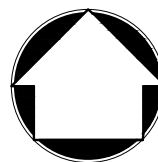
PEAK WEEKDAY AM HOUR

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 05

SCALE: 1" = 500'



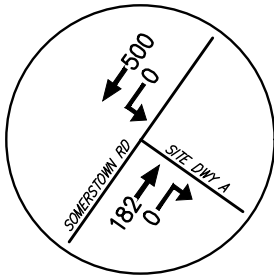
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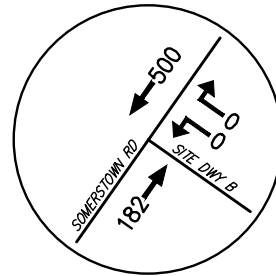


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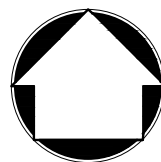
PEAK WEEKDAY PM HOUR

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 06

SCALE: 1" = 500'



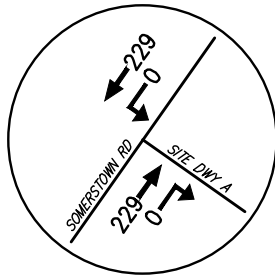
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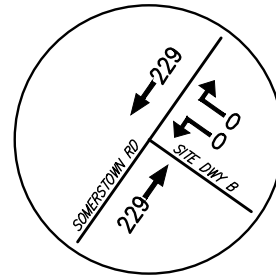


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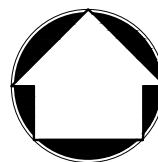
PEAK SATURDAY MIDDAY HOUR

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 07

SCALE: 1" = 500'



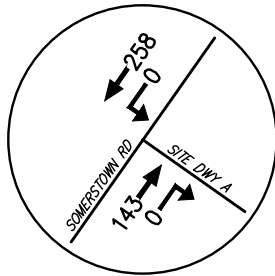
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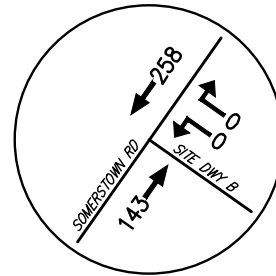
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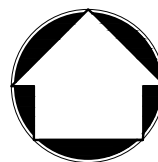
PEAK SATURDAY PM HOUR

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 08

SCALE: 1" = 500'



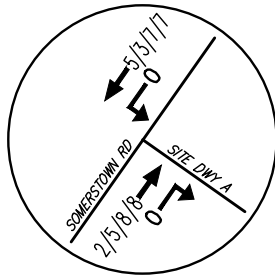
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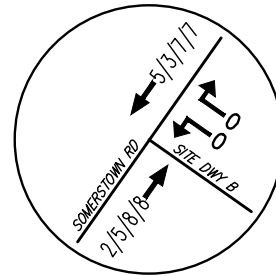
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LEGEND: PEAK WEEKDAY AM HOUR / PEAK WEEKDAY PM HOUR / PEAK SATURDAY MIDDAY HOUR / PEAK SATURDAY PM HOUR



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OTHER DEVELOPMENT VOLUMES

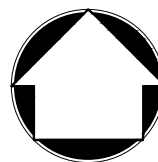
HIGHVIEW FARMS

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 09

SCALE: 1" = 500'



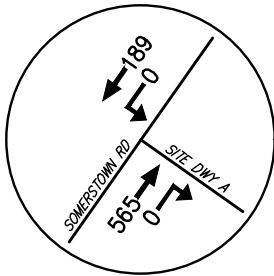
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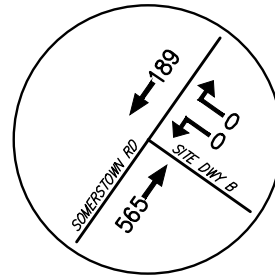
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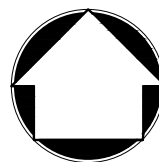
PEAK WEEKDAY AM HOUR (7:15 - 8:15)

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 10

SCALE: 1" = 500'



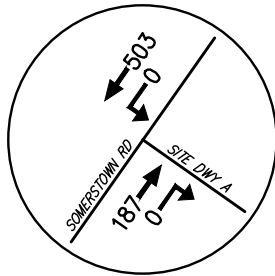
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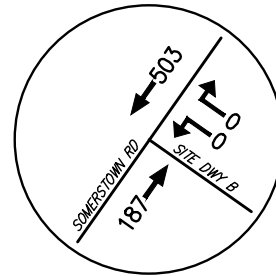


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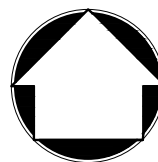
PEAK WEEKDAY PM HOUR (4:30 - 5:30)

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 11

SCALE: 1" = 500'



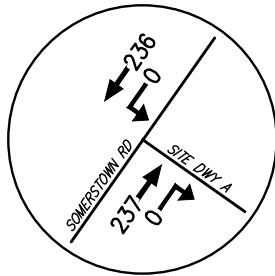
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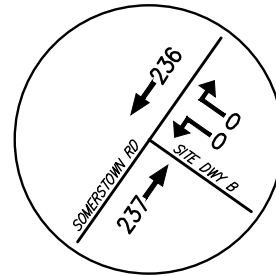
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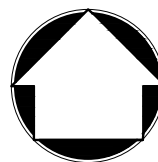
PEAK SATURDAY MIDDAY HOUR (12:45 - 1:45)

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 12

SCALE: 1" = 500'



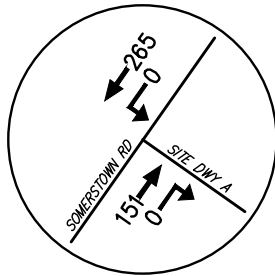
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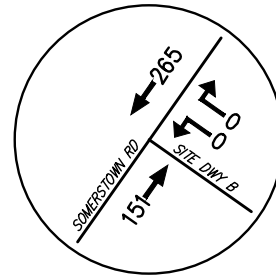
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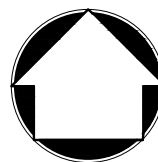
PEAK SATURDAY PM HOUR (6:45 - 7:45)

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 13

SCALE: 1" = 500'



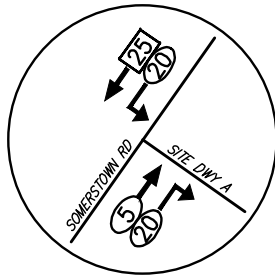
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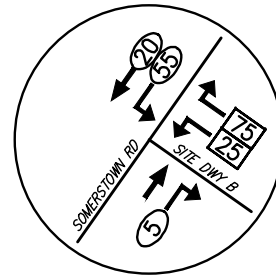
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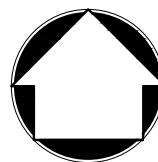
PRIMARY TRIP DISTRIBUTIONS

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 14

SCALE: 1" = 500'



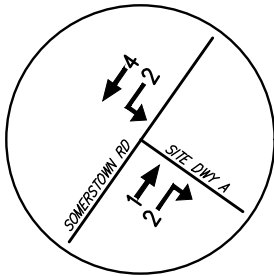
120 BEDFORD RD
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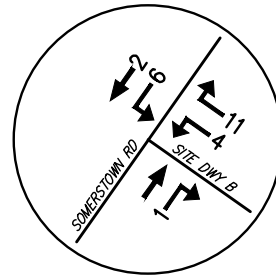
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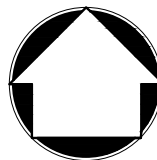
PEAK WEEKDAY AM HOUR

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 15

SCALE: 1" = 500'



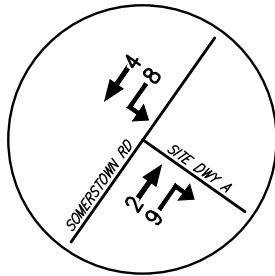
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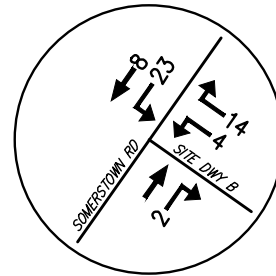
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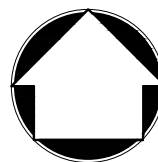
PEAK WEEKDAY PM HOUR

DATE: 08/22/2016

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FIGURE: 16

SCALE: 1" = 500'



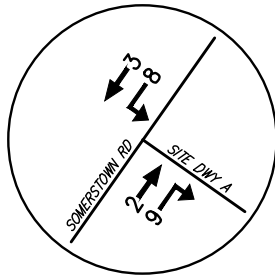
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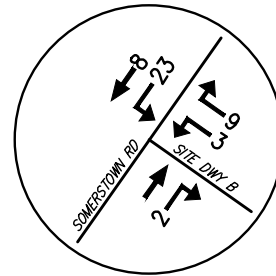
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1 SOMERSTOWN ROAD
& SITE DRIVEWAY A



