
Traffic Analysis for the Town of Bel Air MD Route 24 and Business-US 1 Corridors

November, 2008



Submitted to:



**Town of Bel Air
Department of Planning**

705 Churchville Road
Bel Air, Maryland 21014



Submitted by:

Brudis & Associates, Inc.

Consulting Engineers



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1. Introduction

The Town of Bel Air, Maryland is in the process of developing a "Comprehensive Design Plan" which will provide Town officials the necessary planning tools for the area's potential future growth. Transportation is a key element of the plan to ensure the safe and efficient movement of people, goods and services. In addition to projected local growth, it is anticipated that US Department of Defense's Base Realignment and Closure (BRAC) program will accelerate area growth in Harford County and potentially strain the Town's road network.

BRAC is the military's plan to close existing installations and relocate the operations to other military facilities. As part of the plan the Aberdeen Proving Grounds (APG), which is located in the County has been identified as a base for BRAC growth. To date existing planning studies have not included the impact to the Town of Bel Air but it appears that the Town, which is the County seat, will be impacted by APG's growth.

Thus the Town of Bel Air, Department of Planning contracted Brudis & Associates, Inc. (BAI) to examine transportation elements of the Maryland Route 24 (MD 24) and Business-US Route 1 (Bus- US 1) corridors within the Town limits. The general purpose of this study was to address the growing concerns with traffic congestion on these corridors and determine if there is sufficient capacity for these corridors to accommodate the growth within Harford County due to the BRAC program. The study identified and existing capacity levels for all signalized intersections and roadway links. (Refer to Exhibit 1 - Study Area Map).

2. Existing Conditions/Features

A. MD ROUTE 24 CORRIDOR

MD Route 24 is classified as an Urban Freeway Expressway by the Maryland State Highway Administration (SHA) with a posted speed limit of 55 mph. Through the Town of Bel Air, MD Route 24 serves as a "bypass" to the south of Bel Air for eastbound and westbound traffic. MD Route 24 carries traffic from the I-95 corridor through the Town to US Route 1 (Bel Air Bypass). Throughout the approximate eight (8±) mile length corridor there are 12 intersections, all of which are controlled by a traffic signal. (Refer to site photographs, Exhibits 2 thru 5). Within the Town of Bel Air limits, the intersections of concern include:

- MD Route 24 / MacPhail Road
- MD Route 24 / Marketplace Drive
- MD Route 24 / Business US Route 1
- MD Route 24 / Boulton Street

A.1 MD ROUTE 24 / MACPHAIL ROAD

The intersection of MD Route 24 and MacPhail Road is the first intersection at the south end of the Town's jurisdiction. The Upper Chesapeake Hospital has relocated to the southeast quadrant of the intersection. On the northwest quadrant of the intersection is a small shopping center.

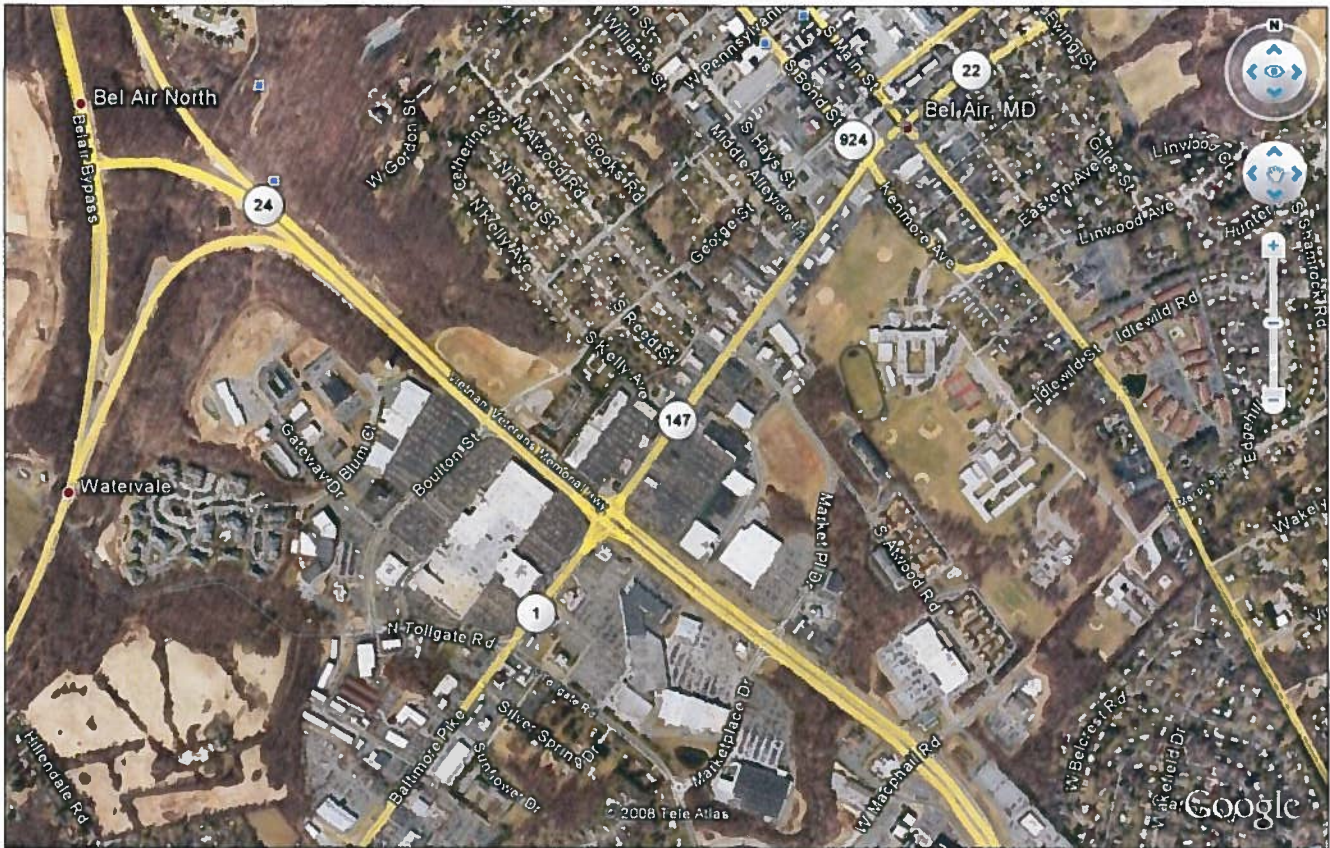


Exhibit 1- Study Area Map

MD Route 24 at this intersection is a four (4) lane divided highway with single left turn lanes and right turn deceleration lanes in both directions. MacPhail Road to the east is a two (2) lane approach with shared right/through lane and a single left lane. The west approach has a single through and left lane with a channelized right turn lane. It is anticipated that this approach will be reconstructed in the future as a condition of the continuing expansion to the hospital. The intersection is signalized and operates in a standard eight-phase operation where all left turns are signalized.

A.2 MD ROUTE 24 / MARKETPLACE DRIVE

The intersection of MD Route 24 and Marketplace Drive is the next intersection, west within the Town's limits. Marketplace Drive was constructed to provide additional access the shopping areas on the south side of the Business-US 1 corridor and allow for future development. To the north, Marketplace Drive provides an alternate into Town and the Business-US 1 corridor. To the south, Marketplace Drive connects to Tollgate Road. Tollgate Road serves as a local connection for northbound and south bound traffic at the southern limits of the Town.

MD Route 24 at this intersection is a four (4) lane divided highway with single left turn lanes and right turn deceleration lanes in both directions. Marketplace Drive to the east is a three (3) lane approach with single through and left lanes. The right turn lane is channelized. The west approach has a shared through/left lane with a channelized right turn lane.



The intersection is signalized and operates as a side street split, where the side road approaches operate independently of each other. There is also signalized pedestrian crossing across the east and north legs of the intersection.

A.3 MD ROUTE 24 / BUSINESS-US ROUTE 1

The intersection of MD Route 24 and Business-US Route 1 is west of Marketplace Drive and is the main intersection within the Town. At this intersection all four (4) quadrants are developed with shopping centers. The intersection also serves as the hub for the main shopping area in Town.

To the north, Bus-US Route 1 serves as a connection from the Town of Bel Air's downtown area, many of the Town's businesses are located along this corridor. Most businesses have direct access to Bus-US Route 1. To the south, Bus-US Route 1 is primarily a connection out of town to US Route 1. While there are several businesses located along the route, the road characteristics are rural in nature, just outside the Town limits.

Bus-US Route 1 at the intersection is a four (4) lane divided highway with double left turn lanes for the eastbound direction and a single left turn lane for vehicles traveling in the westbound direction. There are right turn deceleration lanes in both directions. The intersection is signalized and operates in a standard eight phase operation which means all left turns are signalized.

A.4 MD ROUTE 24 / BOULTON STREET

The final major intersection west is MD Route 24 at Boulton Street/George Street. Just west of the intersection MD Route 24 connects with the Bel Air Bypass. MD Route 24 continues as a four (4) lane divided roadway, with a single left turn lane and right turn deceleration lane (both directions). To the south Boulton Street is a three (3) lane roadway that serves the Harford Mall and other commercial establishments. To the north is George Street, which serves as a connection to one of older residential sections of Town. George Street continues to the downtown area, but traffic control measures have been provided by the Town to discourage vehicle traffic through the residential section.

Boulton Street is a two-lane road with left and through lane and a separate channelized right turn lane approaching the intersection. At the intersection George Street provides a two-lane approach with one (1) shared thru/right turn lane and one (1) shared thru/left turn lane. The intersection is signalized and operates as a side street split, where the side road approaches operate independently of each other. There is also signalized pedestrian crossing across the east and north legs of the intersection.



Exhibit 2-Westbound MD Route 24/Marketplace Drive

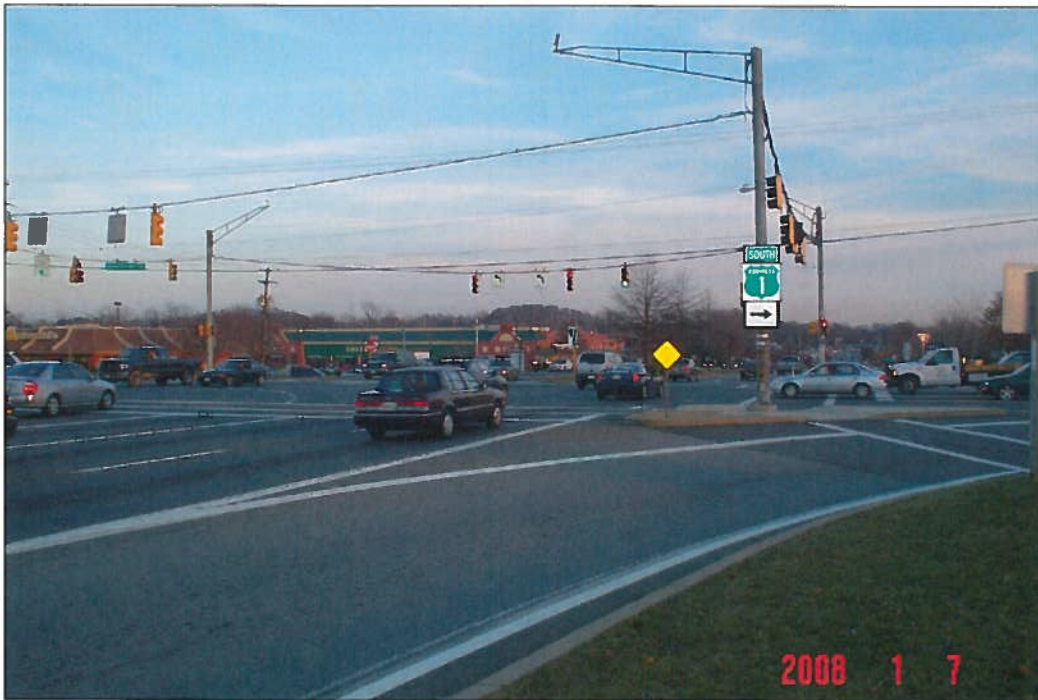


Exhibit 3-Eastbound MD Route 24/Business US Route 1



Exhibit 4- MD Route 24/Business Route 1 Intersection



Exhibit 5- Looking Northbound at MD Route 24/Boulton Street



B. BUSINESS- US ROUTE 1 CORRIDOR

Business-US Route 1 is classified as an Urban Other Primary Arterial by the SHA with a posted speed limit of 35 mph. Through the Town of Bel Air, Business-US Route 1 serves as the major connection from downtown at the MD Route 924, to the shopping centers and MD Route 24 intersection. Various commercial establishments have direct access to Business-US Route 1 between Atwood Road and MD Route 924. Throughout the nearly one (1) mile length corridor there are seven (7) intersections, all of which are controlled by a traffic signal. (Refer to site photographs, Exhibits 6 thru 9). Within the Town of Bel Air jurisdiction, the intersections of concern include:

- Business-US Route 1 / Tollgate Road
- Business-US Route 1 / Bel Air Plaza Entrance
- Business-US Route 1 / Kelly Avenue to Bel Air Plaza
- Business-US Route 1 / Atwood Street

B.1 BUSINESS-US ROUTE 1 / TOLLGATE ROAD

The intersection of Business-US 1 and Tollgate Road is located approximately 1,250 feet south of the MD Route 24 and Bus-US 1 intersection. On the west side of the intersection is Harford Mall, while on the east side of the intersection is Tollgate Mall. In addition, Tollgate Road serves as an access to local businesses on Boulton Street, as well as the Tollgate Mall. The southbound through lanes on Bus-US 1 also provides access to local business located south of the Town, before the roadway merges unto US Route 1 corridor and Harford Raod in Baltimore County.

At this intersection Bus-US 1 is a four (4) lane undivided highway, with a single left turn lane and two (2) thru lanes in both directions. The southbound right lane is channelized providing access to westbound Tollgate Road. The westbound approach of Tollgate Road is a four (4) lane undivided roadway with a dedicated thru and left turn lane also with a channelized right turn. The eastbound approach provides a single thru lane and a left turn lane, and a channelized right turn lane. In addition, on the eastern section of the Bus-US 1/Tollgate Road intersection, the through movement allows access to Tollgate Mall and the nearby residential areas.

B.2 BUSINESS-US ROUTE 1 / BEL AIR PLAZA ENTRANCE

Approximately 530' north of the MD 24 and Bus US 1 intersection is the entrance to the Bel Air Plaza. Bus-US 1 northbound is a two (2) lane roadway with a single left turn lane, and two thru (2) lanes at this intersection. The right turn lane provides access to the Bel Air Plaza entrance. There are two (2) thru and a single left turn lane for the southbound approach along with an accelerating right lane.

The Bel Air Plaza entrance east of the intersection is a two lane approach with a single left turn and through lane/right turn access. The west approach is also a two lane approach with a left turn and a shared through and right turn lane.



B.3 BUSINESS-US ROUTE 1 / KELLY AVENUE

The Kelly Avenue entrance and business US 1 intersection serves as another entrance for the Bel Air Plaza and is located approximately 900 feet north of from the MD 24 and Bus US 1 intersection. Within the intersection Business US 1 provides one (1) thru lane, one (1) left turn lane and a shared thru/right turn lane in both directions. Kelly Avenue provides one (1) left turn lane and one (1) through in the eastbound direction. The westbound approach has a dedicated left turn lane in addition to shared thru/right turn lane.

Additionally, just north of the intersection the roadway provides a two-way center left-turn lane to accommodate the numerous businesses located along the study corridor to MD Route 924.

B.4 BUSINESS-US ROUTE 1 / ATWOOD DRIVE

Approximately 1500 feet north of the MD 24 and Bus US 1 is the Atwood drive and Bus US 1 intersection. At the intersection Bus US 1 provides one (1) thru lane, one (1) shared thru/right turn lane and one (1) dedicated left turn lane in the northbound direction. In the southbound direction BUS US 1 has one (1) thru lane and one (1) left turn lane. In addition the southbound direction provides a shared thru/right turn lane which is channelized.

At the intersection Atwood Drive has a single left turn lane and shared thru/right turn lane in the eastbound direction. The westbound approach at the intersection has a shared thru/left turn lane and a single right turn lane. Atwood drive provides several adjacent driveways near the intersection to accommodate t several small business within the study vicinity.



Exhibit 6-Northbound Business US Route 1/Tollgate Road



Exhibit 7-Northbound Business US Route 1/Bel Air Plaza



Exhibit 8-Northbound Business US Route 1/Kelly Avenue



Exhibit 9-Southbound Business US Route 1/Atwood Drive

3. TRAFFIC DATA

To perform traffic analysis for the MD Route 24 and Business US 1 Corridor, BAI received a Synchro/Sim-Traffic traffic model with existing traffic volumes from the SHA's Office of Traffic & Safety, Traffic Development and Support Division. To verify the validity of the traffic volumes provided BAI compared volumes in the Synchro/Sim-Traffic traffic model to volumes provided by the Maryland State Highway Administration. The intersections used for this comparison, included:

- MD Route 24 / Business US Route 1 (09/05/2007)
- MD Route 24 / Boulton Street (09/12/2007)
- Business-US Route 1 / Tollgate Road (05/22/2008)

The comparison analysis revealed that the volumes provided in the Synchro/Sim-Traffic traffic model were comparable to the volumes obtained from the Maryland State Highway Administration. Based on this data, the peak hours were determined to be 9:00 AM - 10:00 AM in the morning and 5:00 PM - 6:00 PM in the evening. (Refer to Exhibit 10 - Existing Peak Hour Traffic Volumes).

Brudis & Associates, Inc. also conducted a field investigation in January, 2008 to verify roadway and geometric conditions and observe traffic characteristics.

To facilitate projected growth to the area, BAI applied a 2.2 % annual growth factor to the existing peak hour traffic volumes for a seven (7) year period (2008-2015). The annual growth projection is in accordance with Harford County traffic projection guidelines and practices. (Refer to Exhibit 11 – Projected Peak Hour Traffic Volumes).

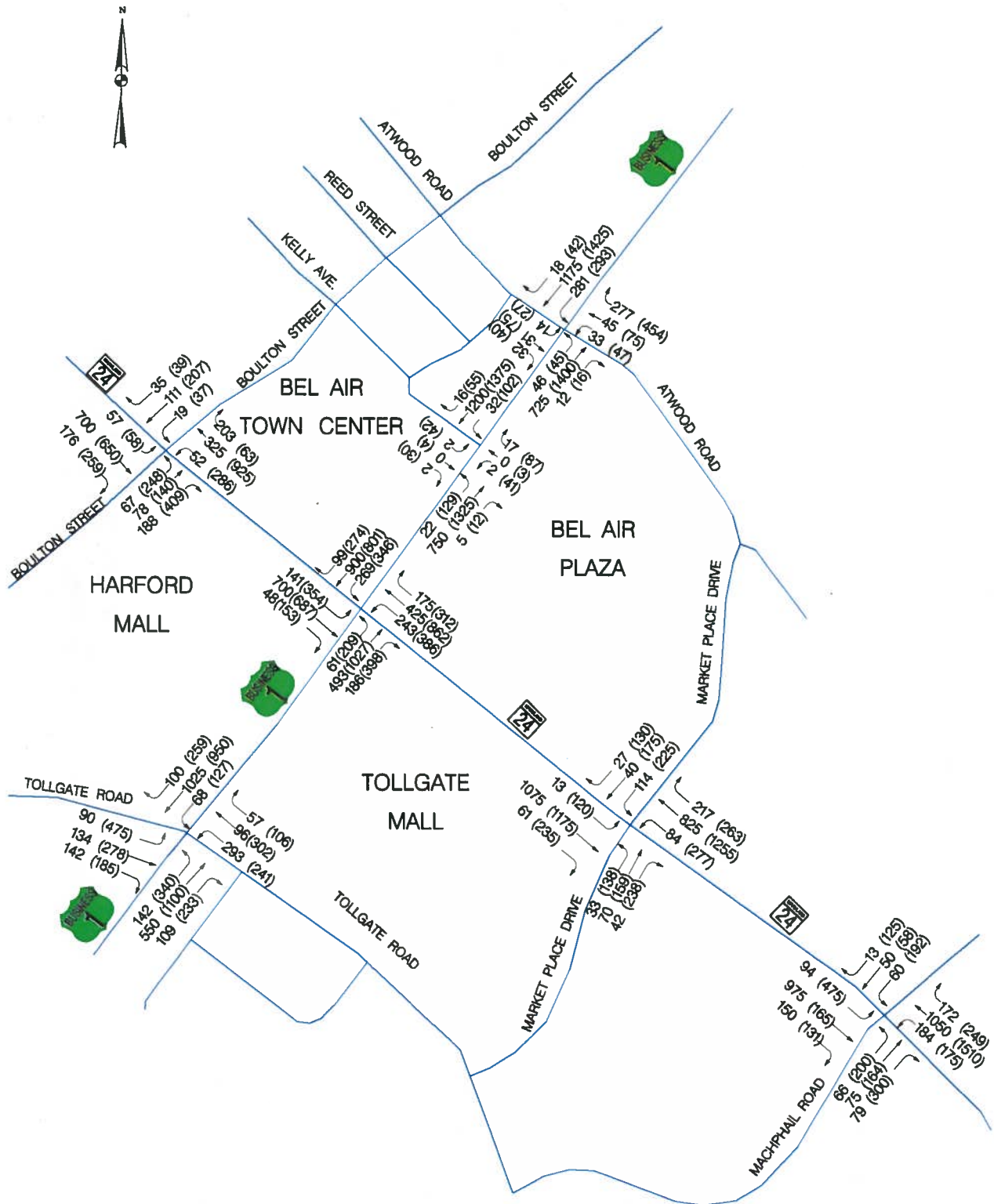


Exhibit 10-Existing Peak Hour Traffic Volumes
[Not to Scale] AM (PM)