2 SOMERSTOWN ROAD
& SITE DRIVEWAY B



BETHANY ARTS COMMUNITY

40 SOMERSTOWN ROAD

TOWN OF OSSINING, NEW YORK

PRIMARY VOLUMES

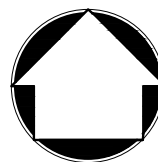
PEAK SATURDAY MIDDAY HOUR

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 17

SCALE: 1" = 500'



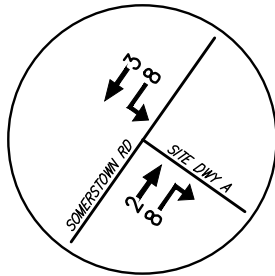
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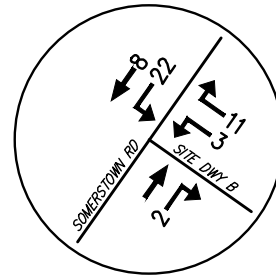
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PRIMARY VOLUMES

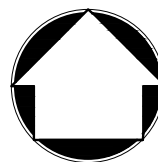
PEAK SATURDAY PM HOUR

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 18

SCALE: 1" = 500'



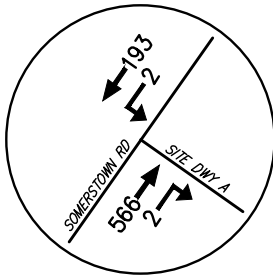
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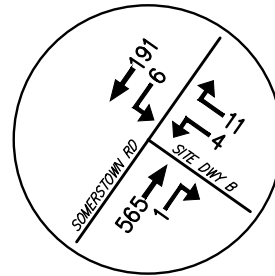
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BETHANY ARTS COMMUNITY

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2021 BUILD VOLUMES

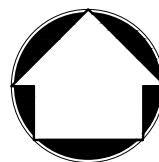
PEAK WEEKDAY AM HOUR (7:15 - 8:15)

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 19

SCALE: 1" = 500'



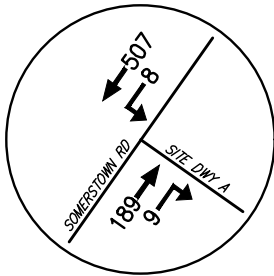
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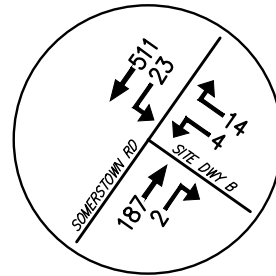


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2

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40 SOMERSTOWN ROAD

TOWN OF OSSINING, NEW YORK

2021 BUILD VOLUMES

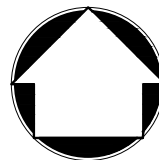
PEAK WEEKDAY PM HOUR (4:30 - 5:30)

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 20

SCALE: 1" = 500'



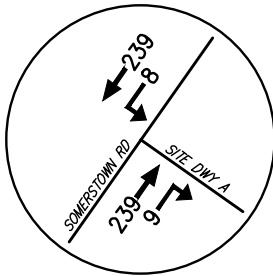
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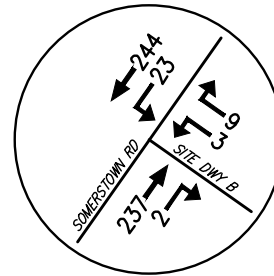
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2021 BUILD VOLUMES

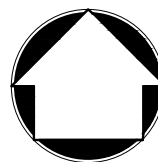
PEAK SATURDAY MIDDAY HOUR (12:45 - 1:45)

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 21

SCALE: 1" = 500'



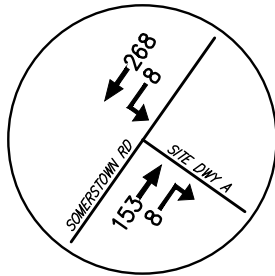
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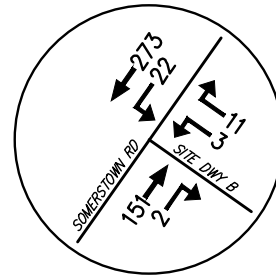
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BETHANY ARTS COMMUNITY

40 SOMERSTOWN ROAD

TOWN OF OSSINING, NEW YORK

2021 BUILD VOLUMES

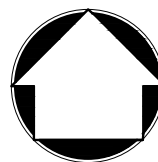
PEAK SATURDAY PM HOUR (6:45 - 7:45)

DATE: 08/22/2016

JMC PROJECT: 16146

FIGURE: 22

SCALE: 1" = 500'



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APPENDIX C

CAPACITY ANALYSES

Lanes, Volumes, Timings
1: Somerstown Road & Site Dwy A

2016-EX-AM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	535	0	0	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		2%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1783	0	0	1767
Flt Permitted						
Satd. Flow (perm)	1782	0	1783	0	0	1767
Link Speed (mph)	30		35			35
Link Distance (ft)	395		299			390
Travel Time (s)	9.0		5.8			7.6
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	2%	0%	0%	5%
Adj. Flow (vph)	0	0	622	0	0	203
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	622	0	0	203
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.06	1.06	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	31.5%		ICU Level of Service A			
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	0	0		535	0	0 175
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	-1	-		2	-	- -2
Peak Hour Factor	86	86		86	86	86 86
Heavy Vehicles, %	0	0		2	0	0 5
Mvmt Flow	0	0		622	0	0 203
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	825	622	0	0	622	0
Stage 1	622	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	361	499	-	-	969	-
Stage 1	558	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	361	499	-	-	969	-
Mov Cap-2 Maneuver	361	-	-	-	-	-
Stage 1	558	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	969	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
2: Somerstown Road & Site Dwy B

2016-EX-AM
8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	535	0	0	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		0%			0%
Storage Length (ft)	0	0		1	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1801	0	0	1749
Flt Permitted						
Satd. Flow (perm)	1782	0	1801	0	0	1749
Link Speed (mph)	30		35			35
Link Distance (ft)	298		390			347
Travel Time (s)	6.8		7.6			6.8
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	2%	0%	0%	5%
Adj. Flow (vph)	0	0	622	0	0	203
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	622	0	0	203
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	31.5%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	535	0	0	175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	2	0	0	5
Mvmt Flow	0	0	622	0	0	203
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	825	622	0	0	622	0
Stage 1	622	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	361	499	-	-	969	-
Stage 1	558	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	361	499	-	-	969	-
Mov Cap-2 Maneuver	361	-	-	-	-	-
Stage 1	558	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	969	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
1: Somerstown Road & Site Dwy A

2016-EX-PM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	173	0	0	475
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		2%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1748	0	0	1837
Flt Permitted						
Satd. Flow (perm)	1782	0	1748	0	0	1837
Link Speed (mph)	30		35			35
Link Distance (ft)	395		299			390
Travel Time (s)	9.0		5.8			7.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	4%	0%	0%	1%
Adj. Flow (vph)	0	0	192	0	0	528
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	192	0	0	528
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.06	1.06	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 28.3%			ICU Level of Service A			
Analysis Period (min) 15						

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	173	0	0	475
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	2	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	4	0	0	1
Mvmt Flow	0	0	192	0	0	528

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	720	192	0
Stage 1	192	-	-
Stage 2	528	-	-
Critical Hdwy	6.2	6.1	4.1
Critical Hdwy Stg 1	5.2	-	-
Critical Hdwy Stg 2	5.2	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	414	859	1394
Stage 1	854	-	-
Stage 2	613	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	414	859	1394
Mov Cap-2 Maneuver	414	-	-
Stage 1	854	-	-
Stage 2	613	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1394
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Lanes, Volumes, Timings
2: Somerstown Road & Site Dwy B

2016-EX-PM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	173	0	0	475
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		0%			0%
Storage Length (ft)	0	0		1	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1766	0	0	1818
Flt Permitted						
Satd. Flow (perm)	1782	0	1766	0	0	1818
Link Speed (mph)	30		35			35
Link Distance (ft)	298		390			347
Travel Time (s)	6.8		7.6			6.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	4%	0%	0%	1%
Adj. Flow (vph)	0	0	192	0	0	528
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	192	0	0	528
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	28.3%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	173	0	0	475
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	4	0	0	1
Mvmt Flow	0	0	192	0	0	528
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	720	192	0	0	192	0
Stage 1	192	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	414	859	-	-	1394	-
Stage 1	854	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	414	859	-	-	1394	-
Mov Cap-2 Maneuver	414	-	-	-	-	-
Stage 1	854	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1394	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
1: Somerstown Road & Site Dwy A

2016-EX-SAT-MID

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	217	0	0	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		2%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1800	0	0	1819
Flt Permitted						
Satd. Flow (perm)	1782	0	1800	0	0	1819
Link Speed (mph)	30		35			35
Link Distance (ft)	395		299			390
Travel Time (s)	9.0		5.8			7.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	2%
Adj. Flow (vph)	0	0	241	0	0	241
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	241	0	0	241
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.06	1.06	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	14.8%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	217	0	0	217
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	2	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	0	241	0	0	241
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	482	241	0	0	241	0
Stage 1	241	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	562	808	-	-	1337	-
Stage 1	815	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	562	808	-	-	1337	-
Mov Cap-2 Maneuver	562	-	-	-	-	-
Stage 1	815	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1337	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
2: Somerstown Road & Site Dwy B