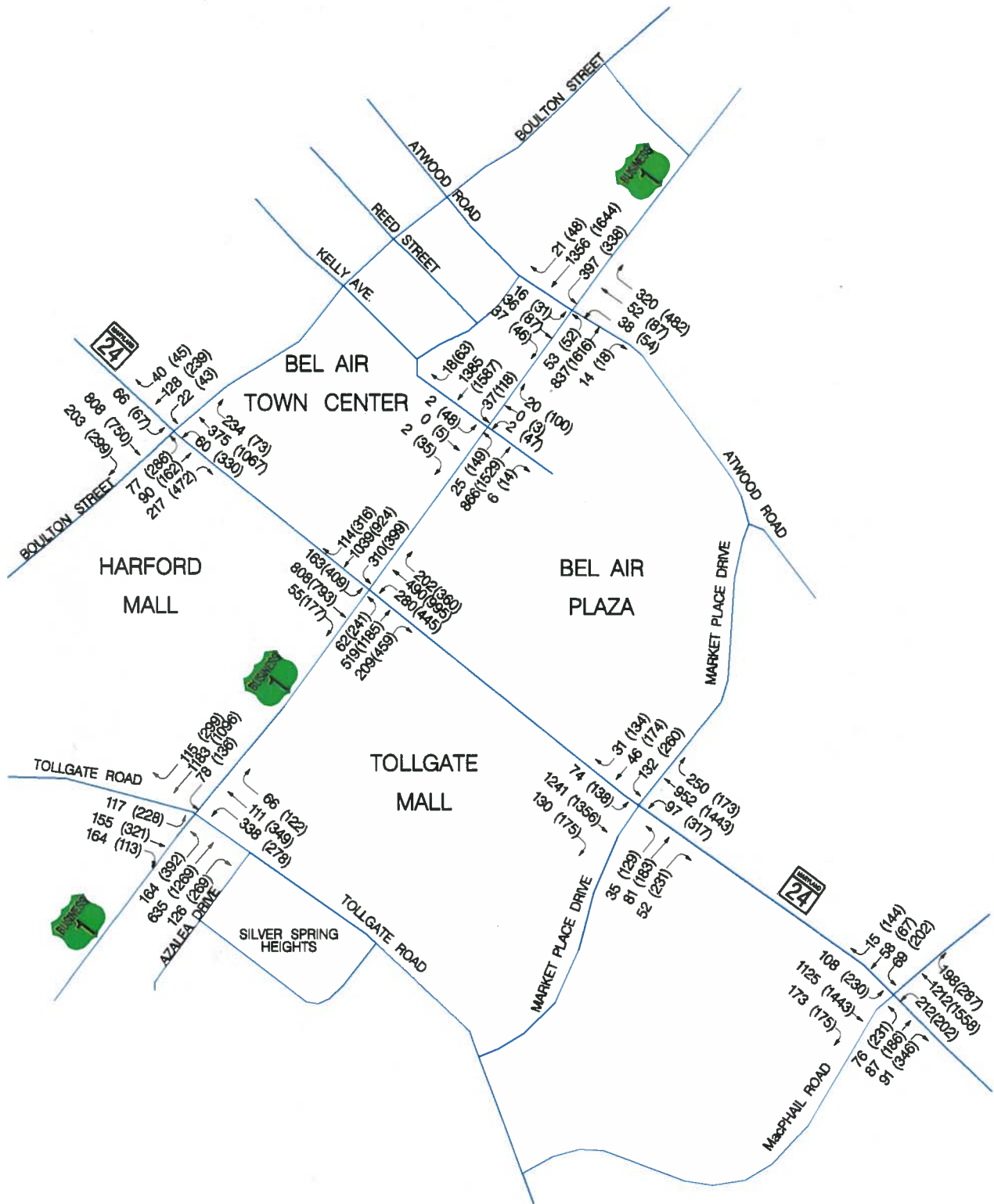


Exhibit 11-2015 Conditions Peak Hour Traffic Volumes
[Not to Scale] AM (PM)



4. Capacity Analysis

Peak hour capacity analyses (AM and PM) were conducted by BAI, using the Critical Lane Volume (CLV) and microscopic traffic modeling software Synchro/Sim-Traffic simulation, for the existing traffic volumes and the projected future year 2015 traffic volumes. The original traffic simulation model was provided by the Maryland SHA for the corridor and adjusted based upon current and available traffic data.

The Critical Lane Volume (CLV) analysis results were summarized in terms of critical lane volume, the volume-to-capacity ratio (v/c) and the Level of Service (LOS). The CLV is the sum of the critical movements at the intersection in the north/south and east/west direction. Level of Service (LOS) is the quantitative measure of traffic operational conditions. There are six (6) Levels of Services which are defined for each type of roadway and are given a letter designations for A to F, with an 'A' representing good operation conditions and a 'F' representing unsatisfactory operations conditions. (Refer to LOS chart, page 15). The Synchro/Sim-Traffic results were summarized in terms of the intersection delay (seconds) and LOS.

A. Existing Conditions

Based upon the Critical Lane Volume (CLV) and Synchro/Sim-Traffic analysis, all existing intersections are operating at relatively fair conditions during the AM peak hours. However, during the PM peak hour, the MD Route 24/Business US Route 1 intersection operates at a LOS F for the CLV analysis and LOS E for the Synchro/Sim-Traffic simulation. In addition, several other intersections are reduced to a LOS D during the PM peak hour. While a LOS D approaches a congested condition, it is an acceptable traffic operation. (Refer to Table 1 - Capacity Analysis Existing Conditions and Appendix B-for Approach and Movement LOS).

Intersection	CLV			Synchro/Sim-Traffic	
	Critical Lane Volume (vph) AM (PM)	v/c Ratio AM (PM)	LOS AM (PM)	Delay(s) AM (PM)	LOS AM (PM)
<i>MD Route 24 Corridor</i>					
MD 24/MacPhail Road	807 (1278)	0.50 (0.80)	A (C)	22.1 (36.0)	C (D)
MD 24/Marketplace Dr.	651 (1192)	0.41 (0.75)	A (C)	19.7 (48.5)	B (D)
MD 24/ Bus-US 1	1257 (1833)	0.79 (1.15)	C (F)	35.5 (75.8)	D (E)
MD 24/Boulton St.	615 (1099)	0.38 (0.69)	A (B)	26.9 (41.6)	C (D)
<i>Bus-US Route 1 Corridor</i>					
Bus-US 1/Tollgate Rd.	1133 (1382)	0.71 (0.86)	C (D)	30.6 (100.5)	D (F)
Bus. US 1/Bel Air Plaza	476 (817)	0.30 (0.51)	A (A)	4.6 (5.8)	A (A)
Bus US 1/Kelly Ave.	682 (975)	0.43 (0.61)	A (A)	2.0 (9.6)	A (A)
Bus US 1/Atwood St.	744 (1173)	0.47 (0.73)	A (C)	20.1 (48.8)	B (D)

TABLE 1 - CAPACITY ANALYSIS
EXISTING CONDITIONS



B. 2015 Conditions

Brudis & Associates, Inc. applied a 2.2 % annual growth factor to the existing peak hour traffic volumes for a seven (7) year period (2008-2015) to reflect area growth to the highway corridor. The annual growth projection is in accordance with Harford County traffic projection guidelines and practices.

As a result of the growth projections, with the exception of the MD Route 24/Bus US 1 intersection, the intersections along the Bus-US 1 corridor are projected to operate at a LOS range of A to E, according to the CLV analysis. The MD 24/Bus US 1 is projected to operate at a LOS F, during the PM peak hour. All intersections are projected to operate in at an acceptable level during the AM peak hours.

However, based upon the Synchro/Sim-Traffic simulation analysis six (6) intersections will operate at a LOS F during the PM Peak hour traffic. These include the MD 24-Bus US1, Bus US1/Tollgate Road, Bus, Bus US 1/Atwood St, MD Route 24/MacPhail Road, MD Route 24/Marketplace Drive and MD Route 24/Boulton Drive.. With the exception of the Bel Air Plaza intersection the remaining intersections are also approaching congestion. Most of the intersections are projected to operate in at an acceptable level during the AM peak hours. (Refer to Table 2 - Capacity Analysis 2015 Conditions and Appendix B-for Approach and Movement LOS).

Intersection	CLV			Synchro/Sim-Traffic	
	Critical Lane Volume (vph) AM (PM)	v/c Ratio AM (PM)	LOS AM (PM)	Delay(s) AM (PM)	LOS AM (PM)
<i>MD Route 24 Corridor</i>					
MD 24/MacPhail Road	931 (1475)	0.58 (0.92)	A (E)	25.5 (119.6)	C (F)
MD 24/Marketplace Dr.	806 (1375)	0.50 (0.86)	A (D)	24.3 (122.9)	C (F)
MD 24/ Bus-US 1	1450 (2112)	0.91 (1.32)	D (F)	38.7 (114.5)	D (F)
MD 24/Boulton St.	709 (1268)	0.44 (0.79)	A (C)	20.2 (107.0)	C (F)
<i>Bus-US Route 1 Corridor</i>					
Bus-US 1/Tollgate Rd.	1308 (1594)	0.82 (1.00)	D (E)	56.6 (293.4)	E (F)
Bus. US 1/Bel Air Plaza	549 (795)	0.34 (0.67)	A (A)	5.5 (10.1)	A (A)
Bus US 1/Kelly Ave.	787 (1074)	0.49 (0.67)	A (B)	3.5 (47.1)	A (D)
Bus US 1/Atwood St.	873 (1368)	0.55 (0.86)	A (D)	26.2 (219.8)	C (F)

TABLE 2 – CAPACITY ANALYSIS
2015 CONDITIONS



5. Summary and Conclusions

Brudis & Associates, Inc. conducted a comprehensive review of the existing traffic volumes, flow, capacity and operation for both the Bus US 1 and the MD Route 24 corridor and concluded that all the intersections within each study area currently operate at acceptable levels-of-service for existing conditions. However, there are several failures of note at the key intersection of MD Route 24 and Bus US:

- Eastbound MD Route 24 the thru and left-turn movement in the PM peak hour
- Westbound MD Route 24 the thru and left-turn movement in the PM peak hour
- Southbound Bus US 1 the left-turn movement in the PM peak hour

In addition this key intersection has several queuing issues:

- Southbound queues along Bus US 1 extend to the intersection at Bel Air Plaza
- Northbound and southbound through volume queues exceeds capacity

To examine project growth within the highway corridor, BAI applied a 2.2% annual growth factor to the existing peak hour traffic volumes for a seven (7) year period (2008-2015). Based upon the transportation analysis for the year 2015, it is anticipated that the both corridor will be operating at congested traffic conditions. In addition it is projected that the flowing intersections will operate at stop-and-go conditions and experience significant delays during the PM peak hours:

- MD Route 24 / Bus US 1
- Bus US 1/Tollgate Road
- Bus US 1 / Kelly Avenue and
- Bus US 1 / Atwood Street

Typically to increase traffic capacity, roadway widening and geometric alignment are the most apparent method of relieving congestion and improving capacity. However the MD Route 24 and Bus US 1 corridors have been significantly developed with commercial business. and the existing roadway alignment offers very little opportunity for highway expansion.

With the projected growth and limited opportunity for roadway expansion, Brudis & Associates, Inc. would recommend a more detailed Urban and Transportation Planning study be conducted. This study should address solutions to these congestion needs, and any proposed corridor alternatives should be measured against these needs to gauge their effectiveness in meeting the Town's transportation system's existing and/or anticipated deficiencies. Such examinations should include by-pass alternatives, interchange construction, one-way directional traffic, Intelligent Transportation Systems (ITS) applications and others as appropriate. If left unchanged, increasing corridor traffic will cause traffic safety problems to intensify.



What is Level of Service (LOS)?

Level of Service is the quantitative measure of traffic operational conditions. Ranges of operation are defined for each type of roadway section (signalized intersections, freeways, ramp junctions and weaving sections) and are related to the amount of traffic demand at a given time as compared to the capacity of that type of roadway section.

Six levels of service are defined for each type of roadway section and are given letter designations for A to F, with A representing good operation conditions and F representing unsatisfactory operations conditions.



Intersection



- Highly stable, free-flow condition with little or no congestion
- Delay: < 10 seconds/vehicle



- Stable, free-flow condition with little congestion
- Delay: 10 to 20 seconds/vehicle



- Free-flow condition with moderate congestion
- Delay: 20 to 35 seconds/vehicle



- Approaching unstable condition with increasing congestion
- Delay: 35 to 55 seconds/vehicle



- Unstable, congested condition
- Delay: 55 to 80 seconds/vehicle



- Stop and go
- Delay: > 80 seconds/vehicle

Roadway



- Free flowing
- Uninterrupted vehicle



- Stable flow
- Other vehicles are more noticeable



- Stable flow
- Vehicle operations affected by other vehicles



- High density free flow
- Operation of vehicle is affected by other vehicles



- High density traffic flow, nearing capacity
- Operating conditions are extremely poor



- Forced or breakdown flow
- Amount of traffic exceeds capacity

LOS A

LOS B

LOS C

LOS D

LOS E

LOS F

Traffic Analysis for the Town of Bel Air MD Route 24 and Business-US 1 Corridors



Appendix

a. CLV Analysis



BAI

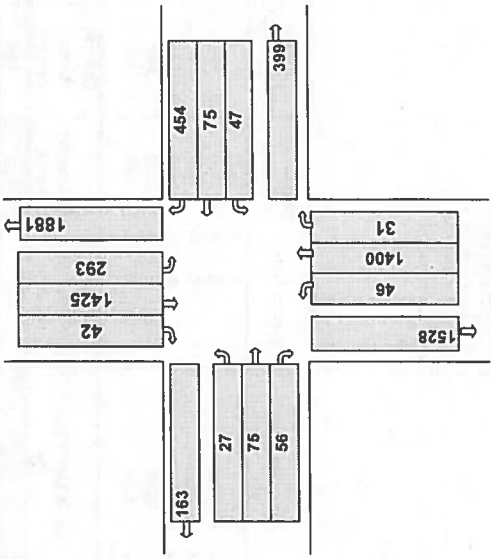
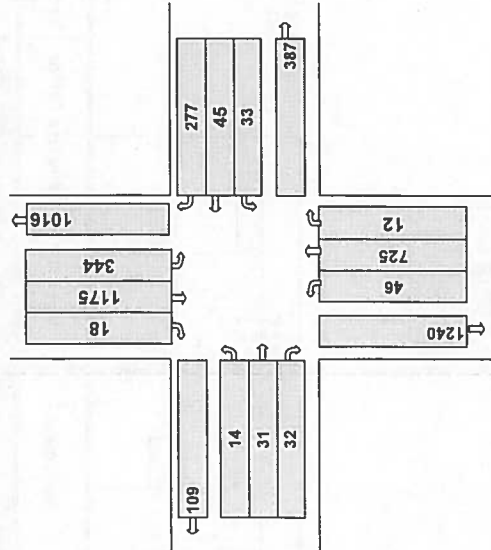
TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

Project: Bus US 1 / Atwood Drive
 Location: BEL AIR
 Condition: Existing Conditions
 BAI Project #: 06-009-07
 County: HARFORD
 Date: 11-24-2008
 Computed by:

MORNING PEAK HOUR: 9:00 - 10:00

LANE CONFIGURATION

EVENING PEAK HOUR: 5:00 - 6:00



Phasing (φ)

φ1	φ2	φ3	φ4
φ5	φ6	φ7	φ8

Intersection Control: Signal Stop - Way
 RTOR: NB SB EB WB

φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	*	φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	Opposing Volume (vhp)	L.T. Factor (PCE)	* Critical Volume	
																	TOTAL:	V/C
	SBT	1175	0.55	646	46	692	*		SBT	1425	0.55	784	45	1000	≤ 199	1.1	* Critical Volume	TOTAL: 1185
	NBT	725	0.55	399	281	680		NBT	1400	0.55	770	283	1063	≤ 599	2.0	V/C		
	EB	31	1.00	31	33	64	*		EB	75	1.00	75	47	1450	≤ 799	3.0	Level of Service:	C
	WB	45	1.00	45	14	59		WB	75	1.00	75	27	1600	≤ 999	4.0			
														1600	≥ 1000	5.0		
Remarks:																		
* Critical Volume																		
TOTAL: 756																		
V/C 0.47																		
A																		
Level of Service:																		
TOTAL: 1185																		
V/C 0.74																		

BAI

TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

Project: Bus US 1 / Kelley Avenue

BAI Project #: 06-009-07

Location: BEL AIR

County: HARFORD

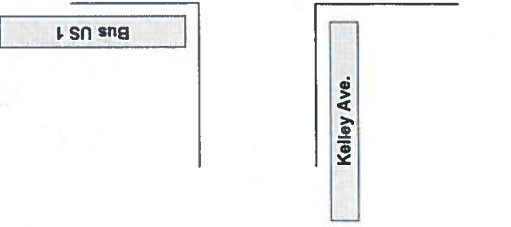
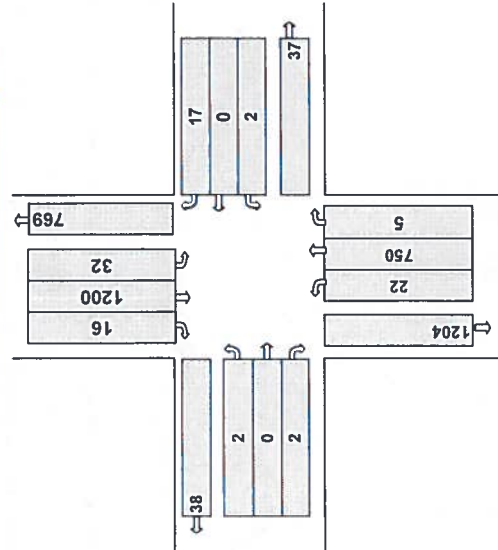
Condition: Existing Conditions

Computed by: _____ Date 11-24-2008

MORNING PEAK HOUR: 9:00 - 10:00

LANE CONFIGURATION

EVENING PEAK HOUR: 5:00 - 6:00



Phasing (φ)

φ1	φ2	φ3	φ4
φ5	φ6	φ7	φ8

Intersection Control: Signal Stop - Way
 RTOR: NB SB EB WB

φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	*	φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	Critical Lane Volume	* Critical Lane Volume	L.T. Factor (PCE)
SBT		1200	0.55	660	22	682	*	SBT		1375	0.55	756	129	885	885	*	1.1
NBT		750	0.55	413	32	445		NBT		1325	0.55	729	102	831	831	*	2.0
EB		0	1.00	0	2			EB		4	1.00	4	41	45	45	*	3.0
WB		0	1.00	0	2			WB		3	1.00	3	42	45	45	*	4.0
* Critical Volume TOTAL: 682 V/C 0.43 Level of Service: A																	
* Critical Volume TOTAL: 975 V/C 0.61 Level of Service: A																	

Remarks:

Remarks:

BAI

TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

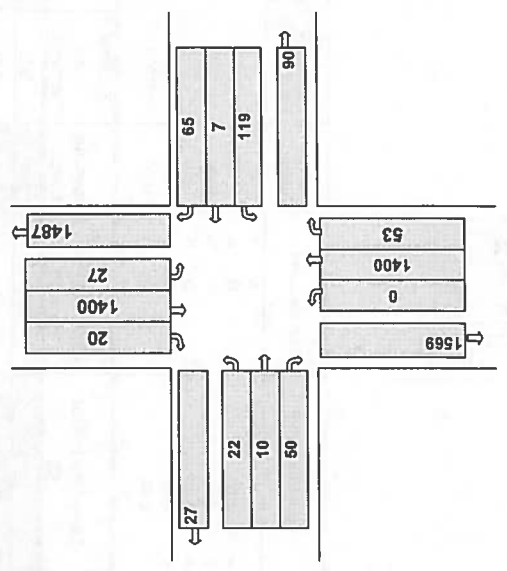
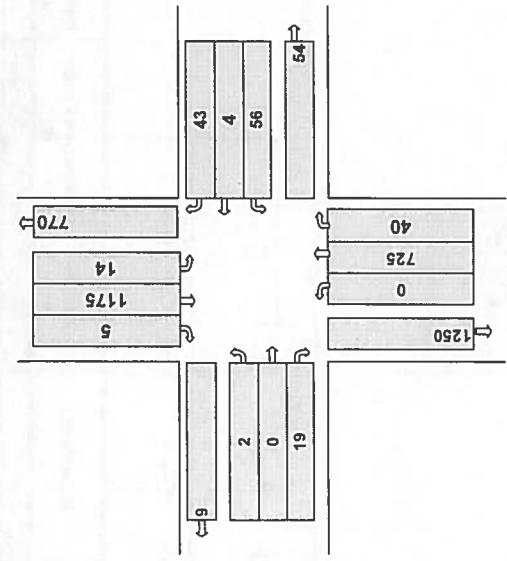
Project: Bus US 1 - Bel Air Plaza
 Location: BEL AIR
 Condition: Existing Conditions

BAI Project #: 06-009-07
 County: HARFORD
 Date 11-24-2008
 Computed by:

MORNING PEAK HOUR: 9:00 - 10:00

LANE CONFIGURATION

EVENING PEAK HOUR: 5:00 - 6:00



Phasing (φ)

φ1	φ2	φ3	φ4
φ5	φ6	φ7	φ8

Intersection Control: Signal Stop - Way
 RTOR: NB SB EB WB

φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	*	φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	Opposing Volume (vhp)	L.T. Factor (PCE)	
																	* Critical Volume
	SBT	1175	0.40	470	0	470	*	SBT	1400	0.40	560	0	1000	≤	199	1.1	
	NBT	725	0.55	399	14	413		NBT	1400	0.55	770	27	1300	≤	599	2.0	
	EB	0	1.00	0	58	0		EB	10	1.00	10	10	1450	≤	799	3.0	
	WB	4	1.00	4	2	6	*	WB	7	1.00	7	7	1600	≥	999	4.0	
									Double L.T.					1600	≥	1000	5.0
Remarks: * Critical Volume																	
TOTAL: 476																	
TOTAL: 817																	
V/C 0.30																	
Level of Service: A																	

BAI

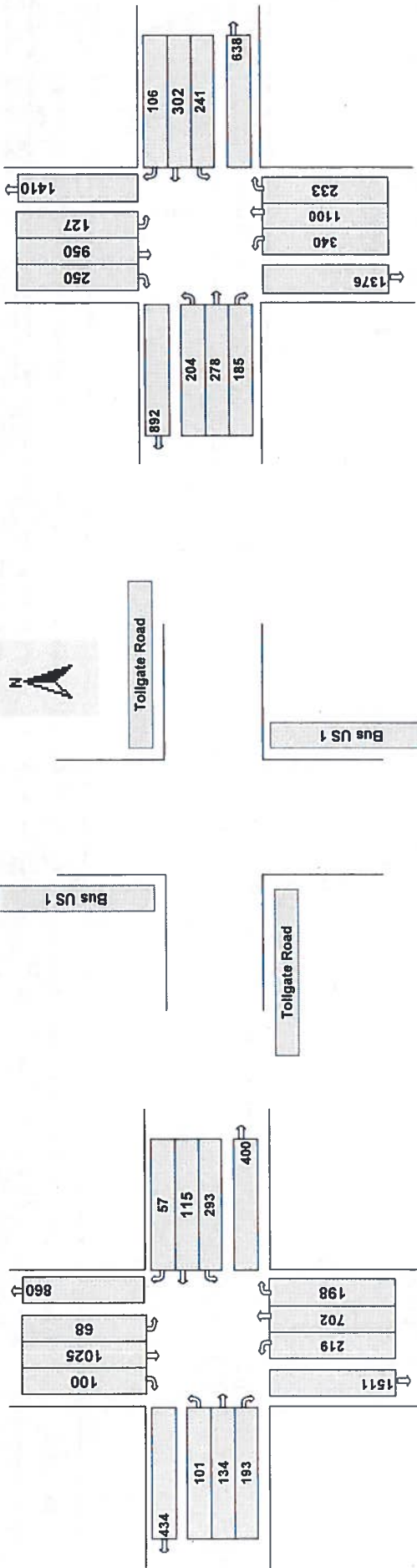
TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

Project: Bus US 1 / Tollgate Road
 Location: BELAIR
 Condition: Existing Conditions
 County: HARFORD
 Date: 11-24-2008
 BAI Project #: 06-009-07
 Computed by:

MORNING PEAK HOUR: 9:00 - 10:00

LANE CONFIGURATION

EVENING PEAK HOUR: 5:00 - 6:00



Intersection Control: Signal Stop - Way
 RTOR: NB SB EB WB

φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume *	φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume *
φ1	SBT	1025	0.55	564	142	706	φ4	NBT	550	0.55	303	68	371
φ2	NBT	550	0.55	303	68	371	φ5	EB	134	1.00	134	283	427
φ3	EB	134	1.00	134	283	427	φ6	WB	115	1.00	115	90	205
φ4	WB	115	1.00	115	90	205	φ7						
φ5							φ8						

No. of Lanes	Lane Use Factor	Service Level	Critical Lane Volume	Opposing Volume (vhp)	L.T. Factor (PCE)
1	= 1.00	A	≤ 1000	≤ 199	1.1
2	= 0.55	B	≤ 1150	≤ 599	2.0
3	= 0.40	C	≤ 1300	≤ 799	3.0
4	= 0.30	D	≤ 1450	≤ 999	4.0
Double L.T.	= 0.60	E	≤ 1600	≤ 1000	5.0

Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume *	φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume *
850	0.55	468	118	723	φ	SBT	850	0.55	468	118	723
1100	0.55	605	241	519	φ	NBT	1100	0.55	605	241	519
278	1.00	278	188	500	φ	EB	278	1.00	278	188	500
302	1.00	302			φ	WB	302	1.00	302		

Remarks:

* Critical Volume
 TOTAL: 1133
 Level of Service: B
 V/C: 0.71
 Remarks:

* Critical Volume
 TOTAL: 1382
 Level of Service: D
 V/C: 0.86

BAI

TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

Project: MD 24 / Boulton Street

BAI Project #: 06-009-07

Location: BEL AIR

County: HARFORD

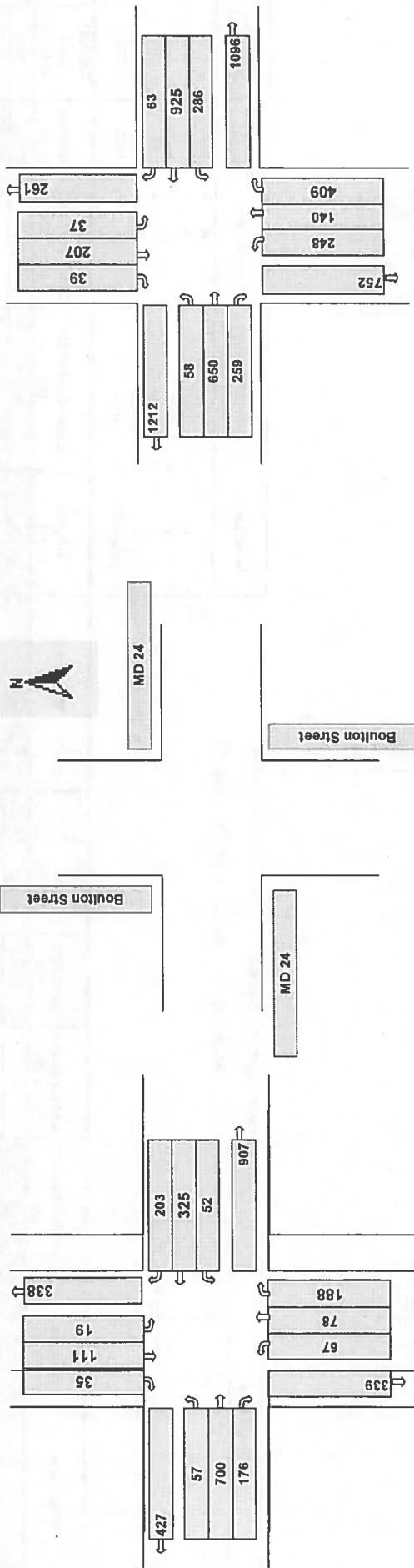
Condition: Existing Conditions

Computed by: Date 11-24-2008

MORNING PEAK HOUR: 9:00 - 10:00

LANE CONFIGURATION

EVENING PEAK HOUR: 5:00 - 6:00



Intersection Control: Signal Stop - Way
 RTOR: NB SB EB WB

Phasing (φ)

φ1	φ2	φ3	φ4
φ5	φ6	φ7	φ8

φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	*	φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	Service Level	Critical Lane Volume	Opposing Volume (vhp)	L.T. Factor (PCE)
SBT		111	1.00	111	67	178	*	SBT		207	1.00	207	248	455	A	≤ 1000	≤ 199	1.1
NBT		78	1.00	78	19	97		NBT		140	1.00	140	37	177	B	≤ 1150	≤ 599	2.0
EB		700	0.55	385	52	437	*	EB		650	0.55	358	286	644	C	≤ 1300	≤ 799	3.0
WB		326	0.55	179	57	236		WB		925	0.55	509	58	567	D	≤ 1450	≤ 999	4.0
															E	≤ 1600	≥ 1000	5.0
															F	≥ 1600		
Remarks:										* Critical Volume		TOTAL: 1099		Level of Service: B		V/C: 0.69		

BAI

TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

Project: MD 24 / MacPhail Dr.

BAI Project #: 06-009-07

Location: BEL AIR

County: HARBOR

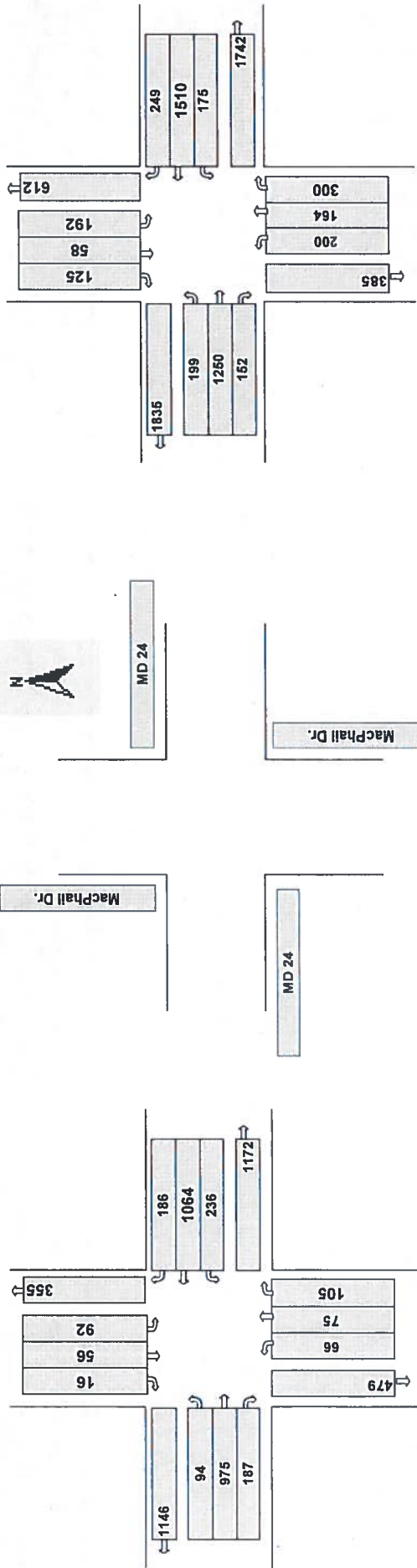
Condition: Existing Conditions

Computed by: _____ Date 11-24-2008

MORNING PEAK HOUR: 9:00 - 10:00

LANE CONFIGURATION

EVENING PEAK HOUR: 5:00 - 6:00



Phasing (φ)

φ 1	φ 2	φ 3	φ 4
φ 5	φ 6	φ 7	φ 8

Intersection Control: Signal Stop - Way
 RTOR: NB SB EB WB

φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	*	φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	L.T. Factor (PCE)	Service Level								
																No. of Lanes	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	Opposing Volume (vhp)	L.T. Factor (PCE)		
	SBT	50	1.00	50	96	116			SBT	58	1.00	58	200	258	1.1	≤	199							
	NBT	75	1.00	75	80	135	*		NBT	161	1.00	161	175	336	2.0	≤	599							
	EB	975	0.55	536	184	720			EB	1250	0.55	688	175	863	3.0	≤	799							
	WB	1050	0.55	578	84	672	*		WB	1350	0.55	743	198	942	4.0	≤	999							
															5.0	>	1000							
<table border="1"> <tr> <td rowspan="2">* Critical Volume</td> <td>TOTAL:</td> <td>807</td> <td>V/C</td> <td>0.50</td> </tr> <tr> <td>Level of Service:</td> <td>A</td> <td></td> <td></td> </tr> </table>																* Critical Volume	TOTAL:	807	V/C	0.50	Level of Service:	A		
* Critical Volume	TOTAL:	807	V/C	0.50																				
	Level of Service:	A																						
<table border="1"> <tr> <td rowspan="2">* Critical Volume</td> <td>TOTAL:</td> <td>1278</td> <td>V/C</td> <td>0.80</td> </tr> <tr> <td>Level of Service:</td> <td>C</td> <td></td> <td></td> </tr> </table>																* Critical Volume	TOTAL:	1278	V/C	0.80	Level of Service:	C		
* Critical Volume	TOTAL:	1278	V/C	0.80																				
	Level of Service:	C																						

Remarks:

Remarks:

BAI

TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

Project: MD 24 / Market Place Drive

BAI Project #: 06-009-07

Location: BEL AIR

County: HARFORD

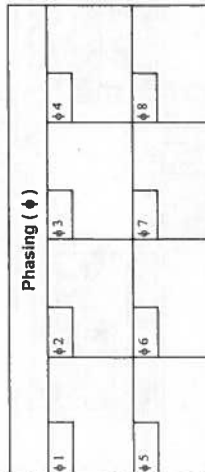
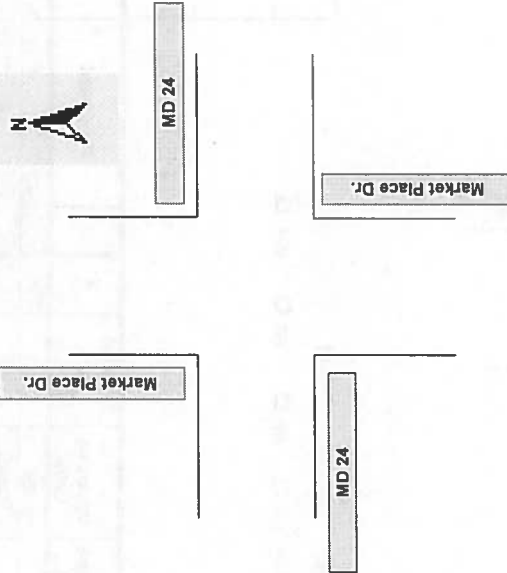
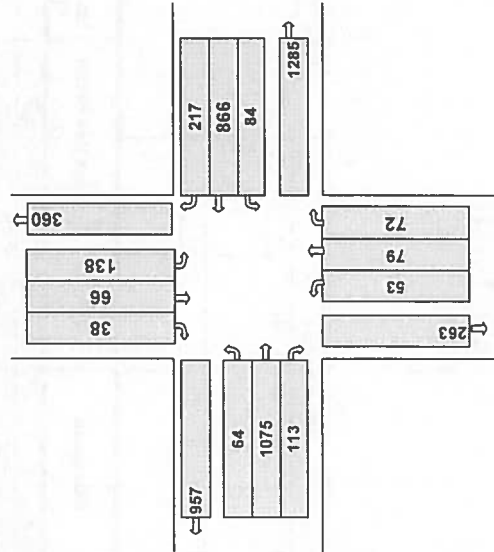
Condition: Existing Conditions

Computed by: _____ Date 11-24-2008

MORNING PEAK HOUR: 9:00 - 10:00

LANE CONFIGURATION

EVENING PEAK HOUR: 5:00 - 6:00



Intersection Control: Signal Stop - Way
 RTOR: NB SB EB WB

φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	*	φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	Service Level	No. of Lanes	Lane Use Factor (2)	Volume (1)	Opposing Volume (vhp)	L.T. Factor (PCE)
	SBT	40	1.00	40	30	70			SBT	151	1.00	151	112	1000	A	1	1.00	151	199	1.1
	NBT	70	1.00	70	114	184	*		NBT	159	1.00	159	225	1300	B	2	0.55	159	599	2.0
	EB	1075	0.40	430	84	514	*		EB	1175	0.40	470	275	1450	D	3	0.40	470	799	3.0
	WB	825	0.55	454	13	467			WB	1250	0.55	688	120	1600	E	4	0.30	688	989	4.0
															F	Double L.T.			1000	5.0
Remarks:										* Critical Volume		TOTAL: 698		Level of Service: A		TOTAL: 1192		V/C: 0.75		

BAI

TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

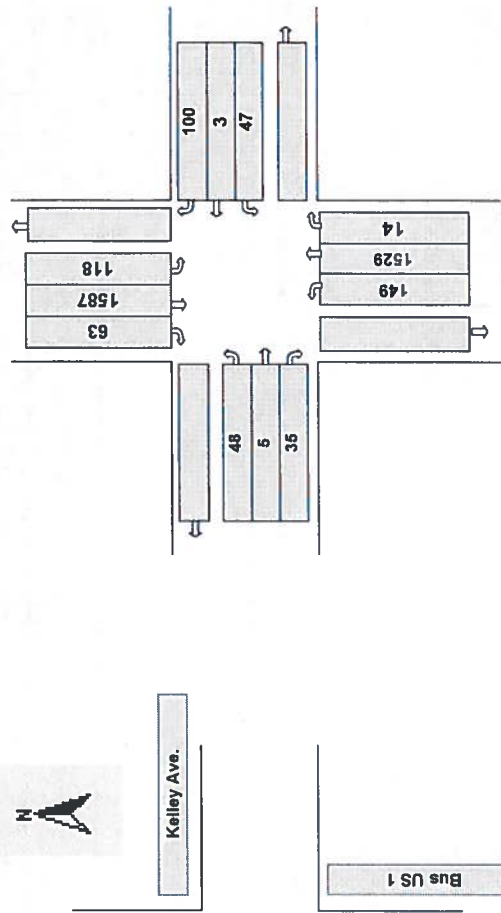
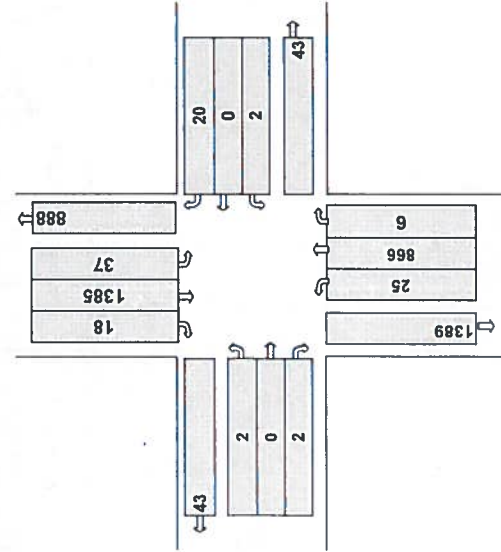
Project: Bus US 1 / Kelley Avenue
 Location: BEL AIR
 Condition: 2015 Conditions

BAI Project #: 06-009-07
 County: HARFORD
 Date: 11-24-2008
 Computed by:

MORNING PEAK HOUR: 9:00-10:00

LANE CONFIGURATION

EVENING PEAK HOUR: 5:00 - 6:00



Phasing (φ)

φ1	φ2	φ3	φ4
φ5	φ6	φ7	φ8

Intersection Control: Signal Stop RTOR: NB SB EB WB - Way

φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	*	φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	Opposing Volume (vhp)	L.T. Factor (PCE)
	SBT	1385	0.55	762	25	787	*		SBT	1587	0.55	873	148	1022	1.1	
	NBT	866	0.55	476	37	513			NBT	1529	0.55	841	118	959	2.0	
	EB	0	1.00	0	2	2			EB	5	1.00	5	47	52	3.0	*
	WB	0	1.00	0	2	2			WB	3	1.00	3	48	51	4.0	
Remarks: * Critical Volume TOTAL: 787 V/C 0.49 Level of Service: A Remarks:																
* Critical Volume TOTAL: 1074 V/C 0.67 Level of Service: B																

BAI

TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

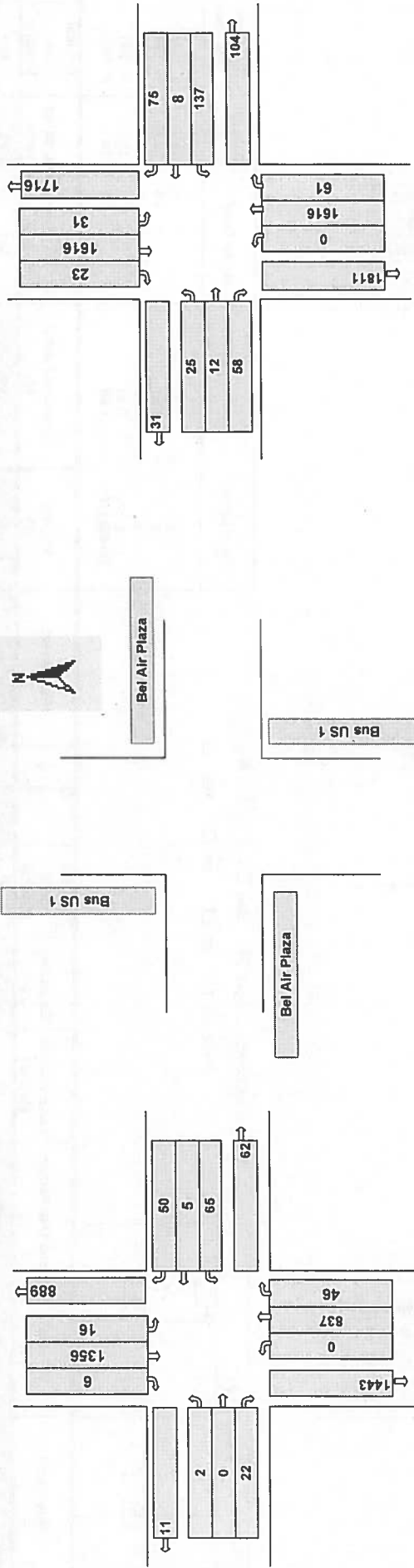
Project: Bus US 1 - Bel Air Plaza
 Location: BEL AIR
 Condition: 2015 Conditions

BAI Project #: 06-009-07
 County: HARFORD
 Date: 11-24-2008
 Computed by:

MORNING PEAK HOUR: 9:00-10:00

LANE CONFIGURATION

EVENING PEAK HOUR: 5:00 - 6:00



Intersection Control: Signal Stop - Way
 RTOR: NB SB EB WB

Phasing (φ)

φ1	φ2	φ3	φ4
φ5	φ6	φ7	φ8

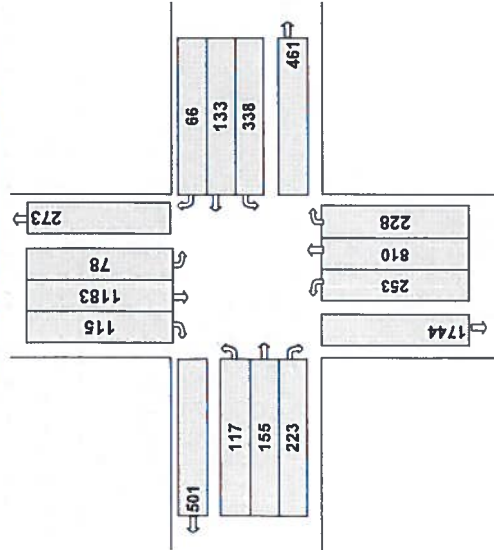
φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	*	φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	L.T. Factor (PCE)
	SBT	1356	0.40	542	0	542	*	SBT	SBT	1616	0.40	646	0	646	1.1
	NBT	837	0.55	460	16	476		NBT	NBT	1616	0.55	889	31	920	2.0
	EB	0	1.00	0	65	65		EB	EB	12	1.00	12	137	149	3.0
	WB	5	1.00	5	2	7	*	WB	WB	8	1.00	8	25	33	4.0
															5.0
Remarks:															
										* Critical Volume		TOTAL: 795		V/C 0.50	
										Level of Service: A		Level of Service: A			

BAI

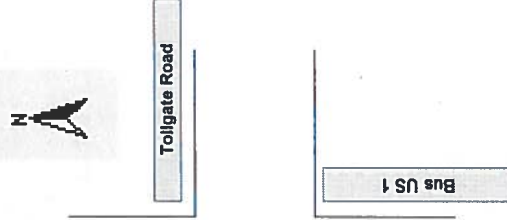
TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

Project: Bus US 1 / Tollgate Road
 Location: BEL AIR
 Condition: 2015 Conditions
 BAI Project #: 06-009-07
 County: HARFORD
 Date: 11-24-2008
 Computed by:

MORNING PEAK HOUR: 9:00-10:00



LANE CONFIGURATION



EVENING PEAK HOUR: 5:00 - 6:00

Phasing (φ)

φ1	φ2	φ3	φ4
φ5	φ6	φ7	φ8

Intersection Control: Signal Stop - Way
 RTOR: NB SB EB WB

φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	*	φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	Service Level	Critical Lane Volume	Opposing Volume (vhp)	L.T. Factor (PCE)
	SBT	1183	0.55	651	164	815	*		SBT	1086	0.55	603	382	1000	A	≤ 199	1.1	
	NBT	635	0.55	349	78	427	*		NBT	1289	0.55	698	136	1300	B	≤ 599	2.0	
	EB	155	1.00	155	338	493	*		EB	321	1.00	321	278	1450	C	≤ 799	3.0	
	WB	111	1.00	111	117	228	*		WB	349	1.00	349	235	1600	D	≤ 999	4.0	
															E	≥ 1000	5.0	
													* Critical Volume	TOTAL: 1594		V/C 1.00		
													Level of Service	E				