2016-EX-SAT-MID

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	217	0	0	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		0%			0%
Storage Length (ft)	0	0		1	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1818	0	0	1801
Flt Permitted						
Satd. Flow (perm)	1782	0	1818	0	0	1801
Link Speed (mph)	30		35			35
Link Distance (ft)	298		390			347
Travel Time (s)	6.8		7.6			6.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	2%
Adj. Flow (vph)	0	0	241	0	0	241
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	241	0	0	241
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	14.8%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	217	0	0	217
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	0	241	0	0	241
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	482	241	0	0	241	0
Stage 1	241	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	562	808	-	-	1337	-
Stage 1	815	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	562	808	-	-	1337	-
Mov Cap-2 Maneuver	562	-	-	-	-	-
Stage 1	815	-	-	-	-	-
Stage 2	815	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1337	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
1: Somerstown Road & Site Dwy A

2016-EX-SAT-PM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	136	0	0	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		2%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1800	0	0	1837
Flt Permitted						
Satd. Flow (perm)	1782	0	1800	0	0	1837
Link Speed (mph)	30		35			35
Link Distance (ft)	395		299			390
Travel Time (s)	9.0		5.8			7.6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Adj. Flow (vph)	0	0	156	0	0	282
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	156	0	0	282
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.06	1.06	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	16.2%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	136	0	0	245
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	2	-	-	-2
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	0	0	156	0	0	282

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	438	156	0
Stage 1	156	-	-
Stage 2	282	-	-
Critical Hdwy	6.2	6.1	4.1
Critical Hdwy Stg 1	5.2	-	-
Critical Hdwy Stg 2	5.2	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	594	899	1436
Stage 1	885	-	-
Stage 2	783	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	594	899	1436
Mov Cap-2 Maneuver	594	-	-
Stage 1	885	-	-
Stage 2	783	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1436
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

Lanes, Volumes, Timings
2: Somerstown Road & Site Dwy B

2016-EX-SAT-PM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	136	0	0	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		0%			0%
Storage Length (ft)	0	0		1	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1818	0	0	1818
Flt Permitted						
Satd. Flow (perm)	1782	0	1818	0	0	1818
Link Speed (mph)	30		35			35
Link Distance (ft)	298		390			347
Travel Time (s)	6.8		7.6			6.8
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Adj. Flow (vph)	0	0	156	0	0	282
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	156	0	0	282
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	16.2%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	136	0	0	245
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	0	0	156	0	0	282
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	438	156	0	0	156	0
Stage 1	156	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	594	899	-	-	1436	-
Stage 1	885	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	594	899	-	-	1436	-
Mov Cap-2 Maneuver	594	-	-	-	-	-
Stage 1	885	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1436	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
1: Somerstown Road & Site Dwy A

2021-NB-AM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	565	0	0	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		2%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1783	0	0	1767
Flt Permitted						
Satd. Flow (perm)	1782	0	1783	0	0	1767
Link Speed (mph)	30		35			35
Link Distance (ft)	395		299			390
Travel Time (s)	9.0		5.8			7.6
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	2%	0%	0%	5%
Adj. Flow (vph)	0	0	657	0	0	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	657	0	0	220
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.06	1.06	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 33.1%			ICU Level of Service A			
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	565	0	0	189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	2	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	2	0	0	5
Mvmt Flow	0	0	657	0	0	220
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	877	657	0	0	657	0
Stage 1	657	-	-	-	-	-
Stage 2	220	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	338	477	-	-	940	-
Stage 1	539	-	-	-	-	-
Stage 2	831	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	338	477	-	-	940	-
Mov Cap-2 Maneuver	338	-	-	-	-	-
Stage 1	539	-	-	-	-	-
Stage 2	831	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	940	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
2: Somerstown Road & Site Dwy B

2021-NB-AM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	565	0	0	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		0%			0%
Storage Length (ft)	0	0		1	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1801	0	0	1749
Flt Permitted						
Satd. Flow (perm)	1782	0	1801	0	0	1749
Link Speed (mph)	30		35			35
Link Distance (ft)	298		390			347
Travel Time (s)	6.8		7.6			6.8
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	2%	0%	0%	5%
Adj. Flow (vph)	0	0	657	0	0	220
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	657	0	0	220
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	33.1%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	0	0		565	0	0 189
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	-1	-		0	-	- 0
Peak Hour Factor	86	86		86	86	86 86
Heavy Vehicles, %	0	0		2	0	0 5
Mvmt Flow	0	0		657	0	0 220
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	877	657		0	0	657 0
Stage 1	657	-		-	-	- -
Stage 2	220	-		-	-	- -
Critical Hdwy	6.2	6.1		-	-	4.1 -
Critical Hdwy Stg 1	5.2	-		-	-	- -
Critical Hdwy Stg 2	5.2	-		-	-	- -
Follow-up Hdwy	3.5	3.3		-	-	2.2 -
Pot Cap-1 Maneuver	338	477		-	-	940 -
Stage 1	539	-		-	-	- -
Stage 2	831	-		-	-	- -
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	338	477		-	-	940 -
Mov Cap-2 Maneuver	338	-		-	-	- -
Stage 1	539	-		-	-	- -
Stage 2	831	-		-	-	- -
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	940	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
1: Somerstown Road & Site Dwy A

2021-NB-PM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	187	0	0	503
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		2%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1748	0	0	1837
Flt Permitted						
Satd. Flow (perm)	1782	0	1748	0	0	1837
Link Speed (mph)	30		35			35
Link Distance (ft)	395		299			390
Travel Time (s)	9.0		5.8			7.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	4%	0%	0%	1%
Adj. Flow (vph)	0	0	208	0	0	559
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	208	0	0	559
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.06	1.06	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 29.8%			ICU Level of Service A			
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	187	0	0	503
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	2	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	4	0	0	1
Mvmt Flow	0	0	208	0	0	559
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	767	208	0	0	208	0
Stage 1	208	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	389	842	-	-	1375	-
Stage 1	841	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	389	842	-	-	1375	-
Mov Cap-2 Maneuver	389	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1375	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
2: Somerstown Road & Site Dwy B

2021-NB-PM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	187	0	0	503
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		0%			0%
Storage Length (ft)	0	0		1	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1766	0	0	1818
Flt Permitted						
Satd. Flow (perm)	1782	0	1766	0	0	1818
Link Speed (mph)	30		35			35
Link Distance (ft)	298		390			347
Travel Time (s)	6.8		7.6			6.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	4%	0%	0%	1%
Adj. Flow (vph)	0	0	208	0	0	559
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	208	0	0	559
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	29.8%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	187	0	0	503
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	4	0	0	1
Mvmt Flow	0	0	208	0	0	559
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	767	208	0	0	208	0
Stage 1	208	-	-	-	-	-
Stage 2	559	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	389	842	-	-	1375	-
Stage 1	841	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	389	842	-	-	1375	-
Mov Cap-2 Maneuver	389	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1375	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
1: Somerstown Road & Site Dwy A

2021-NB-SAT-MID

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	237	0	0	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		2%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1800	0	0	1819
Flt Permitted						
Satd. Flow (perm)	1782	0	1800	0	0	1819
Link Speed (mph)	30		35			35
Link Distance (ft)	395		299			390
Travel Time (s)	9.0		5.8			7.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	2%
Adj. Flow (vph)	0	0	263	0	0	262
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	263	0	0	262
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.06	1.06	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 15.8%			ICU Level of Service A			
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	237	0	0	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	2	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	0	263	0	0	262
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	525	263	0	0	263	0
Stage 1	263	-	-	-	-	-
Stage 2	262	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	532	786	-	-	1313	-
Stage 1	797	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	532	786	-	-	1313	-
Mov Cap-2 Maneuver	532	-	-	-	-	-
Stage 1	797	-	-	-	-	-
Stage 2	798	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1313	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
2: Somerstown Road & Site Dwy B

2021-NB-SAT-MID

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	237	0	0	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		0%			0%
Storage Length (ft)	0	0		1	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1818	0	0	1801
Flt Permitted						
Satd. Flow (perm)	1782	0	1818	0	0	1801
Link Speed (mph)	30		35			35
Link Distance (ft)	298		390			347
Travel Time (s)	6.8		7.6			6.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	2%
Adj. Flow (vph)	0	0	263	0	0	262
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	263	0	0	262
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	15.8%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	237	0	0	236
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	0	263	0	0	262

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	525	263	0
Stage 1	263	-	-
Stage 2	262	-	-
Critical Hdwy	6.2	6.1	4.1
Critical Hdwy Stg 1	5.2	-	-
Critical Hdwy Stg 2	5.2	-	-
Follow-up Hdwy	3.5	3.3	2.2
Pot Cap-1 Maneuver	532	786	1313
Stage 1	797	-	-
Stage 2	798	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	532	786	1313
Mov Cap-2 Maneuver	532	-	-
Stage 1	797	-	-
Stage 2	798	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1313	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	0	-
HCM Lane LOS	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	-

Lanes, Volumes, Timings
1: Somerstown Road & Site Dwy A

2021-NB-SAT-PM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	151	0	0	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		2%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1800	0	0	1837
Flt Permitted						
Satd. Flow (perm)	1782	0	1800	0	0	1837
Link Speed (mph)	30		35			35
Link Distance (ft)	395		299			390
Travel Time (s)	9.0		5.8			7.6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Adj. Flow (vph)	0	0	174	0	0	305
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	174	0	0	305
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.06	1.06	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 17.3%			ICU Level of Service A			
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	151	0	0	265
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	2	-	-	-2
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	0	0	174	0	0	305
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	479	174	0	0	174	0
Stage 1	174	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	564	879	-	-	1415	-
Stage 1	870	-	-	-	-	-
Stage 2	765	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	564	879	-	-	1415	-
Mov Cap-2 Maneuver	564	-	-	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	765	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1415	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
2: Somerstown Road & Site Dwy B

2021-NB-SAT-PM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	151	0	0	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		0%			0%
Storage Length (ft)	0	0		1	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1818	0	0	1818
Flt Permitted						
Satd. Flow (perm)	1782	0	1818	0	0	1818
Link Speed (mph)	30		35			35
Link Distance (ft)	298		390			347
Travel Time (s)	6.8		7.6			6.8
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Adj. Flow (vph)	0	0	174	0	0	305
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	174	0	0	305
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	17.3%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	151	0	0	265
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	0	0	174	0	0	305
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	479	174	0	0	174	0
Stage 1	174	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	564	879	-	-	1415	-
Stage 1	870	-	-	-	-	-
Stage 2	765	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	564	879	-	-	1415	-
Mov Cap-2 Maneuver	564	-	-	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	765	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1415	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
1: Somerstown Road & Site Dwy A

2021-BD-AM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	566	2	2	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		2%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1782	0	1783	0	0	1767
Flt Permitted						
Satd. Flow (perm)	1782	0	1783	0	0	1767
Link Speed (mph)	30		35			35
Link Distance (ft)	395		299			390
Travel Time (s)	9.0		5.8			7.6
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	2%	0%	0%	5%
Adj. Flow (vph)	0	0	658	2	2	224
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	660	0	0	226
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.06	1.06	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 33.2%			ICU Level of Service A			
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	566	2	2	193
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	2	-	-	-2
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	2	0	0	5
Mvmt Flow	0	0	658	2	2	224
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	888	659	0	0	660	0
Stage 1	659	-	-	-	-	-
Stage 2	229	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	333	476	-	-	938	-
Stage 1	538	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	332	476	-	-	938	-
Mov Cap-2 Maneuver	332	-	-	-	-	-
Stage 1	538	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0.1	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	938	-	
HCM Lane V/C Ratio	-	-	-	0.002	-	
HCM Control Delay (s)	-	-	0	8.8	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
2: Somerstown Road & Site Dwy B

2021-BD-AM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	4	11	565	1	6	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	11	11	11	11
Grade (%)	-1%		0%			0%
Storage Length (ft)	0	0		1	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.902					
Flt Protected	0.986					0.998
Satd. Flow (prot)	1755	0	1801	0	0	1748
Flt Permitted	0.986					0.998
Satd. Flow (perm)	1755	0	1801	0	0	1748
Link Speed (mph)	30		35			35
Link Distance (ft)	298		390			347
Travel Time (s)	6.8		7.6			6.8
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	2%	0%	0%	5%
Adj. Flow (vph)	5	13	657	1	7	222
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	658	0	0	229
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.95	0.95	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	39.8%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	4	11		565	1	6 191
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	-1	-		0	-	- 0
Peak Hour Factor	86	86		86	86	86 86
Heavy Vehicles, %	0	0		2	0	0 5
Mvmt Flow	5	13		657	1	7 222
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	894	658		0	0	658 0
Stage 1	658	-		-	-	- -
Stage 2	236	-		-	-	- -
Critical Hdwy	6.2	6.1		-	-	4.1 -
Critical Hdwy Stg 1	5.2	-		-	-	- -
Critical Hdwy Stg 2	5.2	-		-	-	- -
Follow-up Hdwy	3.5	3.3		-	-	2.2 -
Pot Cap-1 Maneuver	330	476		-	-	939 -
Stage 1	538	-		-	-	- -
Stage 2	819	-		-	-	- -
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	327	476		-	-	939 -
Mov Cap-2 Maneuver	327	-		-	-	- -
Stage 1	538	-		-	-	- -
Stage 2	812	-		-	-	- -
Approach	WB		NB		SB	
HCM Control Delay, s	13.9		0		0.3	
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	424	939	-	
HCM Lane V/C Ratio	-	-	0.041	0.007	-	
HCM Control Delay (s)	-	-	13.9	8.9	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Lanes, Volumes, Timings
1: Somerstown Road & Site Dwy A

2021-BD-PM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	189	9	8	507
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		2%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.994			
Flt Protected						0.999
Satd. Flow (prot)	1782	0	1741	0	0	1835
Flt Permitted						0.999
Satd. Flow (perm)	1782	0	1741	0	0	1835
Link Speed (mph)	30		35			35
Link Distance (ft)	395		299			390
Travel Time (s)	9.0		5.8			7.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	4%	0%	0%	1%
Adj. Flow (vph)	0	0	210	10	9	563
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	220	0	0	572
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.06	1.06	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	36.4%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	0	0		189	9	8 507
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	-1	-		2	-	- -2
Peak Hour Factor	90	90		90	90	90 90
Heavy Vehicles, %	0	0		4	0	0 1
Mvmt Flow	0	0		210	10	9 563
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	796	215	0	0	220	0
Stage 1	215	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	375	835	-	-	1361	-
Stage 1	836	-	-	-	-	-
Stage 2	582	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	371	835	-	-	1361	-
Mov Cap-2 Maneuver	371	-	-	-	-	-
Stage 1	836	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0.1	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1361	-	
HCM Lane V/C Ratio	-	-	-	0.007	-	
HCM Control Delay (s)	-	-	0	7.7	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
2: Somerstown Road & Site Dwy B

2021-BD-PM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	4	14	187	2	23	511
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	11	11	11	11
Grade (%)	-1%		0%			0%
Storage Length (ft)	0	0		1	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.892		0.999			
Flt Protected	0.990					0.998
Satd. Flow (prot)	1742	0	1765	0	0	1816
Flt Permitted	0.990					0.998
Satd. Flow (perm)	1742	0	1765	0	0	1816
Link Speed (mph)	30		35			35
Link Distance (ft)	298		390			347
Travel Time (s)	6.8		7.6			6.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	4%	0%	0%	1%
Adj. Flow (vph)	4	16	208	2	26	568
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	210	0	0	594
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.95	0.95	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	51.5%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	4	14		187	2	23 511
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	-1	-		0	-	- 0
Peak Hour Factor	90	90		90	90	90 90
Heavy Vehicles, %	0	0		4	0	0 1
Mvmt Flow	4	16		208	2	26 568
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	828	209		0	0	210 0
Stage 1	209	-		-	-	- -
Stage 2	619	-		-	-	- -
Critical Hdwy	6.2	6.1		-	-	4.1 -
Critical Hdwy Stg 1	5.2	-		-	-	- -
Critical Hdwy Stg 2	5.2	-		-	-	- -
Follow-up Hdwy	3.5	3.3		-	-	2.2 -
Pot Cap-1 Maneuver	360	841		-	-	1373 -
Stage 1	840	-		-	-	- -
Stage 2	560	-		-	-	- -
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	350	841		-	-	1373 -
Mov Cap-2 Maneuver	350	-		-	-	- -
Stage 1	840	-		-	-	- -
Stage 2	544	-		-	-	- -
Approach	WB		NB		SB	
HCM Control Delay, s	10.8		0		0.3	
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	641	1373	-	
HCM Lane V/C Ratio	-	-	0.031	0.019	-	
HCM Control Delay (s)	-	-	10.8	7.7	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	

Lanes, Volumes, Timings
1: Somerstown Road & Site Dwy A

2021-BD-SAT-MID

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	239	9	8	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		2%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995			
Flt Protected						0.998
Satd. Flow (prot)	1782	0	1792	0	0	1816
Flt Permitted						0.998
Satd. Flow (perm)	1782	0	1792	0	0	1816
Link Speed (mph)	30		35			35
Link Distance (ft)	395		299			390
Travel Time (s)	9.0		5.8			7.6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	2%
Adj. Flow (vph)	0	0	266	10	9	266
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	276	0	0	275
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.06	1.06	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	22.4%		ICU Level of Service A			
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	239	9	8	239
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	2	-	-	-2
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	0	0	266	10	9	266
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	554	271	0	0	276	0
Stage 1	271	-	-	-	-	-
Stage 2	283	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	512	778	-	-	1299	-
Stage 1	791	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	508	778	-	-	1299	-
Mov Cap-2 Maneuver	508	-	-	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	776	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0.3	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1299	-	
HCM Lane V/C Ratio	-	-	-	0.007	-	
HCM Control Delay (s)	-	-	0	7.8	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
2: Somerstown Road & Site Dwy B