Remarks:

BAI

TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

Project: MD 24 / Boulton Street

BAI Project #: 06-009-07

Location: BEL AIR

County: HARFORD

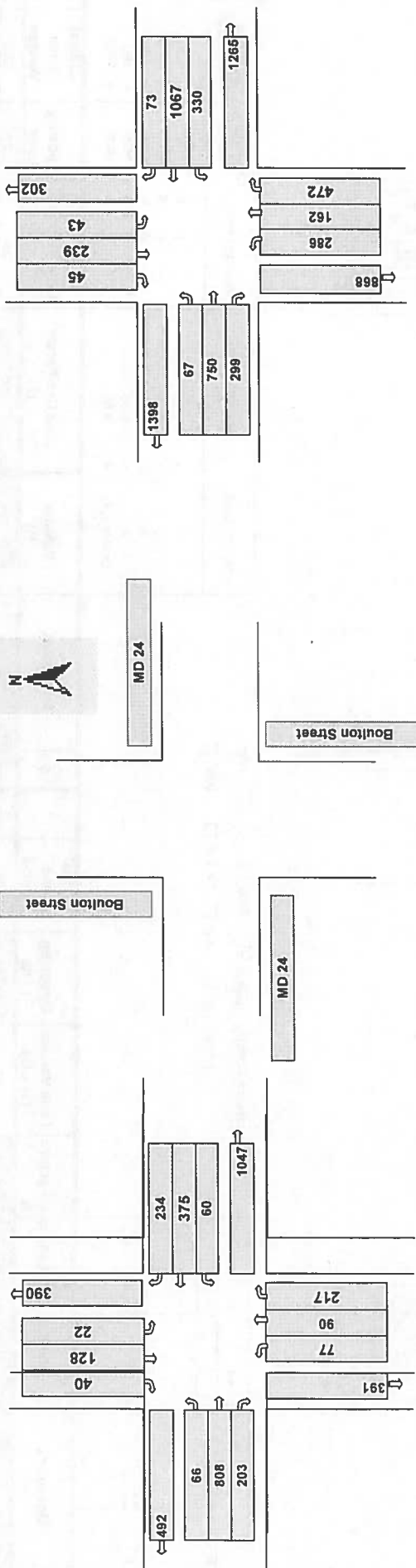
Condition: 2015 Conditions

Computed by: Date 11-24-2008

MORNING PEAK HOUR: 9:00-10:00

LANE CONFIGURATION

EVENING PEAK HOUR: 5:00 - 6:00



φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	*	φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	Opposing Volume (Vhp) (PCE)	L.T. Factor (PCE)	
																	* Critical Volume
φ 1	SBT	128	1.00	128	77	205	*	SBT	239	1.00	239	286	525	1.1			
φ 2	NBT	90	1.00	90	22	112	*	NBT	162	1.00	162	43	205	2.0			
φ 3	EB	808	0.55	444	60	504	*	EB	750	0.55	413	330	743	3.0			
φ 4	WB	375	0.55	206	66	272		WB	1087	0.55	587	67	654	4.0			
φ 5														5.0			
φ 6																	
φ 7																	
φ 8																	
Remarks:										* Critical Volume		TOTAL: Level of Service		TOTAL: Level of Service		V/C	
Remarks:										* Critical Volume		TOTAL: Level of Service		TOTAL: Level of Service		V/C	

Intersection Control: Signal Stop - Way
 RTOR: NB SB EB WB

BAI

TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

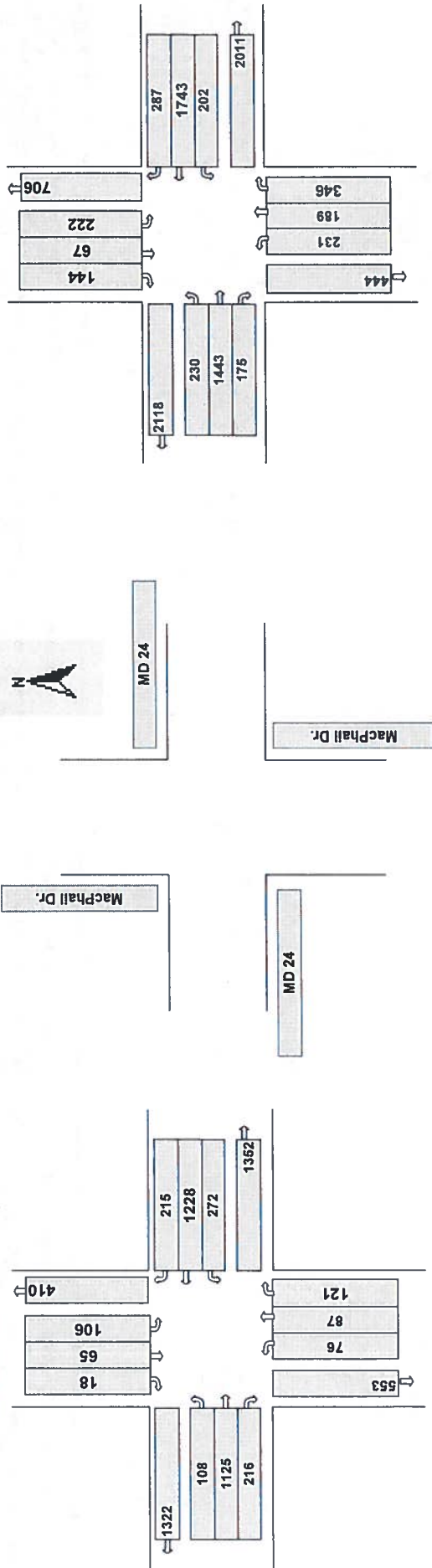
Project: MD 24 / MacPhail Dr.
 Location: BEL AIR
 Condition: 2015 Conditions

BAI Project #: 06-009-07
 County: HARFORD
 Computed by: Date 11-24-2008

MORNING PEAK HOUR: 9:00-10:00

LANE CONFIGURATION

EVENING PEAK HOUR: 5:00 - 6:00



Phasing (φ)

φ1	φ2	φ3	φ4
φ5	φ6	φ7	φ8

Intersection Control: Signal Stop - Way
 RTOR: NB SB EB WB

No. of Lanes	Lane Use Factor	Service Level	Critical Lane Volume	Opposing Volume (vhp)	L.T. Factor (PCE)
1	= 1.00	A	≤ 1000	≤ 199	1.1
2	= 0.55	B	≤ 1150	≤ 599	2.0
3	= 0.40	C	≤ 1300	≤ 798	3.0
4	= 0.30	D	≤ 1450	≤ 999	4.0
Double L.T.	= 0.60	E	≤ 1600	≤ 1000	5.0

φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	*	Remarks:	
								* Critical Volume	V/C
SBT	SBT	67	1.00	67	231	298	*	TOTAL: 1475	V/C 0.92
NBT	NBT	198	1.00	186	202	388	*	Level of Service: E	
EB	EB	1443	0.55	794	202	986	*		
WB	WB	1558	0.55	857	230	1087	*		
								* Critical Volume	
								TOTAL: 931	V/C 0.58
								Level of Service: A	

BAI

TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

Project: MD 24 / Market Place Drive

BAI Project #: 06-009-07

Location: BELAIR

County: HARFORD

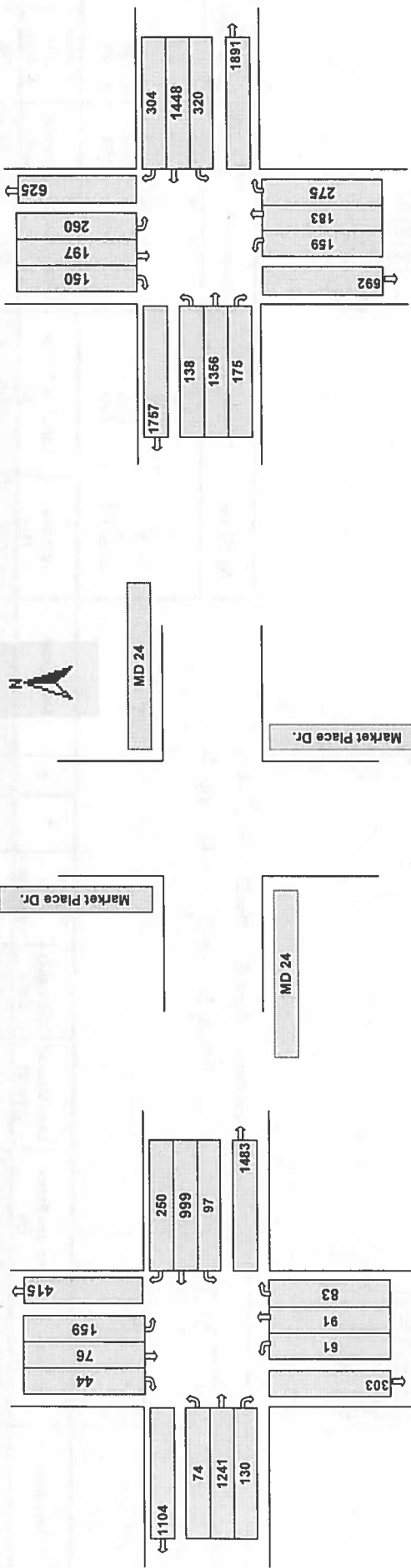
Condition: 2015 Conditions

Computed by: Date 11-24-2008

MORNING PEAK HOUR: 9:00-10:00

LANE CONFIGURATION

EVENING PEAK HOUR: 5:00 - 6:00



Phasing (φ)

φ 1	φ 2	φ 3	φ 4
φ 5	φ 6	φ 7	φ 8

Intersection Control: Signal Stop - Way
 RTOR: NB SB EB WB

φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	*	φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	Service Level	Critical Lane Volume	Opposing Volume (vhp)	L.T. Factor (PCE)	
																			* Critical Volume
	SBT	46	1.00	46	35	81		SBT	174	174	1.00	174	129	1000	A	≤ 1000	≤ 199	1.1	
	NBT	81	1.00	81	132	213	*	NBT	183	183	1.00	183	260	1300	B	≤ 1150	≤ 599	2.0	
	EB	1241	0.40	496	97	593		EB	1356	542	0.40	542	317	1450	C	≤ 1300	≤ 799	3.0	
	WB	952	0.55	524	74	598	*	WB	1443	794	0.55	794	138	1600	D	≤ 1600	≤ 999	4.0	
															E	≤ 1600	≥ 1000	4.0	
															F	> 1600	≥ 1000	5.0	
Remarks:										* Critical Volume		TOTAL: Level of Service:		TOTAL: Level of Service:		V/C			
										811		A		1375		D		0.86	

BAI

TURNING MOVEMENT SUMMARY AND LEVEL OF SERVICE

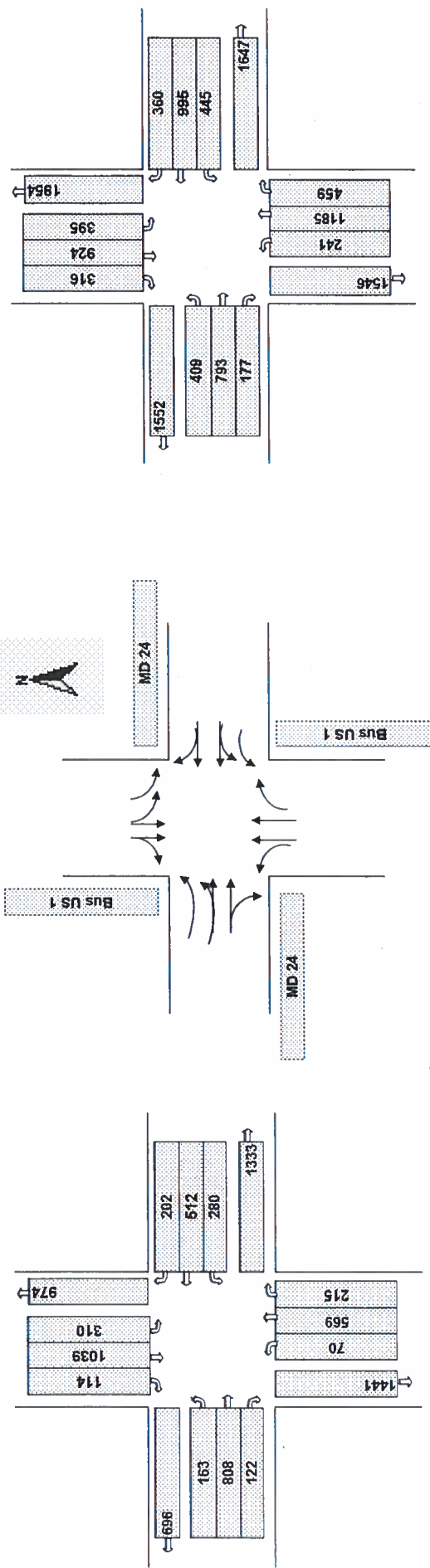
Project: MD 24 / Bus US 1 INTERSECTION STUDY
 Location: BEL AIR
 Condition: 2015 Conditions

BAI Project #: 06-009-07
 County: HARFORD
 Date: 11-24-2008
 Computed by:

MORNING PEAK HOUR: 9:00-10:00

LANE CONFIGURATION

EVENING PEAK HOUR: 5:00 - 6:00



Intersection Control: Signal Stop - Way
 RTOR: NB SB EB WB

Phasing (φ)

φ 1	φ 2	φ 3	φ 4
φ 5	φ 6	φ 7	φ 8

No. of Lanes	Lane Use Factor	Service Level	Critical Lane Volume	Opposing Volume (vhp)	L.T. Factor (PCE)
1	= 1.00	A	≤ 1000	≤ 199	1.1
2	= 0.55	B	≤ 1150	≤ 599	2.0
3	= 0.40	C	≤ 1300	≤ 799	3.0
4	= 0.30	D	≤ 1450	≤ 999	4.0
Double L.T.	= 0.60	E	≤ 1600	≥ 1000	5.0

φ	Movement	Volume (1)	Lane Use Factor (2)	Lane Volume (1) x (2)	Opposing Lefts	Critical Lane Volume	*	Remarks								
SBT	SBT	1039	0.60	623	62	685	*									
NET	NET	519	0.60	311	310	621										
EB	EB	808	0.60	485	280	765	*									
WB	WB	490	0.60	294	163	457										
<table border="1"> <tr> <td>* Critical Volume</td> <td>TOTAL: 1450</td> <td>V/C</td> <td>0.91</td> </tr> <tr> <td>Level of Service:</td> <td>D</td> <td></td> <td></td> </tr> </table>									* Critical Volume	TOTAL: 1450	V/C	0.91	Level of Service:	D		
* Critical Volume	TOTAL: 1450	V/C	0.91													
Level of Service:	D															
<table border="1"> <tr> <td>* Critical Volume</td> <td>TOTAL: 2112</td> <td>V/C</td> <td>1.32</td> </tr> <tr> <td>Level of Service:</td> <td>F</td> <td></td> <td></td> </tr> </table>									* Critical Volume	TOTAL: 2112	V/C	1.32	Level of Service:	F		
* Critical Volume	TOTAL: 2112	V/C	1.32													
Level of Service:	F															

Traffic Analysis for the Town of Bel Air MD Route 24 and Business-US 1 Corridors



Appendix

b. Synchro/Sim-Traffic Analysis



AM EXISTING CONDITIONS

Baseline

11/24/2008

Summary of All Intervals

Start Time	6:57
End Time	8:07
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intvls	1
Vehs Entered	14014
Vehs Exited	13921
Starting Vehs	728
Ending Vehs	821
Denied Entry Before	13
Denied Entry After	76
Travel Distance (mi)	19213
Travel Time (hr)	903.7
Total Delay (hr)	498.3
Total Stops	21008
Fuel Used (gal)	7899.7

Interval #0 Information Seeding

Start Time	6:57
End Time	7:07
Total Time (min)	10
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:07
End Time	8:07
Total Time (min)	60
Volumes adjusted by Growth Factors.	
Vehs Entered	14014
Vehs Exited	13921
Starting Vehs	728
Ending Vehs	821
Denied Entry Before	13
Denied Entry After	76
Travel Distance (mi)	19213
Travel Time (hr)	903.7
Total Delay (hr)	498.3
Total Stops	21008
Fuel Used (gal)	7899.7

AM EXISTING CONDITIONS

Baseline

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4: MD 24 & Singer Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	1.6	14.2	0.1	1.0	10.9	0.2	3.2	2.3	1.5	3.1	4.9	0.7
Delay / Veh (s)	77.9	31.0	11.5	87.4	41.2	13.4	63.0	57.0	35.7	92.3	99.7	19.4
Stop Delay (hr)	1.3	5.4	0.0	0.8	5.3	0.0	2.9	2.1	1.4	2.8	4.5	0.6
St Del/Veh (s)	66.5	11.8	1.0	71.8	19.9	1.2	57.0	51.6	34.2	83.5	91.4	17.8
Total Stops	71	602	8	47	559	21	173	117	117	149	209	107
Travel Dist (mi)	71.8	1666.1	25.5	28.4	641.1	38.6	23.9	19.1	19.8	15.9	23.4	16.9
Travel Time (hr)	2.9	42.7	0.5	1.6	21.7	0.9	3.9	2.9	2.2	3.6	5.6	1.3
Avg Speed (mph)	25	39	47	18	30	41	6	7	9	5	4	14
Fuel Used (gal)	25.2	515.2	8.0	9.4	192.9	10.8	16.1	11.7	10.3	12.9	19.5	6.5
HC Emissions (g)	6	78	1	2	28	3	1	1	1	1	1	1
CO Emissions (g)	2008	31857	482	626	10538	1051	548	418	442	353	525	311
NOx Emissions (g)	19	302	3	7	104	10	3	3	3	3	4	2
Vehicles Entered	69	1650	25	42	950	57	181	144	149	119	176	127
Vehicles Exited	75	1653	26	42	951	57	183	144	149	121	177	126
Hourly Exit Rate	75	1653	26	42	951	57	183	144	149	121	177	126
Input Volume	87	1666	26	36	950	50	183	139	133	115	165	129
% of Volume	86	99	100	117	100	114	100	104	112	105	107	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	1	1	0
Denied Entry After	0	0	0	0	0	0	2	0	0	0	0	0

4: MD 24 & Singer Rd Performance by movement

Movement	All
Total Delay (hr)	43.6
Delay / Veh (s)	42.5
Stop Delay (hr)	27.1
St Del/Veh (s)	26.4
Total Stops	2180
Travel Dist (mi)	2590.6
Travel Time (hr)	89.8
Avg Speed (mph)	29
Fuel Used (gal)	838.3
HC Emissions (g)	124
CO Emissions (g)	49161
NOx Emissions (g)	464
Vehicles Entered	3689
Vehicles Exited	3704
Hourly Exit Rate	3704
Input Volume	3679
% of Volume	101
Denied Entry Before	2
Denied Entry After	2

AM EXISTING CONDITIONS

Baseline

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5: MD 24 & Wheel Rd. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.3	3.4	0.0	0.5	10.9	0.3	0.2	0.6	1.7	1.9	0.3	0.3
Delay / Veh (s)	52.4	7.9	7.1	117.2	33.0	15.7	93.9	58.5	41.3	76.1	59.8	36.8
Stop Delay (hr)	0.2	0.6	0.0	0.4	4.0	0.0	0.2	0.5	1.6	1.8	0.3	0.3
St Del/Veh (s)	45.8	1.5	0.0	98.5	12.0	0.8	91.0	53.8	38.1	71.3	55.5	34.7
Total Stops	17	166	0	17	380	19	7	28	125	92	17	20
Travel Dist (mi)	6.1	519.9	0.7	16.3	1212.5	62.7	0.9	4.5	19.9	12.0	2.7	3.7
Travel Time (hr)	0.4	13.5	0.0	0.8	31.8	1.4	0.2	0.7	2.4	2.3	0.4	0.4
Avg Speed (mph)	15	39	39	20	38	44	4	7	8	6	6	9
Fuel Used (gal)	2.8	203.4	0.2	6.8	435.7	22.2	0.7	3.0	10.9	8.1	1.6	1.6
HC Emissions (g)	0	30	0	0	69	3	0	0	1	1	0	0
CO Emissions (g)	172	14355	19	314	29889	1508	11	124	473	279	46	60
NOx Emissions (g)	1	115	0	2	259	12	0	1	4	2	0	1
Vehicles Entered	18	1541	2	16	1193	62	7	34	150	91	21	28
Vehicles Exited	18	1529	2	16	1195	62	7	34	149	90	20	27
Hourly Exit Rate	18	1529	2	16	1195	62	7	34	149	90	20	27
Input Volume	26	1570	6	13	1201	56	7	33	133	96	21	38
% of Volume	69	97	33	123	100	111	100	103	112	94	95	71
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

5: MD 24 & Wheel Rd. Performance by movement

Movement	All
Total Delay (hr)	20.3
Delay / Veh (s)	23.2
Stop Delay (hr)	9.9
St Del/Veh (s)	11.3
Total Stops	888
Travel Dist (mi)	1862.1
Travel Time (hr)	54.4
Avg Speed (mph)	34
Fuel Used (gal)	697.1
HC Emissions (g)	105
CO Emissions (g)	47249
NOx Emissions (g)	397
Vehicles Entered	3163
Vehicles Exited	3149
Hourly Exit Rate	3149
Input Volume	3200
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

AM EXISTING CONDITIONS

Baseline

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6: MD 24 & Belair South Pkwy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	3.0	4.9	0.2	1.4	7.4	0.3	3.0	1.5	0.3	5.9	1.0	1.0
Delay / Veh (s)	87.5	15.4	5.8	87.6	25.8	8.6	77.3	66.9	19.0	58.2	61.7	20.3
Stop Delay (hr)	2.8	2.5	0.0	1.2	4.3	0.1	2.7	1.4	0.3	5.3	0.8	0.9
St Del/Veh (s)	80.1	7.9	0.8	80.3	14.9	1.5	71.6	61.0	17.7	52.8	54.3	18.5
Total Stops	119	231	34	55	284	39	125	82	46	312	49	146
Travel Dist (mi)	38.8	361.9	40.3	19.1	350.7	40.2	18.1	11.3	6.9	48.2	7.4	24.4
Travel Time (hr)	3.9	11.8	1.1	1.8	13.9	1.2	3.5	1.9	0.5	7.5	1.2	1.9
Avg Speed (mph)	10	31	37	11	25	35	5	6	14	7	6	13
Fuel Used (gal)	20.2	146.8	15.3	9.9	137.0	15.0	13.2	7.5	2.4	30.4	4.5	9.8
HC Emissions (g)	2	22	2	1	20	1	1	0	0	2	0	2
CO Emissions (g)	999	10755	1217	524	8861	931	415	254	86	1012	119	517
NOx Emissions (g)	6	79	7	4	74	6	3	2	1	8	1	4
Vehicles Entered	122	1142	130	57	1048	121	137	85	52	363	56	183
Vehicles Exited	125	1147	125	56	1030	119	138	82	52	362	56	182
Hourly Exit Rate	125	1147	125	56	1030	119	138	82	52	362	56	182
Input Volume	111	1200	116	59	1056	130	125	71	55	347	64	167
% of Volume	113	96	108	95	98	92	110	115	95	104	88	109
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: MD 24 & Belair South Pkwy Performance by movement

Movement	All
Total Delay (hr)	29.8
Delay / Veh (s)	30.8
Stop Delay (hr)	22.4
St Del/Veh (s)	23.1
Total Stops	1522
Travel Dist (mi)	967.2
Travel Time (hr)	50.1
Avg Speed (mph)	19
Fuel Used (gal)	412.0
HC Emissions (g)	54
CO Emissions (g)	25689
NOx Emissions (g)	193
Vehicles Entered	3496
Vehicles Exited	3474
Hourly Exit Rate	3474
Input Volume	3501
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

AM EXISTING CONDITIONS

Baseline

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7: MD 24 & Plumtree Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	1.1	6.5	0.0	1.2	4.4	0.2	0.3	0.6	1.2	1.1	0.6	1.0
Delay / Veh (s)	87.0	19.0	8.3	54.2	13.6	6.3	58.8	65.4	35.1	62.9	61.9	31.8
Stop Delay (hr)	1.0	2.5	0.0	1.1	2.0	0.0	0.3	0.6	1.0	1.0	0.5	0.9
St Del/Veh (s)	78.1	7.3	0.0	48.6	6.0	0.8	55.0	60.4	31.9	57.5	56.3	27.8
Total Stops	45	305	0	60	248	31	15	34	102	64	31	100
Travel Dist (mi)	42.0	1100.5	3.6	25.2	374.8	32.6	2.3	4.6	15.6	8.5	4.4	15.0
Travel Time (hr)	1.9	25.5	0.1	1.8	11.7	0.9	0.4	0.8	1.7	1.4	0.7	1.6
Avg Speed (mph)	22	43	48	14	32	35	6	6	9	6	6	10
Fuel Used (gal)	16.2	374.3	1.3	11.7	159.4	12.2	1.5	3.2	8.3	5.5	3.1	7.4
HC Emissions (g)	1	62	0	1	26	2	0	0	1	1	0	1
CO Emissions (g)	877	26690	97	614	12047	1004	52	109	337	218	120	308
NOx Emissions (g)	6	232	0	4	93	8	0	1	2	2	1	2
Vehicles Entered	46	1232	4	79	1179	104	17	35	117	65	33	113
Vehicles Exited	47	1233	4	79	1171	100	17	35	119	63	34	114
Hourly Exit Rate	47	1233	4	79	1171	100	17	35	119	63	34	114
Input Volume	52	1274	4	82	1175	98	16	36	114	62	51	112
% of Volume	90	97	100	96	100	102	106	97	104	102	67	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: MD 24 & Plumtree Performance by movement

Movement	All
Total Delay (hr)	18.2
Delay / Veh (s)	21.7
Stop Delay (hr)	10.9
St Del/Veh (s)	13.0
Total Stops	1035
Travel Dist (mi)	1629.1
Travel Time (hr)	48.5
Avg Speed (mph)	34
Fuel Used (gal)	604.0
HC Emissions (g)	95
CO Emissions (g)	42474
NOx Emissions (g)	350
Vehicles Entered	3024
Vehicles Exited	3016
Hourly Exit Rate	3016
Input Volume	3076
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

13: MD 24 & Ring Factory Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	1.0	3.6	0.0	0.8	10.4	0.4	0.1	1.3	0.9	4.2	2.1	1.6
Delay / Veh (s)	80.9	12.2	5.2	88.0	28.3	15.3	55.4	45.6	27.5	79.9	65.9	49.0
Stop Delay (hr)	0.9	1.9	0.0	0.7	4.0	0.0	0.1	1.1	0.7	3.7	1.8	1.4
St Del/Veh (s)	77.3	6.4	0.4	77.8	11.0	1.9	48.9	39.5	23.9	70.5	55.6	41.3
Total Stops	40	183	2	33	463	24	8	87	85	222	117	113
Travel Dist (mi)	25.2	598.4	11.2	28.8	1126.1	84.2	1.1	14.4	16.0	26.8	16.7	16.9
Travel Time (hr)	1.5	14.5	0.2	1.3	29.6	2.0	0.2	1.7	1.4	5.0	2.7	2.2
Avg Speed (mph)	17	41	45	22	38	42	8	8	11	6	6	8
Fuel Used (gal)	8.7	172.1	3.1	10.7	364.5	25.7	0.8	7.6	7.2	18.1	10.4	8.9
HC Emissions (g)	0	26	0	2	67	3	0	1	1	1	1	1
CO Emissions (g)	239	8452	131	772	26609	1444	32	283	298	561	266	289
NOx Emissions (g)	3	111	1	6	236	11	0	2	2	4	2	3
Vehicles Entered	43	1053	19	34	1322	96	8	102	112	189	118	118
Vehicles Exited	45	1054	19	33	1313	96	8	102	112	188	117	120
Hourly Exit Rate	45	1054	19	33	1313	96	8	102	112	188	117	120
Input Volume	43	1118	11	34	1300	104	8	91	122	183	131	116
% of Volume	105	94	173	97	101	92	100	112	92	103	89	103
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	1	0	0

13: MD 24 & Ring Factory Performance by movement

Movement	All
Total Delay (hr)	26.4
Delay / Veh (s)	29.6
Stop Delay (hr)	16.4
St Del/Veh (s)	18.4
Total Stops	1377
Travel Dist (mi)	1965.8
Travel Time (hr)	62.4
Avg Speed (mph)	32
Fuel Used (gal)	637.7
HC Emissions (g)	102
CO Emissions (g)	39376
NOx Emissions (g)	382
Vehicles Entered	3214
Vehicles Exited	3207
Hourly Exit Rate	3207
Input Volume	3261
% of Volume	98
Denied Entry Before	0
Denied Entry After	1

AM EXISTING CONDITIONS

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14: MD 24 & MacPhail Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	2.0	2.1	0.1	4.7	3.9	0.2	1.0	1.5	0.2	1.8	1.4	0.2
Delay / Veh (s)	74.0	8.2	2.8	73.4	13.1	3.5	60.9	66.1	7.2	66.0	79.5	55.0
Stop Delay (hr)	1.9	1.4	0.1	4.2	1.5	0.0	0.9	1.4	0.1	1.6	1.3	0.2
St Del/Veh (s)	69.7	5.3	1.5	65.3	5.2	0.1	55.7	61.4	5.1	59.8	74.8	51.4
Total Stops	89	162	35	203	293	6	49	71	0	94	62	12
Travel Dist (mi)	15.0	143.7	28.7	36.3	165.5	29.5	5.5	7.9	8.4	8.3	5.6	1.1
Travel Time (hr)	2.4	5.4	1.0	5.7	6.9	1.0	1.2	1.8	0.5	2.0	1.6	0.3
Avg Speed (mph)	6	27	30	6	24	30	5	5	25	4	3	5
Fuel Used (gal)	7.4	40.2	5.4	18.1	44.1	5.8	4.5	6.1	3.9	7.8	5.3	0.9
HC Emissions (g)	0	5	1	2	6	1	0	1	0	1	0	0
CO Emissions (g)	126	1504	254	494	1991	431	147	201	238	258	102	26
NOx Emissions (g)	1	20	3	4	18	2	1	1	1	2	1	0
Vehicles Entered	96	939	185	234	1063	194	58	83	97	95	64	13
Vehicles Exited	98	936	186	231	1061	198	59	83	97	100	66	15
Hourly Exit Rate	98	936	186	231	1061	198	59	83	97	100	66	15
Input Volume	94	1004	187	236	1064	186	66	75	105	92	56	16
% of Volume	104	93	99	98	100	106	89	111	92	109	118	94
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	1	0	0	0	0	0

14: MD 24 & MacPhail Performance by movement

Movement	All
Total Delay (hr)	19.2
Delay / Veh (s)	22.1
Stop Delay (hr)	14.7
St Del/Veh (s)	16.9
Total Stops	1076
Travel Dist (mi)	455.4
Travel Time (hr)	29.6
Avg Speed (mph)	16
Fuel Used (gal)	149.5
HC Emissions (g)	17
CO Emissions (g)	5772
NOx Emissions (g)	56
Vehicles Entered	3121
Vehicles Exited	3130
Hourly Exit Rate	3130
Input Volume	3181
% of Volume	98
Denied Entry Before	0
Denied Entry After	1

AM EXISTING CONDITIONS

Baseline

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15: MD 24 & Marketplace Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	1.5	3.2	0.2	1.7	2.1	0.2	0.9	1.4	0.1	2.3	1.5	0.1
Delay / Veh (s)	85.7	11.3	7.0	72.5	9.0	2.7	61.4	68.3	6.5	70.1	67.7	11.0
Stop Delay (hr)	1.3	1.6	0.0	1.6	1.6	0.0	0.9	1.3	0.1	2.1	1.4	0.1
St Del/Veh (s)	77.9	5.5	0.5	67.9	6.8	0.0	57.2	63.6	4.3	65.1	63.3	8.0
Total Stops	59	164	2	83	163	1	48	69	0	102	76	12
Travel Dist (mi)	16.7	281.5	28.4	9.6	95.1	22.5	4.9	6.9	5.1	9.9	6.8	3.7
Travel Time (hr)	1.9	10.0	1.0	2.0	4.3	0.8	1.1	1.7	0.3	2.6	1.8	0.3
Avg Speed (mph)	9	28	29	5	22	27	4	4	23	4	4	18
Fuel Used (gal)	10.0	127.6	11.0	5.6	31.2	3.5	4.3	6.0	2.5	9.6	6.0	1.6
HC Emissions (g)	1	19	2	0	4	0	1	1	0	1	0	0
CO Emissions (g)	381	8996	796	88	1368	132	165	257	163	347	124	115
NOx Emissions (g)	2	69	6	1	15	1	2	3	1	3	1	1
Vehicles Entered	61	1036	106	86	852	215	53	75	61	117	79	46
Vehicles Exited	61	1035	107	83	854	212	54	75	61	118	83	46
Hourly Exit Rate	61	1035	107	83	854	212	54	75	61	118	83	46
Input Volume	64	1075	113	84	866	217	53	79	72	138	66	38
% of Volume	95	96	95	99	99	98	102	95	85	86	126	121
Denied Entry Before	0	0	0	0	0	0	0	1	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

15: MD 24 & Marketplace Performance by movement

Movement	All
Total Delay (hr)	15.3
Delay / Veh (s)	19.7
Stop Delay (hr)	12.0
St Del/Veh (s)	15.5
Total Stops	779
Travel Dist (mi)	491.1
Travel Time (hr)	27.7
Avg Speed (mph)	18
Fuel Used (gal)	219.0
HC Emissions (g)	30
CO Emissions (g)	12932
NOx Emissions (g)	106
Vehicles Entered	2787
Vehicles Exited	2789
Hourly Exit Rate	2789
Input Volume	2865
% of Volume	97
Denied Entry Before	1
Denied Entry After	0

AM EXISTING CONDITIONS

Baseline

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16: MD 24 & Boulton Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.3	4.1	0.3	5.3	0.8	0.3	1.0	1.3	0.4	0.3	2.1	0.5
Delay / Veh (s)	19.5	22.1	8.7	75.5	6.8	5.0	74.4	60.2	7.2	67.4	65.0	43.2
Stop Delay (hr)	0.2	2.8	0.1	4.6	0.4	0.1	1.0	1.2	0.3	0.3	2.0	0.5
St Del/Veh (s)	15.6	15.4	4.8	65.5	3.2	1.0	70.8	55.8	5.3	63.3	60.4	40.3
Total Stops	39	281	2	241	66	44	43	75	1	13	112	38
Travel Dist (mi)	15.0	186.9	29.9	41.0	70.6	38.2	4.5	6.8	15.8	1.3	10.2	3.5
Travel Time (hr)	0.6	7.7	0.9	6.5	2.5	1.4	1.2	1.6	1.0	0.3	2.5	0.7
Avg Speed (mph)	27	25	38	6	28	27	4	4	23	4	4	5
Fuel Used (gal)	5.4	60.5	9.0	29.3	36.5	16.0	3.9	5.3	6.2	1.2	9.2	2.6
HC Emissions (g)	1	8	1	4	5	2	0	0	1	0	1	0
CO Emissions (g)	407	3951	820	1476	2757	1117	81	105	344	31	284	67
NOx Emissions (g)	2	28	4	13	17	6	0	1	3	0	3	1
Vehicles Entered	53	662	108	253	430	225	51	78	198	16	119	41
Vehicles Exited	53	663	108	250	430	225	49	80	200	14	119	42
Hourly Exit Rate	53	663	108	250	430	225	49	80	200	14	119	42
Input Volume	57	700	106	243	444	210	61	78	188	19	111	35
% of Volume	93	95	102	103	97	107	80	103	106	74	107	120
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	1	0	0	0

16: MD 24 & Boulton Performance by movement

Movement	All
Total Delay (hr)	16.7
Delay / Veh (s)	26.9
Stop Delay (hr)	13.5
St Del/Veh (s)	21.7
Total Stops	955
Travel Dist (mi)	423.7
Travel Time (hr)	26.9
Avg Speed (mph)	16
Fuel Used (gal)	185.3
HC Emissions (g)	24
CO Emissions (g)	11440
NOx Emissions (g)	79
Vehicles Entered	2234
Vehicles Exited	2233
Hourly Exit Rate	2233
Input Volume	2252
% of Volume	99
Denied Entry Before	0
Denied Entry After	1

18: Tollgate Rd. & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	1.8	3.1	0.6	6.2	2.1	0.3	2.8	4.3	1.4	0.4	6.9	0.5
Delay / Veh (s)	76.7	71.9	11.0	78.7	72.3	19.8	45.2	23.7	24.1	20.7	23.2	17.7
Stop Delay (hr)	1.7	2.9	0.5	5.7	1.9	0.3	2.5	3.1	1.1	0.3	4.6	0.3
St Del/Veh (s)	72.2	66.4	8.2	72.6	67.3	16.7	39.3	17.1	17.9	14.8	15.5	10.3
Total Stops	78	151	27	273	91	51	210	316	114	64	421	52
Travel Dist (mi)	7.1	13.4	16.8	24.6	8.8	4.9	63.3	182.1	59.5	10.3	140.0	12.7
Travel Time (hr)	2.0	3.6	1.3	7.1	2.4	0.5	4.6	8.9	3.1	0.7	10.5	0.9
Avg Speed (mph)	4	4	18	4	4	13	15	21	20	14	13	15
Fuel Used (gal)	6.9	11.4	7.9	23.9	7.8	2.6	22.2	56.9	16.8	3.1	48.6	4.0
HC Emissions (g)	0	1	1	1	0	0	3	8	2	0	5	0
CO Emissions (g)	171	216	394	462	122	91	764	2315	584	68	1286	84
NOx Emissions (g)	1	2	3	4	1	1	9	25	7	1	16	1
Vehicles Entered	82	156	211	286	102	57	227	653	214	79	1079	95
Vehicles Exited	84	156	210	285	104	57	226	656	215	77	1064	95
Hourly Exit Rate	84	156	210	285	104	57	226	656	215	77	1064	95
Input Volume	101	134	193	293	115	57	219	702	198	68	1081	100
% of Volume	83	116	109	97	90	100	103	93	109	113	98	95
Denied Entry Before	0	1	0	0	0	0	0	0	0	0	0	0
Denied Entry After	1	0	0	1	0	0	1	0	0	0	0	0

18: Tollgate Rd. & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	30.6
Delay / Veh (s)	34.0
Stop Delay (hr)	24.8
St Del/Veh (s)	27.6
Total Stops	1848
Travel Dist (mi)	543.5
Travel Time (hr)	45.6
Avg Speed (mph)	12
Fuel Used (gal)	212.1
HC Emissions (g)	22
CO Emissions (g)	6558
NOx Emissions (g)	72
Vehicles Entered	3241
Vehicles Exited	3229
Hourly Exit Rate	3229
Input Volume	3261
% of Volume	99
Denied Entry Before	1
Denied Entry After	3

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19: MD 24 & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	3.0	11.1	0.1	3.5	8.0	0.3	0.4	2.3	0.1	6.0	4.3	0.1
Delay / Veh (s)	86.1	59.1	4.7	55.2	54.8	5.1	23.9	14.2	1.8	74.8	16.9	2.0
Stop Delay (hr)	2.8	8.8	0.0	3.1	6.7	0.0	0.3	1.9	0.0	5.6	3.0	0.0
St Del/Veh (s)	78.4	47.0	0.1	48.6	45.9	0.4	20.7	11.9	0.0	69.3	11.9	0.1
Total Stops	122	446	5	221	406	22	46	130	0	248	310	0
Travel Dist (mi)	24.1	130.4	19.4	62.7	135.7	54.4	4.8	46.7	13.6	27.1	87.1	8.7
Travel Time (hr)	3.7	14.2	0.7	5.1	11.1	1.7	0.5	3.4	0.5	6.8	6.5	0.3
Avg Speed (mph)	7	9	29	12	12	32	9	14	26	4	13	26
Fuel Used (gal)	16.1	71.7	7.5	25.7	59.7	15.5	1.6	17.5	2.3	20.6	36.2	2.5
HC Emissions (g)	1	8	2	4	8	2	0	2	0	1	3	0
CO Emissions (g)	711	3176	727	1255	2857	892	38	750	87	369	1189	159
NOx Emissions (g)	4	25	5	12	25	7	0	7	1	3	12	1
Vehicles Entered	126	681	107	226	527	201	53	574	166	285	903	102
Vehicles Exited	127	669	106	228	528	203	54	574	167	293	925	101
Hourly Exit Rate	127	669	106	228	528	203	54	574	167	293	925	101
Input Volume	141	700	106	243	504	210	61	613	186	269	900	99
% of Volume	90	96	100	94	105	97	89	94	90	109	103	102
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

19: MD 24 & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	39.1
Delay / Veh (s)	35.5
Stop Delay (hr)	32.2
St Del/Veh (s)	29.2
Total Stops	1956
Travel Dist (mi)	614.7
Travel Time (hr)	54.6
Avg Speed (mph)	11
Fuel Used (gal)	276.9
HC Emissions (g)	32
CO Emissions (g)	12211
NOx Emissions (g)	103
Vehicles Entered	3951
Vehicles Exited	3975
Hourly Exit Rate	3975
Input Volume	4032
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

20: Belair & US 1 Bus. Performance by movement

Movement	EBL	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.1	0.0	0.8	0.1	0.1	0.7	0.0	0.0	1.0	0.0	2.7
Delay / Veh (s)	93.0	5.6	71.7	93.6	7.0	3.2	2.6	6.9	2.8	3.0	4.6
Stop Delay (hr)	0.1	0.0	0.8	0.1	0.1	0.2	0.0	0.0	0.3	0.0	1.5
St Del/Veh (s)	90.8	4.6	68.2	91.2	6.0	0.9	0.8	4.4	0.8	1.8	2.5
Total Stops	2	16	40	2	39	71	3	5	124	1	303
Travel Dist (mi)	0.1	1.0	2.4	0.1	2.5	71.8	3.5	1.1	85.4	0.3	168.2
Travel Time (hr)	0.1	0.1	0.9	0.1	0.2	2.7	0.2	0.1	3.1	0.0	7.3
Avg Speed (mph)	2	14	3	2	13	27	23	17	27	20	23
Fuel Used (gal)	0.2	0.3	2.8	0.1	0.6	42.7	1.4	0.3	28.7	0.1	77.0
HC Emissions (g)	0	0	0	0	0	6	0	0	4	0	11
CO Emissions (g)	3	3	55	1	16	3005	95	5	1482	1	4665
NOx Emissions (g)	0	0	0	0	0	23	1	0	13	0	38
Vehicles Entered	2	19	41	2	42	746	36	16	1227	4	2135
Vehicles Exited	2	19	41	2	44	746	35	16	1220	4	2129
Hourly Exit Rate	2	19	41	2	44	746	35	16	1220	4	2129
Input Volume	2	19	56	4	43	804	40	14	1185	5	2172
% of Volume	100	100	73	50	102	93	88	114	103	80	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

21: Kelley & US 1 Bus. Performance by movement

Movement	EBR	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.0	0.0	0.0	0.1	0.0	0.0	0.9	0.0	1.1
Delay / Veh (s)	4.2	6.0	5.6	0.5	0.2	5.5	2.7	2.4	2.0
Stop Delay (hr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
St Del/Veh (s)	3.0	4.7	3.0	0.1	0.0	1.9	0.1	0.2	0.2
Total Stops	5	13	12	0	0	9	18	0	57
Travel Dist (mi)	0.3	0.8	1.5	48.7	0.3	3.1	148.6	2.8	206.0
Travel Time (hr)	0.0	0.1	0.1	1.4	0.0	0.1	4.7	0.1	6.5
Avg Speed (mph)	16	14	17	36	27	23	31	25	32
Fuel Used (gal)	0.1	0.1	0.5	16.4	0.0	1.2	62.1	1.2	81.6
HC Emissions (g)	0	0	0	3	0	0	8	0	11
CO Emissions (g)	0	1	13	919	1	55	3413	52	4454
NOx Emissions (g)	0	0	0	9	0	0	30	0	41
Vehicles Entered	5	13	23	703	4	26	1244	23	2041
Vehicles Exited	5	13	23	702	4	26	1242	23	2038
Hourly Exit Rate	5	13	23	702	4	26	1242	23	2038
Input Volume	2	17	22	751	5	32	1201	16	2050
% of Volume	250	76	105	93	80	81	103	144	99
Denied Entry Before	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0