2021-BD-SAT-MID

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	3	9	237	2	23	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	11	11	11	11
Grade (%)	-1%		0%			0%
Storage Length (ft)	0	0		1	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.896		0.999			
Flt Protected	0.989					0.996
Satd. Flow (prot)	1748	0	1817	0	0	1797
Flt Permitted	0.989					0.996
Satd. Flow (perm)	1748	0	1817	0	0	1797
Link Speed (mph)	30		35			35
Link Distance (ft)	298		390			347
Travel Time (s)	6.8		7.6			6.8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	1%	0%	0%	2%
Adj. Flow (vph)	3	10	263	2	26	271
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	0	265	0	0	297
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.95	0.95	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	40.0%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	3	9	237	2	23	244
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	3	10	263	2	26	271
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	586	264	0	0	266	0
Stage 1	264	-	-	-	-	-
Stage 2	322	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	492	785	-	-	1310	-
Stage 1	796	-	-	-	-	-
Stage 2	752	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	481	785	-	-	1310	-
Mov Cap-2 Maneuver	481	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	10.4		0		0.7	
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	678	1310	-	
HCM Lane V/C Ratio	-	-	0.02	0.02	-	
HCM Control Delay (s)	-	-	10.4	7.8	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	

Lanes, Volumes, Timings
1: Somerstown Road & Site Dwy A

2021-BD-SAT-PM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	153	8	8	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-1%		2%			-2%
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.993			
Flt Protected						0.999
Satd. Flow (prot)	1782	0	1789	0	0	1835
Flt Permitted						0.999
Satd. Flow (perm)	1782	0	1789	0	0	1835
Link Speed (mph)	30		35			35
Link Distance (ft)	395		299			390
Travel Time (s)	9.0		5.8			7.6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Adj. Flow (vph)	0	0	176	9	9	308
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	185	0	0	317
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.06	1.06	1.03	1.03
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	23.9%		ICU Level of Service A			
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	0	153	8	8	268
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	-1	-	2	-	-	-2
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	1	0	0	1
Mvmt Flow	0	0	176	9	9	308
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	506	180	0	0	185	0
Stage 1	180	-	-	-	-	-
Stage 2	326	-	-	-	-	-
Critical Hdwy	6.2	6.1	-	-	4.1	-
Critical Hdwy Stg 1	5.2	-	-	-	-	-
Critical Hdwy Stg 2	5.2	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	545	872	-	-	1402	-
Stage 1	864	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	541	872	-	-	1402	-
Mov Cap-2 Maneuver	541	-	-	-	-	-
Stage 1	864	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	0		0		0.2	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	-	1402	-	
HCM Lane V/C Ratio	-	-	-	0.007	-	
HCM Control Delay (s)	-	-	0	7.6	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
2: Somerstown Road & Site Dwy B

2021-BD-SAT-PM

8/22/2016

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	3	11	151	2	22	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	11	11	11	11
Grade (%)	-1%		0%			0%
Storage Length (ft)	0	0		1	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.890		0.998			
Flt Protected	0.991					0.996
Satd. Flow (prot)	1740	0	1815	0	0	1813
Flt Permitted	0.991					0.996
Satd. Flow (perm)	1740	0	1815	0	0	1813
Link Speed (mph)	30		35			35
Link Distance (ft)	298		390			347
Travel Time (s)	6.8		7.6			6.8
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	1%	0%	0%	1%
Adj. Flow (vph)	3	13	174	2	25	314
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	0	176	0	0	339
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	13		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.95	0.95	1.04	1.04	1.04	1.04
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	37.0%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR		NBT	NBR	SBL SBT
Vol, veh/h	3	11		151	2	22 273
Conflicting Peds, #/hr	0	0		0	0	0 0
Sign Control	Stop	Stop		Free	Free	Free Free
RT Channelized	-	None		-	None	- None
Storage Length	0	-		-	-	- -
Veh in Median Storage, #	0	-		0	-	- 0
Grade, %	-1	-		0	-	- 0
Peak Hour Factor	87	87		87	87	87 87
Heavy Vehicles, %	0	0		1	0	0 1
Mvmt Flow	3	13		174	2	25 314
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	539	175		0	0	176 0
Stage 1	175	-		-	-	- -
Stage 2	364	-		-	-	- -
Critical Hdwy	6.2	6.1		-	-	4.1 -
Critical Hdwy Stg 1	5.2	-		-	-	- -
Critical Hdwy Stg 2	5.2	-		-	-	- -
Follow-up Hdwy	3.5	3.3		-	-	2.2 -
Pot Cap-1 Maneuver	522	878		-	-	1412 -
Stage 1	869	-		-	-	- -
Stage 2	722	-		-	-	- -
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	511	878		-	-	1412 -
Mov Cap-2 Maneuver	511	-		-	-	- -
Stage 1	869	-		-	-	- -
Stage 2	707	-		-	-	- -
Approach	WB		NB		SB	
HCM Control Delay, s	9.8		0		0.6	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	761	1412	-	
HCM Lane V/C Ratio	-	-	0.021	0.018	-	
HCM Control Delay (s)	-	-	9.8	7.6	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	

APPENDIX D

TURNING MOVEMENT COUNTS

ENTER COUNT DATA ON THIS PAGE

JOB NO:	16146
NAME:	HL
INT #:	1

DATE:	7/21/2016
PERIOD:	7-9AM & 4-6PM
LOCATION:	40 Somertown Rd

CALCULATIONS - DO NOT EDIT THIS SHEET

JOB NO:	16146
NAME:	HL
INT #:	1

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PEDESTRIAN MOVEMENT				TOTAL PEDS	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 7:15 AM	TOTAL	27	79	0	0	0	0	0	0	0	0	0	0	106						
	TRUCK	0	4	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
7:15 - 7:30 AM	TOTAL	34	141	0	0	0	0	0	0	0	0	0	0	175						
	TRUCK	3	1	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
7:30 - 7:45 AM	TOTAL	44	149	0	0	0	0	0	0	0	0	0	0	193						
	TRUCK	1	3	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
7:45 - 8:00 AM	TOTAL	37	99	0	0	0	0	0	0	0	0	0	0	136						
	TRUCK	3	4	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
8:00 - 8:15 AM	TOTAL	60	146	0	0	0	0	0	0	0	0	0	0	206						
	TRUCK	2	2	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
8:15 - 8:30 AM	TOTAL	48	83	4	0	0	0	0	0	0	0	0	0	135						
	TRUCK	1	1	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
8:30 - 8:45 AM	TOTAL	47	68	0	0	0	0	0	0	0	0	0	0	115						
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
8:45 - 9:00 AM	TOTAL	51	69	1	0	0	0	0	0	0	0	0	0	121						
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
4:00 - 4:15 PM	TOTAL	62	84	0	0	0	0	0	0	0	0	0	0	146						
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
4:15 - 4:30 PM	TOTAL	86	41	0	0	0	0	0	0	0	0	0	0	127						
	TRUCK	0	1	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
4:30 - 4:45 PM	TOTAL	103	47	0	0	0	0	0	0	0	0	0	0	150						
	TRUCK	2	1	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
4:45 - 5:00 PM	TOTAL	124	49	0	0	0	0	0	0	0	0	0	0	173						
	TRUCK	3	2	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
5:00 - 5:15 PM	TOTAL	107	38	0	0	0	0	0	0	0	0	0	0	145						
	TRUCK	0	3	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
5:15 - 5:30 PM	TOTAL	141	39	0	0	0	0	0	0	0	0	0	0	180						
	TRUCK	2	1	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
5:30 - 5:45 PM	TOTAL	122	27	0	0	0	0	0	0	0	0	0	0	149						
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	
5:45 - 6:00 PM	TOTAL	98	37	0	0	0	0	0	0	0	0	0	0	135						
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	