AM EXISTING CONDITIONS

Baseline

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22: Atwood & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.4	0.7	0.3	1.0	0.8	1.3	0.2	4.3	0.1	2.1	4.1	0.0
Delay / Veh (s)	94.2	62.2	31.5	74.6	74.1	17.5	17.9	22.9	20.9	21.8	12.4	10.1
Stop Delay (hr)	0.4	0.7	0.3	0.9	0.7	1.1	0.1	3.3	0.1	1.6	2.9	0.0
St Del/Veh (s)	90.6	59.1	29.7	70.8	69.3	14.1	13.3	17.6	16.1	16.6	8.6	6.9
Total Stops	14	35	33	45	37	212	35	371	8	227	287	3
Travel Dist (mi)	0.8	2.5	2.0	2.7	2.2	16.5	4.6	80.1	1.6	37.8	130.8	1.3
Travel Time (hr)	0.4	0.8	0.4	1.1	0.8	2.0	0.3	6.4	0.1	3.3	7.7	0.1
Avg Speed (mph)	2	3	5	3	3	11	14	13	13	15	21	20
Fuel Used (gal)	1.1	2.5	1.4	3.2	2.5	9.1	1.3	30.1	0.5	16.2	55.9	0.5
HC Emissions (g)	0	0	0	0	0	1	0	4	0	2	7	0
CO Emissions (g)	15	38	31	39	31	288	22	1050	9	832	2936	15
NOx Emissions (g)	0	0	0	0	0	3	0	11	0	6	23	0
Vehicles Entered	14	42	34	45	37	273	39	679	13	349	1196	12
Vehicles Exited	14	40	34	46	37	272	39	679	13	350	1197	12
Hourly Exit Rate	14	40	34	46	37	272	39	679	13	350	1197	12
Input Volume	14	31	32	33	45	277	46	725	12	344	1175	18
% of Volume	100	129	106	139	82	98	85	94	108	102	102	67
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	1	0	0

22: Atwood & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	15.3
Delay / Veh (s)	20.1
Stop Delay (hr)	12.0
St Del/Veh (s)	15.8
Total Stops	1307
Travel Dist (mi)	283.1
Travel Time (hr)	23.3
Avg Speed (mph)	14
Fuel Used (gal)	124.3
HC Emissions (g)	13
CO Emissions (g)	5306
NOx Emissions (g)	44
Vehicles Entered	2733
Vehicles Exited	2733
Hourly Exit Rate	2733
Input Volume	2752
% of Volume	99
Denied Entry Before	0
Denied Entry After	1

AM EXISTING CONDITIONS

Baseline

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35: MD 24 & MD 924 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.8	33.8	0.7	7.0	29.0	0.4	1.2	2.4	4.7	73.6	3.2	1.2
Delay / Veh (s)	75.6	68.6	38.5	91.0	110.1	2.7	101.0	106.6	24.3	231.7	125.4	105.1
Stop Delay (hr)	0.8	28.5	0.5	6.4	25.3	0.0	1.1	2.2	4.2	63.5	3.0	1.2
St Del/Veh (s)	70.1	57.8	30.0	82.6	96.2	0.0	97.4	100.8	21.8	199.8	120.2	101.6
Total Stops	37	1099	26	290	751	0	40	76	0	1784	62	6
Travel Dist (mi)	3.0	135.1	4.3	33.1	114.2	61.4	3.7	7.1	55.7	281.2	22.3	9.8
Travel Time (hr)	0.9	36.5	0.8	7.9	31.4	2.2	1.3	2.6	6.6	81.4	3.8	1.5
Avg Speed (mph)	3	4	5	4	4	28	4	3	24	5	15	32
Fuel Used (gal)	3.1	123.0	3.0	26.2	93.9	7.0	4.0	7.3	28.6	256.9	14.2	6.2
HC Emissions (g)	0	6	0	1	5	1	0	0	3	14	1	1
CO Emissions (g)	85	1604	68	605	1550	195	146	109	1238	3694	426	257
NOx Emissions (g)	1	22	1	4	14	2	1	1	8	40	3	2
Vehicles Entered	38	1776	65	276	938	554	42	81	701	1156	90	40
Vehicles Exited	39	1770	61	278	957	557	41	80	700	1133	91	41
Hourly Exit Rate	39	1770	61	278	957	557	41	80	700	1133	91	41
Input Volume	36	1807	55	276	950	536	42	94	687	1221	105	38
% of Volume	108	98	111	101	101	104	98	85	102	93	87	108
Denied Entry Before	0	0	0	0	0	0	0	0	8	1	0	0
Denied Entry After	0	0	0	0	0	0	0	1	13	46	6	1

35: MD 24 & MD 924 Performance by movement

Movement	All
Total Delay (hr)	158.0
Delay / Veh (s)	98.9
Stop Delay (hr)	136.7
St Del/Veh (s)	85.6
Total Stops	4171
Travel Dist (mi)	731.1
Travel Time (hr)	176.8
Avg Speed (mph)	5
Fuel Used (gal)	573.4
HC Emissions (g)	33
CO Emissions (g)	9975
NOx Emissions (g)	99
Vehicles Entered	5757
Vehicles Exited	5748
Hourly Exit Rate	5748
Input Volume	5847
% of Volume	98
Denied Entry Before	9
Denied Entry After	67

AM EXISTING CONDITIONS

Baseline

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Total Network Performance

Total Delay (hr)	498.3
Delay / Veh (s)	128.4
Stop Delay (hr)	351.2
St Del/Veh (s)	90.5
Total Stops	21008
Travel Dist (mi)	19212.8
Travel Time (hr)	903.7
Avg Speed (mph)	22
Fuel Used (gal)	7899.7
HC Emissions (g)	1103
CO Emissions (g)	477136
NOx Emissions (g)	3949
Vehicles Entered	14014
Vehicles Exited	13921
Hourly Exit Rate	13921
Input Volume	80072
% of Volume	17
Denied Entry Before	13
Denied Entry After	76

AM EXISTING CONDITIONS

Baseline

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Intersection: 4: MD 24 & Singer Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	195	439	540	15	324	844	847	43	222	215	192	155
Average Queue (ft)	66	264	296	3	64	281	292	7	142	107	84	102
95th Queue (ft)	143	408	465	13	203	680	702	25	220	173	152	174
Link Distance (ft)		5305	5305			3512	3512			692	692	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	325			800	300			675	270			130
Storage Blk Time (%)		2				9	1					7
Queuing Penalty (veh)		2				3	1					11

Intersection: 4: MD 24 & Singer Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	565	146
Average Queue (ft)	239	45
95th Queue (ft)	423	98
Link Distance (ft)	692	692
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	34	
Queuing Penalty (veh)	39	

Intersection: 5: MD 24 & Wheel Rd.

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	LTR	L	TR
Maximum Queue (ft)	72	229	260	74	435	443	31	217	172	107
Average Queue (ft)	18	60	84	20	170	188	10	120	85	29
95th Queue (ft)	44	175	199	51	382	383	32	206	158	86
Link Distance (ft)		1715	1715		5305	5305		691		691
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	375			300			725		380	
Storage Blk Time (%)					5					
Queuing Penalty (veh)					1					

AM EXISTING CONDITIONS

Baseline

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Intersection: 6: MD 24 & Belair South Pkwy

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SE
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	202	256	292	48	141	290	292	74	185	262	64	329
Average Queue (ft)	120	104	124	18	62	137	155	21	118	87	24	151
95th Queue (ft)	198	201	226	42	125	267	290	55	181	188	54	242
Link Distance (ft)		1616	1616			1715	1715			692	692	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	900			900	800			800	160			380
Storage Blk Time (%)									6			
Queuing Penalty (veh)									4			

Intersection: 6: MD 24 & Belair South Pkwy

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	343	177
Average Queue (ft)	175	66
95th Queue (ft)	269	136
Link Distance (ft)	692	692
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: MD 24 & Plumtree

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	T	L	T	T	R	LTR	LTR
Maximum Queue (ft)	116	249	284	160	236	241	46	196	238
Average Queue (ft)	49	122	147	61	113	132	20	107	137
95th Queue (ft)	106	227	263	111	205	220	42	190	226
Link Distance (ft)		4668	4668		1616	1616		690	690
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	575			600			600		
Storage Blk Time (%)									
Queuing Penalty (veh)									

AM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 13: MD 24 & Ring Factory

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	101	163	198	60	458	533	541	74	238	75	551
Average Queue (ft)	31	67	75	24	185	190	19	7	141	69	310
95th Queue (ft)	78	149	163	56	364	372	179	32	238	87	498
Link Distance (ft)		3026	3026		4668	4668			746		746
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	625			525			525	50		50	
Storage Blk Time (%)						0	0		40	55	38
Queuing Penalty (veh)						0	0		3	135	69

Intersection: 14: MD 24 & MacPhail

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	L	TR
Maximum Queue (ft)	175	182	265	95	410	400	362	120	88	170	172	138
Average Queue (ft)	93	71	95	27	198	140	139	9	44	62	88	77
95th Queue (ft)	167	155	175	65	307	297	275	58	78	120	160	130
Link Distance (ft)		763	763	763		788	788			491		454
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	700				575			750	250		325	
Storage Blk Time (%)												
Queuing Penalty (veh)												

AM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 15: MD 24 & Marketplace

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	T	R	L	T	T	R	LT	L	T
Maximum Queue (ft)	140	121	140	115	54	182	281	297	54	227	238	205
Average Queue (ft)	64	55	68	34	2	85	79	86	2	117	111	86
95th Queue (ft)	119	112	124	81	18	160	194	201	18	192	190	170
Link Distance (ft)		1392	1392	1392			539	539		486		448
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	525				200	500			500		350	
Storage Blk Time (%)												35
Queuing Penalty (veh)												62

Intersection: 15: MD 24 & Marketplace

Movement	SB
Directions Served	R
Maximum Queue (ft)	62
Average Queue (ft)	2
95th Queue (ft)	21
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	50
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 16: MD 24 & Boulton

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	T	L	TR
Maximum Queue (ft)	53	253	270	382	75	74	53	118	184	68	243
Average Queue (ft)	27	119	143	239	30	37	26	47	75	13	134
95th Queue (ft)	53	220	255	353	69	73	45	91	148	46	215
Link Distance (ft)		1489	1489		970	970	970		465		441
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	500			625				200		200	
Storage Blk Time (%)									0		1
Queuing Penalty (veh)									0		0

AM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 18: Tollgate Rd. & US 1 Bus.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	T
Maximum Queue (ft)	133	456	275	275	467	54	250	339	416	274	515	500
Average Queue (ft)	73	135	30	233	155	27	129	180	241	49	180	213
95th Queue (ft)	121	265	122	307	382	49	227	301	370	154	333	393
Link Distance (ft)		441			454			1470	1470		640	640
Upstream Blk Time (%)		1			2							
Queuing Penalty (veh)		0			0							
Storage Bay Dist (ft)	250		250	250		250	325			250		
Storage Blk Time (%)		2	0	15				0		0	2	40
Queuing Penalty (veh)		7	0	26				0		0	1	40

Intersection: 18: Tollgate Rd. & US 1 Bus.

Movement	SB
Directions Served	R
Maximum Queue (ft)	75
Average Queue (ft)	20
95th Queue (ft)	65
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	50
Storage Blk Time (%)	0
Queuing Penalty (veh)	1

AM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 19: MD 24 & US 1 Bus.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	L	L	T	T	R	L	T	T
Maximum Queue (ft)	116	118	544	536	182	182	299	312	128	115	120	116
Average Queue (ft)	66	66	201	214	107	118	194	198	22	36	66	71
95th Queue (ft)	107	105	373	385	175	180	265	281	83	76	110	112
Link Distance (ft)			970	970			1392	1392	1392		420	420
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	575	575			925	925				325		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 19: MD 24 & US 1 Bus.

Movement	SB	SB	SB	SB
Directions Served	L	L	T	T
Maximum Queue (ft)	246	246	317	325
Average Queue (ft)	125	136	141	158
95th Queue (ft)	204	215	259	275
Link Distance (ft)		441	441	441
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	325			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Belair & US 1 Bus.

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	T	TR	L	T	T	TR
Maximum Queue (ft)	26	50	110	55	31	31	30	97	138	136
Average Queue (ft)	2	12	41	28	1	3	5	30	33	41
95th Queue (ft)	13	38	96	47	10	18	24	83	101	109
Link Distance (ft)		278		306	441	441		302	302	302
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200		200				100			
Storage Blk Time (%)								0		
Queuing Penalty (veh)								0		

AM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 21: Kelley & US 1 Bus.

Movement	EB	WB	NB	SB	SB	SB
Directions Served	TR	TR	L	L	T	TR
Maximum Queue (ft)	29	31	53	54	54	74
Average Queue (ft)	5	12	11	9	2	2
95th Queue (ft)	22	37	41	33	18	24
Link Distance (ft)	301	307			565	565
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			200	200		
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 22: Atwood & US 1 Bus.

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	74	158	333	125	224	315	312	156	349	258
Average Queue (ft)	20	60	93	79	28	174	196	90	117	124
95th Queue (ft)	56	116	192	140	93	289	301	146	247	246
Link Distance (ft)		314	318			565	565		565	565
Upstream Blk Time (%)			2							
Queuing Penalty (veh)			0							
Storage Bay Dist (ft)	100			100	200			200		
Storage Blk Time (%)		5	11	2		5			1	
Queuing Penalty (veh)		1	29	2		2			4	

AM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 35: MD 24 & MD 924

Movement	EB	EB	EB	EB	EB	B214	B214	B214	B11	B11	WB	WB
Directions Served	L	T	T	T	R	T	T	T	T	T	L	L
Maximum Queue (ft)	324	460	417	417	175	265	265	266	912	946	247	549
Average Queue (ft)	48	418	415	413	11	229	195	205	291	317	145	205
95th Queue (ft)	175	436	422	440	81	328	279	302	762	841	234	416
Link Distance (ft)		346	346	346		194	194	194	1069	1069		
Upstream Blk Time (%)		46	46	45		22	19	16				
Queuing Penalty (veh)		291	289	282		137	122	102				
Storage Bay Dist (ft)	300				150						525	525
Storage Blk Time (%)	0	48		57	0							
Queuing Penalty (veh)	0	17		31	0							

Intersection: 35: MD 24 & MD 924

Movement	WB	WB	WB	B28	B28	B28	NB	NB	NB	SB	SB	SB
Directions Served	T	T	T	T	T	T	L	L	T	L	L	T
Maximum Queue (ft)	651	662	651	445	455	399	70	53	182	550	1320	1320
Average Queue (ft)	468	470	287	79	69	27	21	32	82	535	1284	584
95th Queue (ft)	763	766	568	282	260	159	55	56	166	568	1492	1569
Link Distance (ft)	579	579	579	472	472	472			465		1305	1305
Upstream Blk Time (%)	15	16	1		0						32	4
Queuing Penalty (veh)	0	0	0		0						0	0
Storage Bay Dist (ft)							325	325		525		
Storage Blk Time (%)	19									10	35	3
Queuing Penalty (veh)	51									62	211	1

Intersection: 35: MD 24 & MD 924

Movement	SB
Directions Served	R
Maximum Queue (ft)	125
Average Queue (ft)	16
95th Queue (ft)	81
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	100
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Network Summary

Network wide Queuing Penalty: 2041

AM EXISTING CONDITIONS
Baseline

11/24/2008

Intersection: 4: MD 24 & Singer Rd

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	EBL	WBT	NBL	SBTL	WBL	EBT	SBL	NBTL
Maximum Green (s)	19.0	68.0	19.0	21.0	19.0	68.0	19.0	21.0
Minimum Green (s)	5.0	20.0	5.0	8.0	5.0	20.0	5.0	8.0
Recall	None	C-Max	None	None	None	C-Max	None	None
Avg. Green (s)	10.5	80.3	16.9	19.5	9.7	86.0	11.5	24.9
g/C Ratio	0.07	0.54	0.11	0.13	0.04	0.57	0.08	0.17
Cycles Skipped (%)	4	0	0	0	35	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	33	21	0	100	4	21
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
Number of Complete Cycles : 23

Intersection: 5: MD 24 & Wheel Rd.

Phase	1	2	4	5	6	8
Movement(s) Served	EBTL	WBT	SBTL	WBL	EBT	NBTL
Maximum Green (s)	23.0	71.0	36.0	16.0	50.0	36.0
Minimum Green (s)	5.0	20.0	8.0	5.0	20.0	8.0
Recall	Max	C-Max	None	None	C-Max	None
Avg. Green (s)	23.0	85.7	21.4	6.4	80.2	21.4
g/C Ratio	0.15	0.57	0.14	0.02	0.53	0.14
Cycles Skipped (%)	0	0	0	48	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	100	100	8	0	100	8
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
Number of Complete Cycles : 23

AM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 6: MD 24 & Belair South Pkwy

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	NBTL	SBTL	WBL	EBT
Maximum Green (s)	19.0	59.0	18.0	30.0	19.0	59.0
Minimum Green (s)	5.0	20.0	5.0	5.0	5.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	14.4	72.7	14.9	24.5	10.1	80.1
g/C Ratio	0.10	0.48	0.10	0.16	0.05	0.53
Cycles Skipped (%)	0	0	0	0	21	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	13	100	29	8	0	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 7: MD 24 & Plumtree

Phase	1	2	4	5	6	8
Movement(s) Served	WBTL	EBT	SBTL	EBL	WBT	NBTL
Maximum Green (s)	23.0	71.0	36.0	16.0	50.0	36.0
Minimum Green (s)	5.0	25.0	8.0	5.0	25.0	8.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	17.6	88.5	26.2	8.5	76.8	26.2
g/C Ratio	0.11	0.59	0.17	0.04	0.51	0.17
Cycles Skipped (%)	8	0	0	23	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	29	100	17	0	100	17
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 13: MD 24 & Ring Factory

Phase	1	2	4	5	6	8
Movement(s) Served	EBL	WBT	SBTL	WBL	EBT	NBTL
Maximum Green (s)	16.0	62.0	54.0	16.0	62.0	54.0
Minimum Green (s)	8.0	20.0	8.0	8.0	20.0	8.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	9.5	80.9	44.6	8.6	82.7	44.6
g/C Ratio	0.05	0.54	0.30	0.04	0.55	0.30
Cycles Skipped (%)	17	0	0	22	0	0
Cycles @ Minimum (%)	46	0	0	57	0	0
Cycles Maxed Out (%)	4	100	35	0	100	35
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
Number of Complete Cycles : 23

Intersection: 14: MD 24 & MacPhail

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	EBL	WBT	NBL	SBTL	WBL	EBT	SBL	NBTL
Maximum Green (s)	25.0	74.5	11.5	18.0	40.0	60.0	11.0	18.0
Minimum Green (s)	5.0	20.0	5.0	8.0	5.0	20.0	5.0	8.0
Recall	None	C-Max	None	None	None	C-Max	None	None
Avg. Green (s)	12.3	94.5	10.4	15.2	24.9	82.3	10.3	12.6
g/C Ratio	0.08	0.63	0.06	0.09	0.15	0.55	0.07	0.08
Cycles Skipped (%)	0	0	13	8	8	0	4	4
Cycles @ Minimum (%)	0	0	0	4	0	0	0	4
Cycles Maxed Out (%)	0	100	21	4	0	100	58	4
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
Number of Complete Cycles : 23

AM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 15: MD 24 & Marketplace

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	NBTL	SBTL	WBL	EBT
Maximum Green (s)	25.0	54.0	24.0	24.0	25.0	54.0
Minimum Green (s)	5.0	20.0	5.0	5.0	5.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	9.6	86.5	15.1	16.9	11.8	84.9
g/C Ratio	0.06	0.58	0.10	0.11	0.07	0.57
Cycles Skipped (%)	8	0	0	0	8	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	8	0	0	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 16: MD 24 & Boulton

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	NBTL	SBTL	WBL	EBTL
Maximum Green (s)	25.0	52.0	25.0	28.0	25.0	52.0
Minimum Green (s)	3.0	20.0	5.0	5.0	3.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	6.2	101.9	11.2	16.6	26.7	76.4
g/C Ratio	0.02	0.68	0.07	0.11	0.18	0.51
Cycles Skipped (%)	52	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	0	0	0	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

AM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 18: Tollgate Rd. & US 1 Bus.

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBTL	WBTL	EBTL	SBL	NBTL
Maximum Green (s)	25.0	52.0	31.0	22.0	25.0	52.0
Minimum Green (s)	3.0	20.0	8.0	5.0	3.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	15.9	68.1	28.7	17.9	5.6	82.2
g/C Ratio	0.11	0.45	0.19	0.12	0.02	0.55
Cycles Skipped (%)	0	0	0	0	43	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	4	100	54	17	0	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

Intersection: 19: MD 24 & US 1 Bus.

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	WBL	EBT	NBL	SBT	EBL	WBT	SBL	NBTL
Maximum Green (s)	25.0	39.0	25.0	39.0	25.0	39.0	25.0	39.0
Minimum Green (s)	3.0	20.0	3.0	20.0	3.0	20.0	3.0	20.0
Recall	None	Min	None	C-Max	None	Min	None	C-Max
Avg. Green (s)	14.1	35.1	5.8	78.2	9.6	39.6	16.7	61.1
g/C Ratio	0.09	0.23	0.02	0.52	0.06	0.26	0.11	0.41
Cycles Skipped (%)	0	0	52	0	0	0	0	0
Cycles @ Minimum (%)	0	8	0	0	0	4	0	0
Cycles Maxed Out (%)	0	25	0	100	0	25	4	100
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

AM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 20: Belair & US 1 Bus.

Phase	2	4	6	8
Movement(s) Served	NBT	EBTL	SBTL	WBTL
Maximum Green (s)	100.0	40.0	100.0	40.0
Minimum Green (s)	15.0	8.0	15.0	8.0
Recall	C-Max	None	C-Max	None
Avg. Green (s)	172.3	9.4	172.3	9.4
g/C Ratio	0.90	0.05	0.90	0.05
Cycles Skipped (%)	22	21	22	21
Cycles @ Minimum (%)	0	42	0	42
Cycles Maxed Out (%)	78	0	78	0
Cycles with Peds (%)	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 21: Kelley & US 1 Bus.

Phase	1	2	4	5	6	8
Movement(s) Served	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Maximum Green (s)	26.0	70.0	40.0	26.0	70.0	40.0
Minimum Green (s)	3.0	20.0	5.0	3.0	20.0	5.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	3.0	0.0	0.0	0.0	0.0	0.0
g/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
Cycles Skipped (%)	96	100	100	100	100	100
Cycles @ Minimum (%)	4	0	0	0	0	0
Cycles Maxed Out (%)	0	0	0	0	0	0
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

AM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 22: Atwood & US 1 Bus.