DATE:	7/21/2016
PERIOD:	7-9AM & 4-6PM
LOCATION:	40 Somertown Rd

**PEAK HOUR MOVEMENTS & % HEAVY
VEHICLES - DO NOT EDIT THIS SHEET**

JOB NO:	16146
NAME:	HL
INT #:	1

TIME	CLASS	VEHICLE MOVEMENT												TOTAL VEHICLES	PEDESTRIAN MOVEMENT				TOTAL PEDS	INT. PHF
		1	2	3	4	5	6	7	8	9	10	11	12		A	B	C	D		
7:00 - 8:00 AM	TOTAL	142	468	0	0	0	0	0	0	0	0	0	0	610	0	0	0	0	0	0.79
	TRUCK	5%	3%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####		0	0	0	0	0	
7:15 - 8:15 AM	TOTAL	175	535	0	0	0	0	0	0	0	0	0	0	710	0	0	0	0	0	0.86
	TRUCK	5%	2%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####		0	0	0	0	0	
7:30 - 8:30 AM	TOTAL	189	477	4	0	0	0	0	0	0	0	0	0	670	0	0	0	0	0	0.81
	TRUCK	4%	2%	0%	#####	#####	#####	#####	#####	#####	#####	#####	#####		0	0	0	0	0	
7:45 - 8:45 AM	TOTAL	192	396	4	0	0	0	0	0	0	0	0	0	592	0	0	0	0	0	0.72
	TRUCK	3%	2%	0%	#####	#####	#####	#####	#####	#####	#####	#####	#####		0	0	0	0	0	
8:00 - 9:00 AM	TOTAL	206	366	5	0	0	0	0	0	0	0	0	0	577	0	0	0	0	0	0.70
	TRUCK	1%	1%	0%	#####	#####	#####	#####	#####	#####	#####	#####	#####		0	0	0	0	0	
4:00 - 5:00 PM	TOTAL	375	221	0	0	0	0	0	0	0	0	0	0	596	0	0	0	0	0	0.86
	TRUCK	1%	2%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####		0	0	0	0	0	
4:15 - 5:15 PM	TOTAL	420	175	0	0	0	0	0	0	0	0	0	0	595	0	0	0	0	0	0.86
	TRUCK	1%	4%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####		0	0	0	0	0	
4:30 - 5:30 PM	TOTAL	475	173	0	0	0	0	0	0	0	0	0	0	648	0	0	0	0	0	0.90
	TRUCK	1%	4%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####		0	0	0	0	0	
4:45 - 5:45 PM	TOTAL	494	153	0	0	0	0	0	0	0	0	0	0	647	0	0	0	0	0	0.90
	TRUCK	1%	4%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####		0	0	0	0	0	
5:00 - 6:00 PM	TOTAL	468	141	0	0	0	0	0	0	0	0	0	0	609	0	0	0	0	0	0.85
	TRUCK	0%	3%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####		0	0	0	0	0	

- 1: Somertown Rd - SB Thru
2: Somertown Rd - NB Thru
3: Somertown Rd - SB Left
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12:

- A:
B:
C:
D:

ENTER COUNT DATA ON THIS PAGE

JOB NO:	16146
NAME:	DTS/HL
INT #:	
	1

6:00 - 6:15 PM	TOTAL	65	42															
	TRUCK		1															
6:15 - 6:30 PM	TOTAL	112	91															
	TRUCK																	
6:30 - 6:45 PM	TOTAL	153	122															
	TRUCK	2																
6:45 - 7:00 PM	TOTAL	205	168															
	TRUCK	1																
7:00 - 7:15 PM	TOTAL	271	200															
	TRUCK																	
7:15 - 7:30 PM	TOTAL	345	235															
	TRUCK	2																
7:30 - 7:45 PM	TOTAL	398	258															
	TRUCK		1															
7:45 - 8:00 PM	TOTAL	441	292															
	TRUCK																	
8:00 - 8:15 PM	TOTAL	483	329															
	TRUCK																	
8:15 - 8:30 PM	TOTAL	521	356															
	TRUCK		1															
8:30 - 8:45 PM	TOTAL	568	382															
	TRUCK																	
8:45 - 9:00 PM	TOTAL	603	408															
	TRUCK																	

1: Somertown Rd - SB Thru
2: Somertown Rd - NB Thru
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DATE:	7/23/2016
PERIOD:	
LOCATION:	11-2PM & 6-9PM
	40 Somertown Rd

CALCULATIONS - DO NOT EDIT THIS SHEET

JOB NO:	16146
NAME:	DTS/HL
INT #:	1

[illegible]

6:00 - 6:15 PM	TOTAL	65	42	0	0	0	0	0	0	0	0	0	0	0	107	0	0	0	0	0	
	TRUCK	0	1	0	0	0	0	0	0	0	0	0	0	0							
6:15 - 6:30 PM	TOTAL	47	49	0	0	0	0	0	0	0	0	0	0	0	96	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	0							
6:30 - 6:45 PM	TOTAL	41	31	0	0	0	0	0	0	0	0	0	0	0	72	0	0	0	0	0	
	TRUCK	2	0	0	0	0	0	0	0	0	0	0	0	0							
6:45 - 7:00 PM	TOTAL	52	46	0	0	0	0	0	0	0	0	0	0	0	98	0	0	0	0	0	
	TRUCK	1	0	0	0	0	0	0	0	0	0	0	0	0							
7:00 - 7:15 PM	TOTAL	66	32	0	0	0	0	0	0	0	0	0	0	0	98	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	0							
7:15 - 7:30 PM	TOTAL	74	35	0	0	0	0	0	0	0	0	0	0	0	109	0	0	0	0	0	
	TRUCK	2	0	0	0	0	0	0	0	0	0	0	0	0							
7:30 - 7:45 PM	TOTAL	53	23	0	0	0	0	0	0	0	0	0	0	0	76	0	0	0	0	0	
	TRUCK	0	1	0	0	0	0	0	0	0	0	0	0	0							
7:45 - 8:00 PM	TOTAL	43	34	0	0	0	0	0	0	0	0	0	0	0	77	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	0							
8:00 - 8:15 PM	TOTAL	42	37	0	0	0	0	0	0	0	0	0	0	0	79	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	0							
8:15 - 8:30 PM	TOTAL	38	27	0	0	0	0	0	0	0	0	0	0	0	65	0	0	0	0	0	
	TRUCK	0	1	0	0	0	0	0	0	0	0	0	0	0							
8:30 - 8:45 PM	TOTAL	47	26	0	0	0	0	0	0	0	0	0	0	0	73	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	0							
8:45 - 9:00 PM	TOTAL	35	26	0	0	0	0	0	0	0	0	0	0	0	61	0	0	0	0	0	
	TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	0							

1: Somertown Rd - SB Thru
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D:

DATE:	7/23/2016
PERIOD:	
LOCATION:	40 Somertown Rd

JOB NO:	16146
NAME:	DTS/HL
INT #:	1

[illegible]

6:00 - 7:00 PM	TOTAL	205	168	0	0	0	0	0	0	0	0	0	0	373	0	0	0	0	0	0.87
	TRUCK	1%	1%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####						
6:15 - 7:15 PM	TOTAL	206	158	0	0	0	0	0	0	0	0	0	0	364	0	0	0	0	0	0.93
	TRUCK	1%	0%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####						
6:30 - 7:30 PM	TOTAL	233	144	0	0	0	0	0	0	0	0	0	0	377	0	0	0	0	0	0.86
	TRUCK	2%	0%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####						
6:45 - 7:45 PM	TOTAL	245	136	0	0	0	0	0	0	0	0	0	0	381	0	0	0	0	0	0.87
	TRUCK	1%	1%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####						
7:00 - 8:00 PM	TOTAL	236	124	0	0	0	0	0	0	0	0	0	0	360	0	0	0	0	0	0.83
	TRUCK	1%	1%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####						
7:15 - 8:15 PM	TOTAL	212	129	0	0	0	0	0	0	0	0	0	0	341	0	0	0	0	0	0.78
	TRUCK	1%	1%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####						
7:30 - 8:30 PM	TOTAL	176	121	0	0	0	0	0	0	0	0	0	0	297	0	0	0	0	0	0.94
	TRUCK	0%	2%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####						
7:45 - 8:45 PM	TOTAL	170	124	0	0	0	0	0	0	0	0	0	0	294	0	0	0	0	0	0.93
	TRUCK	0%	1%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####						
8:00 - 9:00 PM	TOTAL	162	116	0	0	0	0	0	0	0	0	0	0	278	0	0	0	0	0	0.88
	TRUCK	0%	1%	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####						

1: Somertown Rd - SB Thru
2: Somertown Rd - NB Thru
3:
4:
5:
6:

7:
8:
9:
10:
11:
12:

A:
B:
C:
D:

APPENDIX E

PARKING ANALYSIS

ksf = thousand square feet

Projected Parking Supply: 98				Mode Adjustment				Noncaptive Ratio			
Land Use	Quantity	Max Parking Spaces		Weekday		Weekend		Weekday		Weekend	
		Weekday	Weekend	Daytime	Evening	Daytime	Evening	Daytime	Evening	Daytime	Evening
Community Shopping Center (<400 ksf)	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Regional Shopping Center (400 to 600 ksf)	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Super Regional Shopping Center (>600 ksf)	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Fine/Casual Dining Restaurant	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Family Restaurant	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Fast Food Restaurant	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Nightclub	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Cineplex	seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Performing Arts Theater	100 seats	30	33	100%	100%	100%	100%	100%	100%	100%	100%
Employee		7	7	100%	100%	100%	100%	100%	100%	100%	100%
Arena	seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Pro Football Stadium	seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Pro Baseball Stadium	seats	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Health Club	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Convention Center	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Hotel-Business	rooms	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Hotel-Leisure	rooms	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Restaurant/Lounge	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Conference Ctr/Banquet (20 to 50 sq ft/guest room)	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Convention Space (>50 sq ft/guest room)	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Rental, Shared Spaces	25 units	13	13	100%	100%	100%	100%	100%	100%	100%	100%
Reserved	1 sp/unit	25	25	100%	100%	100%	100%	100%	100%	100%	100%
Guest	25 units	4	4	100%	100%	100%	100%	100%	100%	100%	100%
Residential, Owned, Shared Spaces	units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Reserved	1 sp/unit	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Guest	units	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office <25 ksf	6.050 sf GLA	2	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		21	2	100%	100%	100%	100%	100%	100%	100%	100%
Office 25 to 100 ksf	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office 100 to 500 ksf	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Office >500 ksf	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Data Processing Office	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Medical/Dental Office	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Bank (Branch) with Drive-In	sf GLA	0	0	100%	100%	100%	100%	100%	100%	100%	100%
Employee		0	0	100%	100%	100%	100%	100%	100%	100%	100%
Subtotal Customer/Guest Spaces		36	37								
Subtotal Employee/Resident Spaces		41	22								
Subtotal Reserved Spaces		25	25								
Total Parking Spaces		102	84								