Phase	1	2	4	5	6	8
Movement(s) Served	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Maximum Green (s)	32.0	55.0	25.0	32.0	55.0	19.0
Minimum Green (s)	5.0	20.0	5.0	5.0	20.0	5.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	6.8	111.3	10.3	18.3	92.7	11.2
g/C Ratio	0.02	0.74	0.06	0.12	0.62	0.07
Cycles Skipped (%)	58	0	13	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	0	0	100	0
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

Intersection: 35: MD 24 & MD 924

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	SBTL	NBTL	WBL	EBT
Maximum Green (s)	20.0	60.0	60.0	20.0	20.0	60.0
Minimum Green (s)	5.0	25.0	5.0	8.0	5.0	25.0
Recall	None	None	None	None	None	None
Avg. Green (s)	43.7	74.2	60.0	12.1	17.7	59.3
g/C Ratio	0.18	0.30	0.35	0.07	0.10	0.34
Cycles Skipped (%)	29	30	0	0	0	0
Cycles @ Minimum (%)	5	0	0	35	0	0
Cycles Maxed Out (%)	33	70	100	0	52	90
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 172.9
 Number of Complete Cycles : 20

PM EXISTING CONDITIONS

Baseline

11/24/2008

Summary of All Intervals

Start Time	6:57
End Time	8:07
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intvls	1
Vehs Entered	20471
Vehs Exited	19727
Starting Vehs	1149
Ending Vehs	1893
Denied Entry Before	58
Denied Entry After	119
Travel Distance (mi)	25250
Travel Time (hr)	1703.3
Total Delay (hr)	1157.9
Total Stops	44459
Fuel Used (gal)	11512.4

Interval #0 Information Seeding

Start Time	6:57
End Time	7:07
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:07
End Time	8:07
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	20471
Vehs Exited	19727
Starting Vehs	1149
Ending Vehs	1893
Denied Entry Before	58
Denied Entry After	119
Travel Distance (mi)	25250
Travel Time (hr)	1703.3
Total Delay (hr)	1157.9
Total Stops	44459
Fuel Used (gal)	11512.4

4: MD 24 & Singer Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	6.5	10.5	0.9	6.6	121.5	4.5	6.1	4.3	0.2	1.3	5.3	1.4
Delay / Veh (s)	131.6	29.4	15.7	253.9	233.6	189.6	125.6	77.7	21.0	98.6	97.0	35.5
Stop Delay (hr)	5.6	3.3	0.1	4.8	77.3	2.8	5.7	3.8	0.2	1.2	4.8	1.4
St Del/Veh (s)	113.4	9.3	1.4	185.2	148.6	116.0	116.9	70.0	19.9	90.4	89.2	33.5
Total Stops	198	428	48	258	4282	200	235	180	29	63	199	121
Travel Dist (mi)	184.7	1307.0	218.9	61.5	1254.9	58.6	23.3	26.1	4.4	6.4	25.8	19.4
Travel Time (hr)	9.9	33.0	5.0	7.8	142.6	5.7	6.8	5.0	0.3	1.5	6.1	2.1
Avg Speed (mph)	19	40	44	8	9	10	4	5	13	4	4	9
Fuel Used (gal)	73.6	433.6	69.6	30.6	578.0	27.1	22.4	18.9	1.5	5.4	21.8	9.5
HC Emissions (g)	8	61	9	2	41	4	1	1	0	0	1	1
CO Emissions (g)	3970	27939	4534	602	12503	1206	528	531	23	198	566	426
NOx Emissions (g)	33	239	36	6	131	10	4	4	0	1	4	3
Vehicles Entered	187	1288	217	97	1968	89	178	198	33	49	194	146
Vehicles Exited	168	1288	215	92	1777	84	173	197	33	48	195	146
Hourly Exit Rate	168	1288	215	92	1777	84	173	197	33	48	195	146
Input Volume	175	1335	200	115	2076	100	183	198	30	45	193	150
% of Volume	96	96	108	80	86	84	95	99	110	107	101	97
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: MD 24 & Singer Rd Performance by movement

Movement	All
Total Delay (hr)	169.1
Delay / Veh (s)	134.4
Stop Delay (hr)	110.9
St Del/Veh (s)	88.2
Total Stops	6241
Travel Dist (mi)	3191.0
Travel Time (hr)	225.9
Avg Speed (mph)	14
Fuel Used (gal)	1291.9
HC Emissions (g)	129
CO Emissions (g)	53028
NOx Emissions (g)	471
Vehicles Entered	4644
Vehicles Exited	4416
Hourly Exit Rate	4416
Input Volume	4800
% of Volume	92
Denied Entry Before	0
Denied Entry After	0

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5: MD 24 & Wheel Rd. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	2.2	5.3	0.0	4.6	42.9	3.3	0.9	1.4	5.7	1.3	2.3	70.0
Delay / Veh (s)	62.5	14.1	5.5	141.0	89.0	48.8	61.2	44.3	99.3	59.2	62.8	60.1
Stop Delay (hr)	1.8	2.2	0.0	3.3	19.0	0.6	0.8	1.3	5.2	1.2	2.2	37.7
St Del/Veh (s)	53.5	5.9	0.4	101.7	39.4	8.4	55.7	40.9	91.2	52.7	59.2	32.4
Total Stops	107	301	2	155	1311	162	50	101	235	59	108	2591
Travel Dist (mi)	41.7	465.0	6.2	120.7	1772.2	249.4	7.2	15.5	27.2	10.9	18.0	2734.0
Travel Time (hr)	3.1	14.2	0.2	6.8	73.2	7.9	1.1	2.0	6.5	1.7	3.0	119.8
Avg Speed (mph)	14	33	38	18	24	31	6	8	4	7	6	23
Fuel Used (gal)	18.1	161.5	1.9	50.4	642.4	85.0	4.7	8.9	22.7	6.4	11.2	1013.1
HC Emissions (g)	3	22	0	5	75	19	0	1	1	0	1	128
CO Emissions (g)	1045	10329	115	2444	33820	6406	122	356	619	187	405	55850
NOx Emissions (g)	9	84	1	19	289	61	1	2	4	1	3	474
Vehicles Entered	122	1368	18	119	1751	246	54	118	206	82	136	4220
Vehicles Exited	126	1364	18	117	1717	238	53	113	206	82	133	4167
Hourly Exit Rate	126	1364	18	117	1717	238	53	113	206	82	133	4167
Input Volume	132	1375	16	150	2000	275	52	125	200	100	125	4553
% of Volume	95	99	112	78	86	87	102	90	103	82	106	92
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	1	0	0	0	0	0	0	1

6: MD 24 & Belair South Pkwy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	13.5	7.0	0.7	1.5	51.3	4.4	3.9	4.2	0.2	9.3	7.2	4.2
Delay / Veh (s)	120.7	20.3	11.0	89.4	120.7	56.5	108.3	111.0	16.9	146.9	190.7	43.9
Stop Delay (hr)	11.2	2.9	0.1	1.1	34.4	2.3	3.7	3.9	0.2	8.7	6.8	3.8
St Del/Veh (s)	100.4	8.4	1.2	65.0	80.9	29.6	100.5	103.0	15.7	138.1	179.2	40.0
Total Stops	419	231	59	85	1990	340	154	159	39	308	224	342
Travel Dist (mi)	125.5	388.6	72.4	19.3	505.2	93.8	17.6	18.3	6.1	30.1	18.3	45.5
Travel Time (hr)	16.3	14.3	2.4	1.9	60.7	6.6	4.5	4.8	0.4	10.3	7.8	5.8
Avg Speed (mph)	8	27	31	10	8	15	4	4	14	3	2	8
Fuel Used (gal)	76.4	198.3	31.7	10.5	266.2	44.1	16.0	16.4	2.3	33.1	23.2	23.5
HC Emissions (g)	6	27	4	1	20	4	1	1	0	1	1	2
CO Emissions (g)	2890	14586	2300	529	6719	2271	419	416	113	609	411	816
NOx Emissions (g)	22	100	14	2	67	14	2	3	1	4	3	6
Vehicles Entered	401	1249	232	61	1566	284	134	138	46	227	140	342
Vehicles Exited	402	1226	230	57	1493	283	128	136	46	228	132	344
Hourly Exit Rate	402	1226	230	57	1493	283	128	136	46	228	132	344
Input Volume	422	1225	229	74	1750	350	118	113	44	242	128	325
% of Volume	95	100	100	77	85	81	108	120	105	94	103	106
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: MD 24 & Belair South Pkwy Performance by movement

Movement	All
Total Delay (hr)	107.4
Delay / Veh (s)	81.2
Stop Delay (hr)	79.0
St Del/Veh (s)	59.7
Total Stops	4350
Travel Dist (mi)	1340.9
Travel Time (hr)	135.8
Avg Speed (mph)	10
Fuel Used (gal)	741.6
HC Emissions (g)	68
CO Emissions (g)	32080
NOx Emissions (g)	240
Vehicles Entered	4820
Vehicles Exited	4705
Hourly Exit Rate	4705
Input Volume	5020
% of Volume	94
Denied Entry Before	0
Denied Entry After	0

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7: MD 24 & Plumtree Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	2.7	26.9	0.1	3.6	13.5	0.2	0.5	1.5	2.9	0.7	1.6	1.1
Delay / Veh (s)	94.7	57.6	28.1	70.0	28.2	12.8	90.6	83.5	73.7	63.2	71.2	58.4
Stop Delay (hr)	2.0	11.4	0.0	2.9	6.4	0.0	0.4	1.3	2.7	0.7	1.4	1.0
St Del/Veh (s)	71.3	24.4	2.4	56.1	13.3	0.9	84.9	76.3	68.0	57.9	65.0	54.1
Total Stops	96	1026	8	155	519	16	21	64	148	48	74	63
Travel Dist (mi)	89.0	1504.1	9.5	60.7	539.6	16.8	2.5	8.4	19.1	5.3	10.4	8.7
Travel Time (hr)	4.3	52.6	0.3	5.0	24.0	0.6	0.6	1.7	3.6	0.9	1.9	1.4
Avg Speed (mph)	21	29	36	12	22	29	4	5	5	6	5	6
Fuel Used (gal)	34.4	520.5	3.4	32.3	263.3	7.2	2.0	6.4	13.7	3.7	7.5	5.8
HC Emissions (g)	7	72	0	4	33	2	0	0	1	0	1	1
CO Emissions (g)	2453	31246	198	1760	16436	619	44	173	455	111	353	224
NOx Emissions (g)	21	264	1	13	125	5	0	1	3	1	3	2
Vehicles Entered	102	1691	10	187	1726	52	18	63	145	40	79	64
Vehicles Exited	100	1676	11	181	1718	52	20	63	141	42	79	67
Hourly Exit Rate	100	1676	11	181	1718	52	20	63	141	42	79	67
Input Volume	107	1625	9	225	1918	50	13	54	181	50	85	72
% of Volume	93	103	122	80	90	104	154	117	78	84	93	93
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: MD 24 & Plumtree Performance by movement

Movement	All
Total Delay (hr)	55.2
Delay / Veh (s)	47.7
Stop Delay (hr)	30.2
St Del/Veh (s)	26.2
Total Stops	2238
Travel Dist (mi)	2274.2
Travel Time (hr)	96.9
Avg Speed (mph)	23
Fuel Used (gal)	900.3
HC Emissions (g)	121
CO Emissions (g)	54072
NOx Emissions (g)	439
Vehicles Entered	4177
Vehicles Exited	4150
Hourly Exit Rate	4150
Input Volume	4389
% of Volume	95
Denied Entry Before	0
Denied Entry After	0

13: MD 24 & Ring Factory Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	3.0	9.2	0.0	1.3	16.0	1.6	0.3	2.5	1.3	1.8	1.9	2.2
Delay / Veh (s)	89.8	19.9	7.1	79.8	40.6	23.7	57.2	55.5	46.9	78.1	60.2	54.4
Stop Delay (hr)	2.6	2.8	0.0	1.1	6.3	0.3	0.3	2.2	1.1	1.6	1.7	1.9
St Del/Veh (s)	78.5	6.0	0.4	67.2	16.1	4.3	50.4	48.4	42.0	70.0	51.5	47.7
Total Stops	117	390	3	55	682	103	19	132	80	104	113	140
Travel Dist (mi)	71.0	954.7	10.1	54.4	1268.3	220.1	2.7	22.9	13.6	12.0	16.4	20.3
Travel Time (hr)	4.5	26.7	0.2	2.3	37.5	5.8	0.4	3.2	1.7	2.2	2.4	2.9
Avg Speed (mph)	16	36	41	23	34	38	7	7	8	6	7	7
Fuel Used (gal)	26.0	281.4	3.0	20.3	421.4	68.0	1.6	13.6	7.8	8.0	10.3	12.1
HC Emissions (g)	3	40	0	3	57	7	0	1	1	1	1	1
CO Emissions (g)	1166	14900	157	1306	26268	3819	51	415	309	259	370	427
NOx Emissions (g)	11	156	1	10	219	32	0	3	2	2	3	4
Vehicles Entered	121	1658	17	61	1423	245	19	162	96	84	116	142
Vehicles Exited	121	1654	18	60	1412	246	19	160	97	83	116	143
Hourly Exit Rate	121	1654	18	60	1412	246	19	160	97	83	116	143
Input Volume	124	1598	20	75	1600	250	21	172	89	92	123	125
% of Volume	98	104	90	80	88	98	90	93	109	90	94	114
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

13: MD 24 & Ring Factory Performance by movement

Movement	All
Total Delay (hr)	41.1
Delay / Veh (s)	35.8
Stop Delay (hr)	21.9
St Del/Veh (s)	19.1
Total Stops	1938
Travel Dist (mi)	2666.4
Travel Time (hr)	89.9
Avg Speed (mph)	30
Fuel Used (gal)	873.6
HC Emissions (g)	115
CO Emissions (g)	49447
NOx Emissions (g)	444
Vehicles Entered	4144
Vehicles Exited	4129
Hourly Exit Rate	4129
Input Volume	4289
% of Volume	96
Denied Entry Before	0
Denied Entry After	0

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14: MD 24 & MacPhail Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	3.9	12.6	0.1	3.6	9.3	0.3	4.7	3.3	1.2	3.5	1.0	1.4
Delay / Veh (s)	74.3	34.7	3.5	79.6	24.8	4.0	70.1	74.9	13.3	59.3	70.0	40.7
Stop Delay (hr)	3.5	9.0	0.1	3.2	5.2	0.0	4.2	3.0	0.9	3.0	0.9	1.2
St Del/Veh (s)	66.8	25.0	1.9	71.7	13.9	0.6	62.5	67.6	10.3	52.1	64.1	37.1
Total Stops	191	715	61	148	528	3	255	149	11	200	49	113
Travel Dist (mi)	29.6	199.7	23.9	24.5	202.9	33.0	22.7	15.4	27.7	18.1	4.5	10.4
Travel Time (hr)	4.7	17.0	0.8	4.2	13.1	1.1	5.4	3.8	2.1	4.0	1.2	1.8
Avg Speed (mph)	6	12	29	6	16	30	5	4	22	5	4	6
Fuel Used (gal)	16.1	78.8	5.5	13.7	61.8	7.8	18.7	12.2	12.6	15.5	3.9	6.9
HC Emissions (g)	1	8	1	1	5	1	2	0	2	2	0	0
CO Emissions (g)	484	2618	325	418	1637	630	521	210	672	533	101	196
NOx Emissions (g)	4	27	3	3	16	3	5	2	5	5	1	2
Vehicles Entered	191	1312	154	161	1353	224	241	162	318	210	52	121
Vehicles Exited	191	1296	154	163	1352	225	242	161	320	210	52	121
Hourly Exit Rate	191	1296	154	163	1352	225	242	161	320	210	52	121
Input Volume	199	1287	152	175	1510	249	200	164	300	192	58	125
% of Volume	96	101	101	93	90	90	121	98	107	109	90	97
Denied Entry Before	0	0	0	0	1	1	1	0	0	0	0	0
Denied Entry After	0	0	0	0	2	0	1	0	2	0	0	0

14: MD 24 & MacPhail Performance by movement

Movement	All
Total Delay (hr)	44.9
Delay / Veh (s)	36.0
Stop Delay (hr)	34.5
St Del/Veh (s)	27.7
Total Stops	2423
Travel Dist (mi)	612.4
Travel Time (hr)	59.3
Avg Speed (mph)	11
Fuel Used (gal)	253.4
HC Emissions (g)	24
CO Emissions (g)	8344
NOx Emissions (g)	75
Vehicles Entered	4499
Vehicles Exited	4487
Hourly Exit Rate	4487
Input Volume	4611
% of Volume	97
Denied Entry Before	3
Denied Entry After	5

Baseline

15: MD 24 & Marketplace Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	2.5	17.6	0.4	6.3	12.7	0.2	2.7	3.7	0.7	5.1	3.9	1.3
Delay / Veh (s)	73.7	53.2	8.9	86.2	37.6	3.8	77.2	79.0	10.1	81.0	86.2	36.0
Stop Delay (hr)	2.1	13.0	0.0	5.7	9.8	0.0	2.5	3.4	0.5	4.7	3.6	1.1
St Del/Veh (s)	63.1	39.4	0.6	77.7	29.0	0.1	70.6	71.6	7.4	74.1	79.9	30.4
Total Stops	126	776	14	285	644	11	134	178	10	238	173	112
Travel Dist (mi)	34.2	331.9	40.9	29.6	134.8	24.8	11.8	15.7	20.9	19.3	13.8	10.2
Travel Time (hr)	3.4	25.6	1.5	7.2	15.8	1.0	3.2	4.3	1.4	5.8	4.3	1.7
Avg Speed (mph)	10	13	27	4	9	25	4	4	21	4	3	7
Fuel Used (gal)	20.0	175.1	17.6	22.2	62.0	6.6	10.4	14.0	10.2	19.9	14.0	7.0
HC Emissions (g)	1	22	3	1	5	1	0	1	1	2	1	1
CO Emissions (g)	913	10091	1317	302	1678	392	155	304	555	484	291	201
NOx Emissions (g)	5	72	8	2	16	2	1	3	5	5	3	2
Vehicles Entered	123	1197	151	263	1217	234	130	171	251	227	162	130
Vehicles Exited	118	1187	151	266	1219	235	124	167	248	226	161	129
Hourly Exit Rate	118	1187	151	266	1219	235	124	167	248	226	161	129
Input Volume	120	1175	152	277	1295	263	138	159	238	225	171	130
% of Volume	98	101	99	96	94	89	90	105	104	100	94	99
Denied Entry Before	0	0	0	0	0	0	0	0	0	1	0	0
Denied Entry After	0	0	0	0	0	0	1	0	1	0	0	0

15: MD 24 & Marketplace Performance by movement

Movement	All
Total Delay (hr)	57.1
Delay / Veh (s)	48.5
Stop Delay (hr)	46.4
St Del/Veh (s)	39.3
Total Stops	2701
Travel Dist (mi)	687.9
Travel Time (hr)	75.1
Avg Speed (mph)	9
Fuel Used (gal)	379.2
HC Emissions (g)	38
CO Emissions (g)	16683
NOx Emissions (g)	125
Vehicles Entered	4256
Vehicles Exited	4231
Hourly Exit Rate	4231
Input Volume	4343
% of Volume	97
Denied Entry Before	1
Denied Entry After	2

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16: MD 24 & Boulton Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.7	7.4	1.0	6.7	3.2	0.1	6.3	3.8	4.2	0.5	4.4	0.8
Delay / Veh (s)	37.0	40.5	12.9	91.9	11.9	7.1	96.5	95.3	36.2	57.4	76.9	55.7
Stop Delay (hr)	0.6	5.6	0.6	5.8	1.2	0.0	5.9	3.6	3.8	0.4	4.0	0.7
St Del/Veh (s)	31.9	31.0	7.8	80.2	4.6	1.0	90.5	88.9	32.3	51.6	70.7	51.8
Total Stops	63	431	21	247	174	8	232	143	75	31	205	50
Travel Dist (mi)	20.0	185.9	76.9	52.8	190.6	10.6	20.6	12.8	33.4	2.5	17.4	4.4
Travel Time (hr)	1.2	11.0	2.7	8.1	7.9	0.4	7.0	4.2	5.4	0.6	5.0	1.0
Avg Speed (mph)	19	18	35	7	24	26	4	4	15	5	3	4
Fuel Used (gal)	7.3	66.7	23.2	36.9	106.2	5.5	21.7	12.7	21.3	2.2	16.8	3.8
HC Emissions (g)	1	8	3	2	14	1	1	1	2	0	1	0
CO Emissions (g)	530	4041	1785	1338	7396	528	407	212	600	54	308	97
NOx Emissions (g)	3	25	8	9	52	4	4	2	5	0	3	1
Vehicles Entered	71	657	278	263	975	53	233	144	418	29	201	51
Vehicles Exited	70	655	279	259	980	53	234	144	423	30	206	52
Hourly Exit Rate	70	655	279	259	980	53	234	144	423	30	206	52
Input Volume	58	650	259	286	996	63	248	140	409	37	207	39
% of Volume	121	101	108	91	98	84	94	103	103	81	100	133
Denied Entry Before	0	1	0	0	0	0	1	2	5	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

16: MD 24 & Boulton Performance by movement

Movement	All
Total Delay (hr)	39.1
Delay / Veh (s)	41.6
Stop Delay (hr)	32.3
St Del/Veh (s)	34.5
Total Stops	1680
Travel Dist (mi)	627.8
Travel Time (hr)	54.6
Avg Speed (mph)	13
Fuel Used (gal)	324.4
HC Emissions (g)	34
CO Emissions (g)	17298
NOx Emissions (g)	116
Vehicles Entered	3373
Vehicles Exited	3385
Hourly Exit Rate	3385
Input Volume	3392
% of Volume	100
Denied Entry Before	9
Denied Entry After	0

18: Tollgate Rd. & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	6.4	8.7	1.6	16.2	20.5	4.6	7.5	16.7	3.5	2.9	24.7	6.2
Delay / Veh (s)	111.6	111.2	31.7	264.4	268.8	196.3	80.9	52.1	56.1	90.2	93.5	90.7
Stop Delay (hr)	6.0	8.1	1.4	15.7	19.8	4.4	6.2	11.8	2.6	2.5	20.3	5.1
St Del/Veh (s)	104.6	103.3	27.5	256.4	259.5	190.4	67.7	36.7	41.3	76.3	76.8	73.9
Total Stops	226	322	54	285	370	113	414	947	191	172	955	291
Travel Dist (mi)	17.6	24.2	14.8	19.0	23.6	7.3	93.0	322.2	62.8	15.6	126.3	33.0
Travel Time (hr)	7.1	9.6	2.2	16.9	21.3	4.9	10.0	25.1	5.3	3.4	27.9	7.3
Avg Speed (mph)	3	3	13	2	2	5	10	13	12	5	5	5
Fuel Used (gal)	21.8	28.3	9.5	45.1	54.9	13.2	40.9	119.2	22.5	11.1	93.9	23.9
HC Emissions (g)	2	1	1	1	2	2	4	12	2	0	6	0
CO Emissions (g)	495	296	397	408	602	318	1260	3632	613	130	1470	185
NOx Emissions (g)	5	3	4	3	5	3	12	37	6	1	18	2
Vehicles Entered	209	287	189	223	275	84	332	1165	224	119	956	252
Vehicles Exited	207	280	184	219	273	84	332	1149	227	113	948	244
Hourly Exit Rate	207	280	184	219	273	84	332	1149	227	113	948	244
Input Volume	204	278	185	241	302	106	340	1100	233	127	954	259
% of Volume	101	101	99	91	90	79	98	104	97	89	99	94
Denied Entry Before	0	0	0	1	0	0	1	3	1	0	0	0
Denied Entry After	0	1	1	7	10	4	0	0	0	0	0	0

18: Tollgate Rd. & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	119.7
Delay / Veh (s)	100.5
Stop Delay (hr)	104.0
St Del/Veh (s)	87.3
Total Stops	4340
Travel Dist (mi)	759.6
Travel Time (hr)	140.8
Avg Speed (mph)	7
Fuel Used (gal)	484.4
HC Emissions (g)	33
CO Emissions (g)	9808
NOx Emissions (g)	100
Vehicles Entered	4315
Vehicles Exited	4260
Hourly Exit Rate	4260
Input Volume	4329
% of Volume	98
Denied Entry Before	6
Denied Entry After	23

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19: MD 24 & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	7.8	19.5	0.3	10.1	19.4	0.7	5.8	36.3	6.6	7.9	10.5	0.2
Delay / Veh (s)	80.2	101.1	7.0	95.8	86.4	9.8	110.1	125.5	64.9	74.7	37.8	2.0
Stop Delay (hr)	6.6	16.2	0.0	8.8	15.4	0.2	5.4	33.4	6.0	7.2	8.5	0.0
St Del/Veh (s)	68.4	83.8	0.5	84.2	68.7	2.1	102.3	115.5	59.1	68.6	30.6	0.0
Total Stops	362	810	10	408	723	50	211	765	46	359	623	0
Travel Dist (mi)	66.0	128.6	30.1	105.2	219.8	71.2	16.3	88.2	27.8	36.4	89.2	25.9
Travel Time (hr)	9.7	22.6	1.2	12.8	24.5	2.6	6.3	38.5	7.5	9.0	12.8	1.0
Avg Speed (mph)	7	6	26	8	9	28	4	4	15	4	7	26
Fuel Used (gal)	44.5	93.0	13.3	62.5	121.2	26.8	18.4	110.9	24.4	27.2	47.3	6.4
HC Emissions (g)	4	6	2	6	12	3	1	5	1	1	3	1
CO Emissions (g)	1756	2858	1112	2893	5174	1881	255	1354	478	449	1124	375
NOx Emissions (g)	14	22	7	20	38	11	2	14	5	4	10	2
Vehicles Entered	354	691	170	387	809	265	192	1041	370	377	1000	294
Vehicles Exited	347	696	168	369	807	265	189	1040	366	383	994	295
Hourly Exit Rate	347	696	168	369	807	265	189	1040	366	383	994	295
Input Volume	354	687	153	386	862	312	209	1027	398	342	953	274
% of Volume	98	101	110	96	94	85	90	101	92	112	104	108
Denied Entry Before	0	0	0	0	0	0	0	2	0	0	0	0
Denied Entry After	0	0	0	0	0	0	1	32	4	0	0	0

19: MD 24 & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	125.0
Delay / Veh (s)	75.8
Stop Delay (hr)	107.8
St Del/Veh (s)	65.4
Total Stops	4367
Travel Dist (mi)	904.8
Travel Time (hr)	148.5
Avg Speed (mph)	7
Fuel Used (gal)	596.0
HC Emissions (g)	46
CO Emissions (g)	19709
NOx Emissions (g)	150
Vehicles Entered	5950
Vehicles Exited	5919
Hourly Exit Rate	5919
Input Volume	5957
% of Volume	99
Denied Entry Before	2
Denied Entry After	37

20: Belair & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.3	0.2	0.3	2.7	0.1	0.4	2.9	0.1	0.3	0.9	0.0	8.3
Delay / Veh (s)	62.6	75.4	21.5	69.5	106.5	24.1	6.6	4.7	34.7	2.1	2.3	8.6
Stop Delay (hr)	0.3	0.2	0.3	2.5	0.1	0.4	0.8	0.0	0.2	0.2	0.0	5.1
St Del/Veh (s)	59.3	72.5	20.3	64.8	102.9	22.4	1.8	0.2	31.9	0.5	0.6	5.3
Total Stops	16	13	50	127	6	56	118	3	26	58	4	477
Travel Dist (mi)	1.0	0.6	3.1	7.9	0.3	3.8	152.1	5.0	2.0	103.2	1.8	280.8
Travel Time (hr)	0.3	0.3	0.5	3.0	0.2	0.6	7.2	0.2	0.3	3.5	0.1	16.2
Avg Speed (mph)	3	2	6	3	2	7	21	21	6	29	21	18
Fuel Used (gal)	1.1	0.7	1.7	9.7	0.4	2.0	87.5	2.2	1.0	43.3	0.6	150.1
HC Emissions (g)	0	0	0	0	0	0	11	1	0	5	0	18
CO Emissions (g)	23	9	28	179	3	34	4775	142	11	2770	21	7997
NOx Emissions (g)	0	0	0	2	0	0	44	2	0	19	0	67
Vehicles Entered	18	12	58	136	6	65	1603	49	28	1476	26	3477
Vehicles Exited	18	11	57	139	5	66	1590	49	28	1476	26	3465
Hourly Exit Rate	18	11	57	139	5	66	1590	49	28	1476	26	3465
Input Volume	22	10	50	119	7	65	1640	53	27	1401	20	3414
% of Volume	82	110	114	117	71	102	97	92	104	105	130	101
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

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21: Kelley & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.7	0.1	0.1	1.0	0.0	0.4	1.0	2.2	0.0	0.8	2.3	0.1
Delay / Veh (s)	71.1	95.3	12.0	70.0	41.4	19.8	26.1	6.0	6.0	28.8	5.7	5.5
Stop Delay (hr)	0.6	0.1	0.1	1.0	0.0	0.4	0.8	0.9	0.0	0.7	0.2	0.0
St Del/Veh (s)	67.7	92.1	10.8	66.0	40.4	18.5	21.6	2.5	4.5	22.6	0.5	0.3
Total Stops	31	4	36	50	1	58	117	173	2	80	89	6
Travel Dist (mi)	2.0	0.2	2.2	3.1	0.1	4.2	9.1	91.0	0.6	12.4	172.8	7.0
Travel Time (hr)	0.7	0.1	0.2	1.1	0.0	0.6	1.3	4.5	0.0	1.2	6.7	0.3
Avg Speed (mph)	3	3	10	3	4	7	7	20	17	10	26	22
Fuel Used (gal)	2.3	0.2	0.8	3.7	0.1	2.0	4.3	34.2	0.1	6.6	85.3	2.8
HC Emissions (g)	0	0	0	0	0	0	0	4	0	0	10	0
CO Emissions (g)	44	2	16	65	1	56	83	1649	1	222	4443	131
NOx Emissions (g)	0	0	0	0	0	0	1	15	0	2	41	2
Vehicles Entered	34	4	39	53	2	71	130	1314	8	103	1434	58
Vehicles Exited	32	3	39	53	2	74	132	1310	8	104	1437	58
Hourly Exit Rate	32	3	39	53	2	74	132	1310	8	104	1437	58
Input Volume	42	4	30	41	3	87	129	1347	12	102	1375	55
% of Volume	76	75	130	129	67	85	102	97	67	102	105	105
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

21: Kelley & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	8.6
Delay / Veh (s)	9.6
Stop Delay (hr)	4.8
St Del/Veh (s)	5.3
Total Stops	647
Travel Dist (mi)	304.6
Travel Time (hr)	16.8
Avg Speed (mph)	18
Fuel Used (gal)	142.3
HC Emissions (g)	16
CO Emissions (g)	6712
NOx Emissions (g)	62
Vehicles Entered	3250
Vehicles Exited	3252
Hourly Exit Rate	3252
Input Volume	3227
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

Baseline

22: Atwood & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.4	1.5	1.0	1.4	2.4	8.1	1.1	21.2	0.5	6.0	10.7	0.2
Delay / Veh (s)	68.5	77.5	62.9	119.4	105.0	62.9	83.6	56.8	64.3	66.6	25.7	18.3
Stop Delay (hr)	0.4	1.4	1.0	1.3	2.2	7.4	1.0	17.1	0.4	5.2	7.1	0.2
St Del/Veh (s)	62.7	73.6	60.2	112.6	98.2	57.8	75.0	45.7	52.7	57.7	17.1	12.7
Total Stops	26	67	62	52	85	349	63	914	28	337	746	14
Travel Dist (mi)	1.3	4.1	3.5	2.7	4.8	28.0	5.8	159.2	3.4	34.8	162.8	4.8
Travel Time (hr)	0.4	1.6	1.2	1.5	2.5	9.2	1.3	25.3	0.6	7.0	15.2	0.4
Avg Speed (mph)	3	3	3	2	2	5	8	7	5	6	13	15
Fuel Used (gal)	1.5	4.9	3.7	4.3	7.2	29.2	4.1	95.9	2.1	25.4	79.7	1.8
HC Emissions (g)	0	0	0	0	1	1	0	6	0	2	7	0
CO Emissions (g)	26	61	67	67	147	440	101	1795	38	642	2628	33
NOx Emissions (g)	0	1	1	1	1	4	1	22	0	6	25	0
Vehicles Entered	22	70	59	44	77	458	51	1349	29	322	1494	44
Vehicles Exited	21	67	58	43	84	465	48	1343	29	323	1494	44
Hourly Exit Rate	21	67	58	43	84	465	48	1343	29	323	1494	44
Input Volume	27	75	56	47	75	454	46	1400	31	293	1425	42
% of Volume	78	89	104	91	112	102	104	96	94	110	105	105
Denied Entry Before	0	0	0	0	1	3	0	0	0	0	0	0
Denied Entry After	1	0	0	0	0	0	0	0	0	1	4	0

22: Atwood & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	54.5
Delay / Veh (s)	48.8
Stop Delay (hr)	44.7
St Del/Veh (s)	40.0
Total Stops	2743
Travel Dist (mi)	415.2
Travel Time (hr)	66.4
Avg Speed (mph)	7
Fuel Used (gal)	259.9
HC Emissions (g)	18
CO Emissions (g)	6046
NOx Emissions (g)	62
Vehicles Entered	4019
Vehicles Exited	4019
Hourly Exit Rate	4019
Input Volume	3971
% of Volume	101
Denied Entry Before	4
Denied Entry After	6

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35: MD 24 & MD 924 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	1.9	20.8	1.5	19.3	28.5	3.3	5.4	7.3	2.0	13.2	4.4	0.3
Delay / Veh (s)	82.0	67.8	31.5	75.0	51.6	8.8	95.1	131.0	17.1	78.5	69.6	16.9
Stop Delay (hr)	1.7	17.5	1.2	16.0	19.5	0.0	5.0	6.8	1.5	11.7	3.9	0.2
St Del/Veh (s)	75.8	57.3	24.2	62.2	35.3	0.1	88.8	122.0	13.4	69.7	61.1	11.5
Total Stops	82	964	102	901	1436	33	201	235	27	550	198	32
Travel Dist (mi)	6.3	83.8	11.9	111.7	238.6	148.0	18.1	17.7	32.8	152.2	57.3	17.5
Travel Time (hr)	2.1	22.4	1.9	22.4	33.4	7.5	5.9	7.8	3.0	17.5	5.9	0.8
Avg Speed (mph)	3	4	6	5	7	20	3	2	21	9	10	24
Fuel Used (gal)	6.4	75.2	7.2	83.1	130.2	36.2	19.8	22.1	17.4	69.6	26.8	6.1
HC Emissions (g)	0	4	0	6	9	3	1	1	2	6	2	1
CO Emissions (g)	132	1099	98	1675	2955	688	434	325	844	1972	876	303
NOx Emissions (g)	1	14	1	19	31	9	3	3	7	18	8	2
Vehicles Entered	83	1100	171	924	1974	1337	205	201	412	623	232	72
Vehicles Exited	83	1103	171	929	1997	1338	201	201	412	592	223	72
Hourly Exit Rate	83	1103	171	929	1997	1338	201	201	412	592	223	72
Input Volume	75	1160	175	925	2025	1350	200	200	400	600	225	66
% of Volume	111	95	98	100	99	99	100	100	103	99	99	109
Denied Entry Before	0	0	0	0	0	0	2	0	0	2	0	0
Denied Entry After	0	0	0	0	0	0	0	1	3	0	1	0

35: MD 24 & MD 924 Performance by movement

Movement	All
Total Delay (hr)	107.8
Delay / Veh (s)	53.0
Stop Delay (hr)	85.2
St Del/Veh (s)	41.8
Total Stops	4761
Travel Dist (mi)	895.9
Travel Time (hr)	130.8
Avg Speed (mph)	7
Fuel Used (gal)	500.1
HC Emissions (g)	35
CO Emissions (g)	11402
NOx Emissions (g)	115
Vehicles Entered	7334
Vehicles Exited	7322
Hourly Exit Rate	7322
Input Volume	7401
% of Volume	99
Denied Entry Before	4
Denied Entry After	5

Total Network Performance

Total Delay (hr)	1157.9
Delay / Veh (s)	207.4
Stop Delay (hr)	824.2
St Del/Veh (s)	147.6
Total Stops	44459
Travel Dist (mi)	25250.1
Travel Time (hr)	1703.3
Avg Speed (mph)	16
Fuel Used (gal)	11512.4
HC Emissions (g)	1308
CO Emissions (g)	573145
NOx Emissions (g)	4694
Vehicles Entered	20471
Vehicles Exited	19727
Hourly Exit Rate	19727
Input Volume	110520
% of Volume	18
Denied Entry Before	58
Denied Entry After	119

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Intersection: 4: MD 24 & Singer Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B12	B12	B12	B11
Directions Served	L	T	T	R	L	T	T	R	T	T		T
Maximum Queue (ft)	348	535	486	47	324	3583	3583	700	1140	1143	1167	284
Average Queue (ft)	207	184	223	17	106	2402	2426	89	301	340	303	38
95th Queue (ft)	332	371	412	39	231	4262	4269	424	1086	1163	1074	189
Link Distance (ft)		5305	5305			3512	3512		1069	1069	1069	194
Upstream Blk Time (%)						11	8		6	11	6	6
Queuing Penalty (veh)						125	90		44	82	47	49
Storage Bay Dist (ft)	325			800	300			675				
Storage Blk Time (%)	3	0			0	38	35	0				
Queuing Penalty (veh)	21	0			0	44	35	0				

Intersection: 4: MD 24 & Singer Rd

Movement	B11	B11	B214	B214	B214	NB	NB	NB	SB	SB	SB
Directions Served	T	T	T	T	T	L	T	R	L	T	R
Maximum Queue (ft)	266	302	412	377	277	295	582	42	154	368	174
Average Queue (ft)	39	30	37	34	27	189	228	15	49	238	72
95th Queue (ft)	188	165	203	190	158	329	475	37	113	376	145
Link Distance (ft)	194	194	346	346	346		692	692		692	692
Upstream Blk Time (%)	7	3	2	2							
Queuing Penalty (veh)	56	24	11	11							
Storage Bay Dist (ft)						270			130		
Storage Blk Time (%)						15	4			39	
Queuing Penalty (veh)						29	8			18	

Intersection: 5: MD 24 & Wheel Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	L	TR
Maximum Queue (ft)	228	281	319	27	324	1451	1592	750	219	366	302
Average Queue (ft)	113	137	160	2	128	658	696	102	121	215	170
95th Queue (ft)	211	251	272	12	215	1239	1323	390	209	330	275
Link Distance (ft)		1715	1715			5305	5305		691		691
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	375			675	300			725		380	
Storage Blk Time (%)					0	31	11	0		0	
Queuing Penalty (veh)					0	46	30	0		0	

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Intersection: 6: MD 24 & Belair South Pkwy

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	672	228	284	52	139	1736	1735	825	185	407	63	405
Average Queue (ft)	461	124	133	27	58	1102	1095	238	134	181	18	262
95th Queue (ft)	626	215	236	53	109	2016	2005	725	213	332	46	402
Link Distance (ft)		1616	1616			1715	1715			692	692	
Upstream Blk Time (%)						3	5					
Queuing Penalty (veh)						37	49					
Storage Bay Dist (ft)	900			900	800			800	160			380
Storage Blk Time (%)						19	19	0	12	14		0
Queuing Penalty (veh)						14	65	0	14	17		0

Intersection: 6: MD 24 & Belair South Pkwy

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	460	467
Average Queue (ft)	328	225
95th Queue (ft)	457	389
Link Distance (ft)	692	692
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	6	
Queuing Penalty (veh)	7	

Intersection: 7: MD 24 & Plumtree

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LTR
Maximum Queue (ft)	239	891	853	588	287	380	398	52	428	262
Average Queue (ft)	105	534	551	26	152	267	286	12	218	162
95th Queue (ft)	195	848	855	199	253	391	418	39	377	251
Link Distance (ft)		4668	4668			1616	1616		690	690
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	575			575	600			600		
Storage Blk Time (%)		5	7	0						
Queuing Penalty (veh)		5	1	0						

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Intersection: 13: MD 24 & Ring Factory

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	189	353	328	80	559	560	550	27	441	75	552
Average Queue (ft)	101	143	159	45	293	289	36	8	201	51	259
95th Queue (ft)	174	302	321	88	536	530	197	26	355	89	440
Link Distance (ft)		3026	3026		4668	4668			746		746
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	625			525			525	50		50	
Storage Blk Time (%)					0	1			56	28	52
Queuing Penalty (veh)					0	2			12	69	48

Intersection: 14: MD 24 & MacPhail

Movement	EB	EB	EB	EB	B1	WB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	T	L	T	T	R	L	T	L
Maximum Queue (ft)	351	467	459	77	473	316	600	613	56	274	530	284
Average Queue (ft)	185	306	322	30	16	156	238	223	4	182	188	163
95th Queue (ft)	300	451	454	61	156	257	420	417	27	289	398	253
Link Distance (ft)		763	763	763	539		788	788				491
Upstream Blk Time (%)												1
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	700					575			750	250		325
Storage Blk Time (%)										6		
Queuing Penalty (veh)										27		

Intersection: 14: MD 24 & MacPhail

Movement	SB
Directions Served	TR
Maximum Queue (ft)	224
Average Queue (ft)	130
95th Queue (ft)	213
Link Distance (ft)	454
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: MD 24 & Marketplace

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	T	R	L	T	T	R	LT	R	L
Maximum Queue (ft)	244	376	440	318	225	390	377	425	81	501	374	374
Average Queue (ft)	119	269	277	190	26	268	296	293	12	291	12	227
95th Queue (ft)	212	379	396	309	136	389	402	396	52	447	123	358
Link Distance (ft)		1392	1392	1392			539	539		486		
Upstream Blk Time (%)										3		
Queuing Penalty (veh)										0		
Storage Bay Dist (ft)	525				200	500			500		350	350
Storage Blk Time (%)				9	0					5	0	0
Queuing Penalty (veh)				14	0					13	0	1

Intersection: 15: MD 24 & Marketplace

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	463	70
Average Queue (ft)	220	12
95th Queue (ft)	396	53
Link Distance (ft)	448	
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		50
Storage Blk Time (%)	65	0
Queuing Penalty (veh)	230	0

PM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 16: MD 24 & Boulton

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	97	314	374	166	403	160	177	53	224	480	225	90
Average Queue (ft)	45	186	198	21	237	66	80	5	198	279	15	21
95th Queue (ft)	90	307	329	86	345	131	143	26	263	535	108	63
Link Distance (ft)		1489	1489			970	970	970		465		
Upstream Blk Time (%)										4		
Queuing Penalty (veh)										0		
Storage Bay Dist (ft)	500			500	625				200		200	200
Storage Blk Time (%)									20	4		
Queuing Penalty (veh)									107	23		

Intersection: 16: MD 24 & Boulton

Movement	SB
Directions Served	TR
Maximum Queue (ft)	390
Average Queue (ft)	230
95th Queue (ft)	378
Link Distance (ft)	441
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	19
Queuing Penalty (veh)	7

Intersection: 18: Tollgate Rd. & US 1 Bus.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
	L	T	R	L	T	R	L	T	TR	L	T	T
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	T
Maximum Queue (ft)	275	456	275	275	473	299	349	776	878	274	711	711
Average Queue (ft)	199	342	54	220	452	94	276	529	584	95	543	566
95th Queue (ft)	315	529	219	306	539	264	399	765	807	193	836	845
Link Distance (ft)		441			454			1470	1470		640	640
Upstream Blk Time (%)		15			40						18	24
Queuing Penalty (veh)		0			0						120	160
Storage Bay Dist (ft)	250		250	250		250	325			250		
Storage Blk Time (%)	8	20	0	8	48	0	8	14		0	48	55
Queuing Penalty (veh)	36	80	0	33	167	1	45	46		0	61	143

Intersection: 18: Tollgate Rd. & US 1 Bus.

Movement	SB	B17	B17
Directions Served	R	T	T
Maximum Queue (ft)	75	429	484
Average Queue (ft)	60	139	184
95th Queue (ft)	92	424	502
Link Distance (ft)		420	420
Upstream Blk Time (%)		1	2
Queuing Penalty (veh)		5	9
Storage Bay Dist (ft)	50		
Storage Blk Time (%)	15		
Queuing Penalty (veh)	69		

PM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 19: MD 24 & US 1 Bus.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	L	L	T	T	R	L	T	T
Maximum Queue (ft)	245	266	579	1051	274	289	464	490	202	349	529	500
Average Queue (ft)	166	163	337	440	188	196	316	342	35	159	381	405
95th Queue (ft)	224	228	538	860	271	280	452	489	117	294	570	574
Link Distance (ft)			970	970			1392	1392	1392		420	420
Upstream Blk Time (%)				0							19	19
Queuing Penalty (veh)				2							134	132
Storage