Table
 Project: 16146 - Bethany Arts Community
 Description:

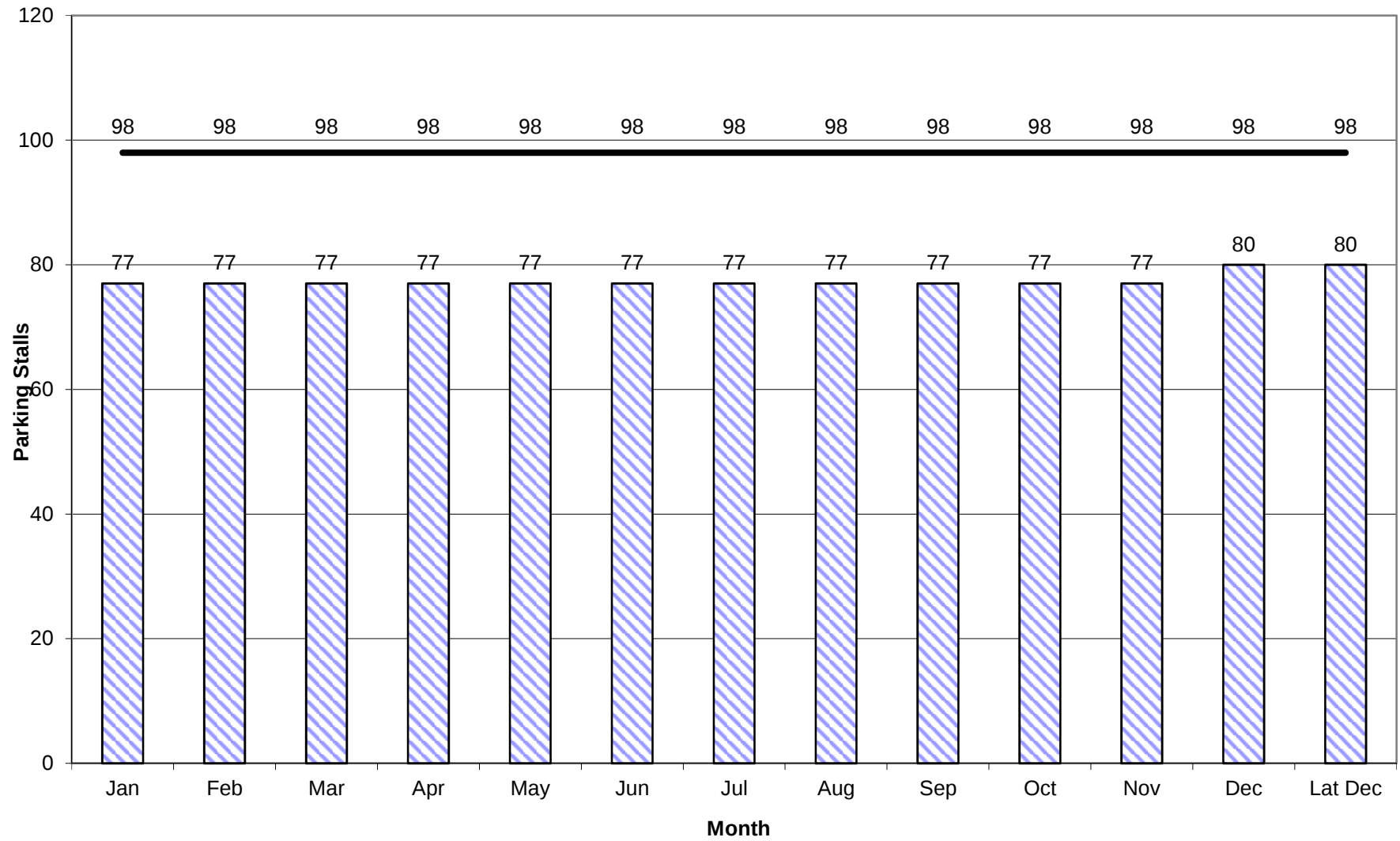
8/22/2016

SHARED PARKING DEMAND SUMMARY

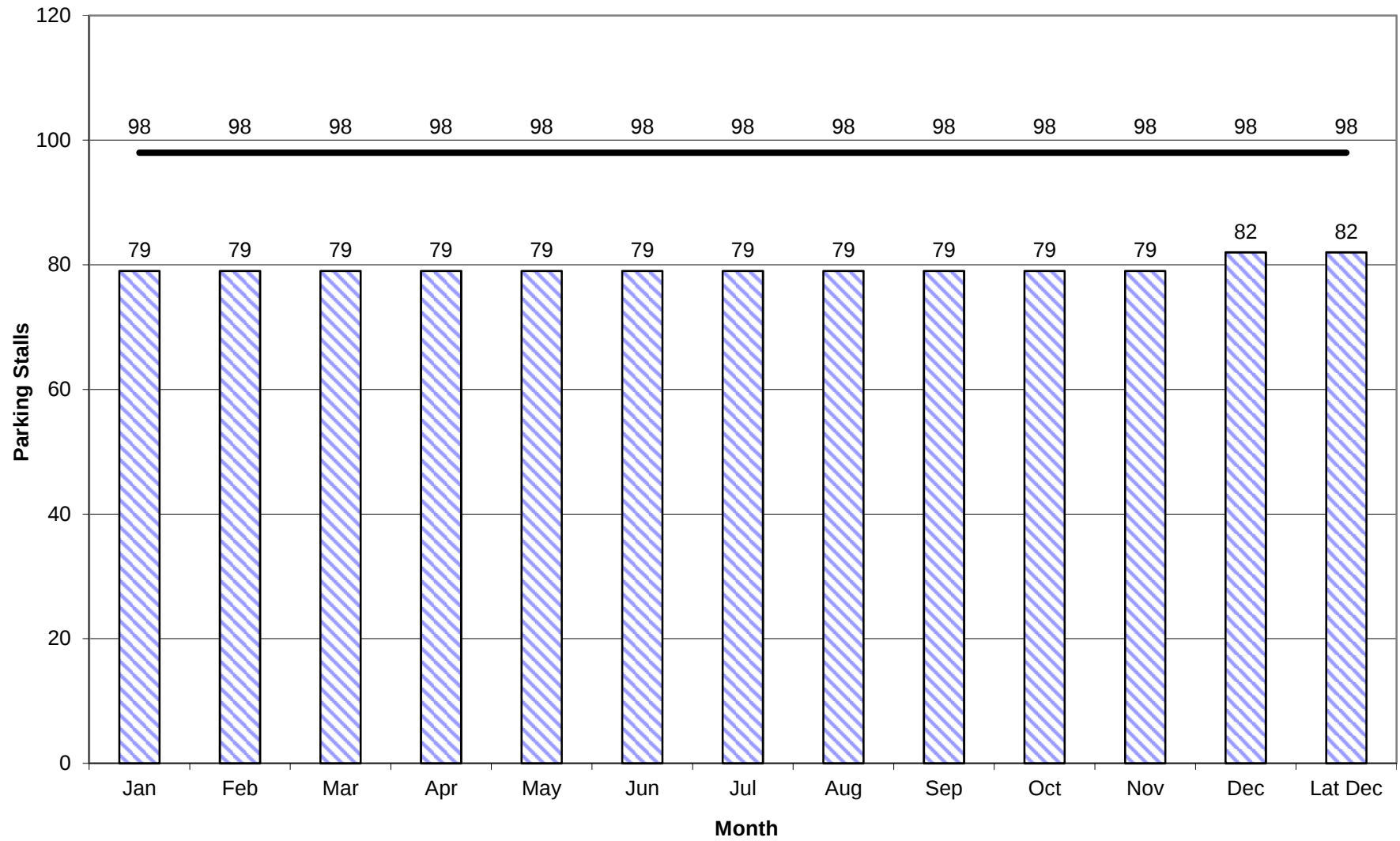
PEAK MONTH: DECEMBER -- PEAK PERIOD: 8 PM, WEEKEND

		PEAK MONTH: DECEMBER					PEAK MONTH: DECEMBER					PEAK MONTH: DECEMBER			PEAK MONTH: DECEMBER			
Land Use	Project Data Quantity Unit		Weekday					Weekend					Weekday			Weekend		
			Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Base Rate	Mode Adj	Non-Captive Ratio	Project Rate	Unit	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand	Peak Hr Adj	Peak Mo Adj	Estimated Parking Demand
	8 PM	December		8 PM	December													
Performing Arts Theater	100	seats	0.30	1.00	1.00	0.30	/seat	0.33	1.00	1.00	0.33	/seat	1.00	1.00	30	1.00	1.00	33
Employee			0.07	1.00	1.00	0.07	/seat	0.07	1.00	1.00	0.07	/seat	1.00	1.00	7	1.00	1.00	7
Residential, Rental, Shared Spaces	25	units	0.50	1.00	1.00	0.50	/unit	0.50	1.00	1.00	0.50	/unit	0.98	1.00	13	0.98	1.00	13
Reserved	1	sp/unit	1	1.00	1.00	1	/unit	1	1.00	1.00	1	/unit	1.00	1.00	25	1.00	1.00	25
Guest	25	units	0	1.00	1.00	0	/unit	0	1.00	1.00	0	/unit	1.00	1.00	4	1.00	1.00	4
Office <25 ksf	6,050	sf GLA	0.30	1.00	1.00	0.30	/unit	0.03	1.00	1.00	0.03	/unit	0.01	1.00	0	0.00	1.00	0
													Customer		34	Customer		37
													Employee		21	Employee		20
													Reserved		25	Reserved		25
													Total		80	Total		82

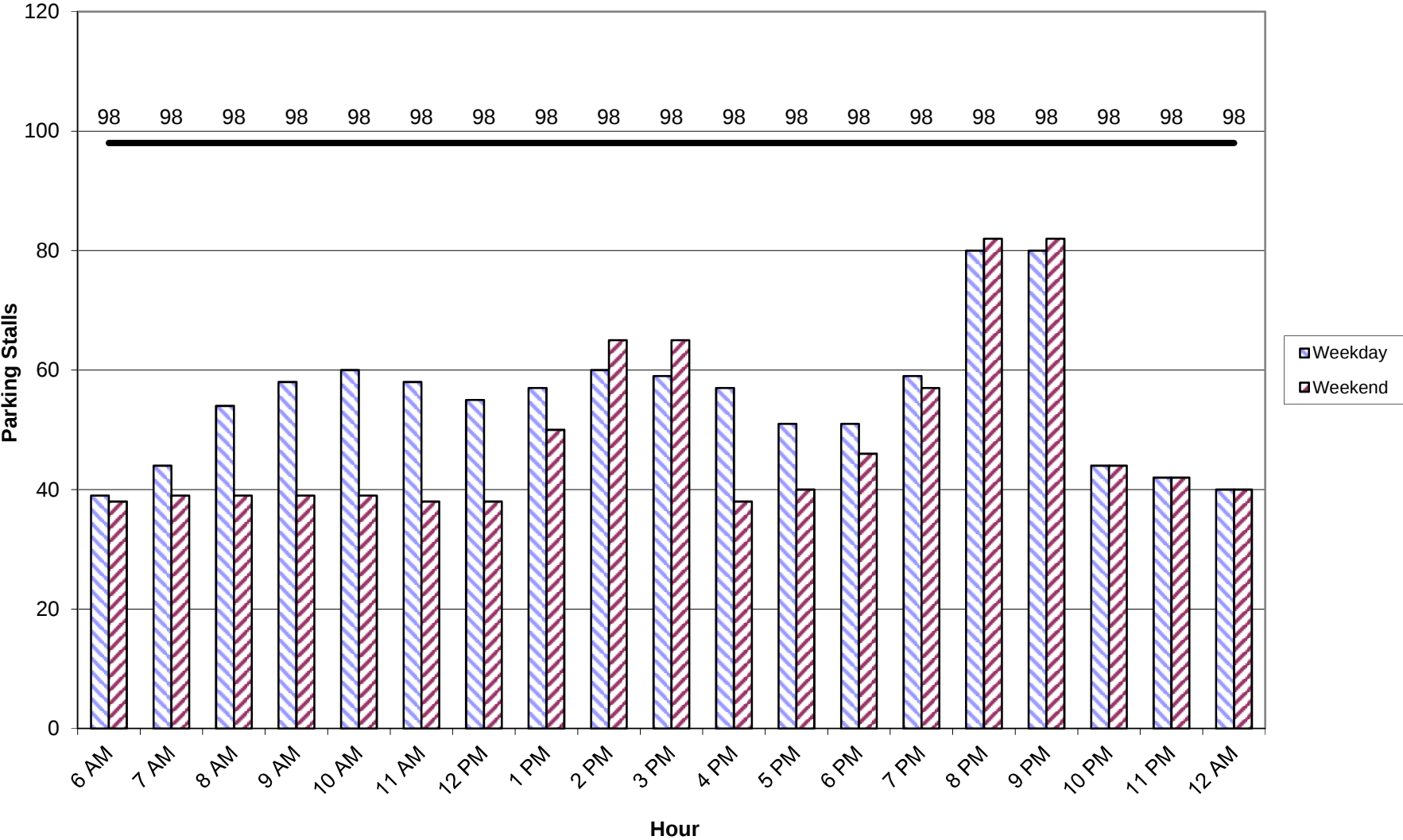
Weekday Month-by-Month Estimated Parking Demand



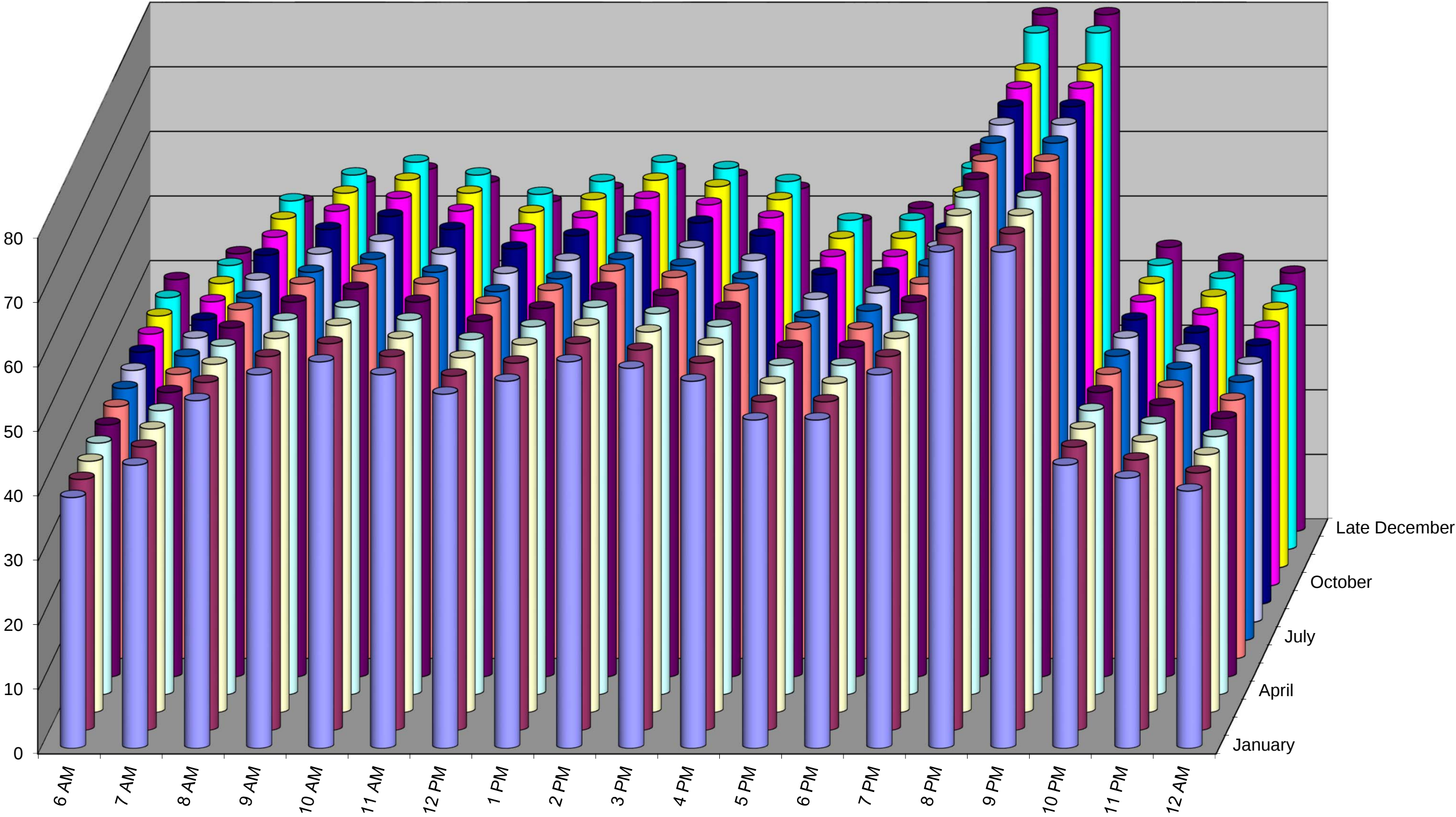
Weekend Month-by-Month Estimated Parking Demand



Peak Month Daily Parking Demand by Hour



Weekday Comparison by Month and by Hour



Weekend Comparison by Month and by Hour

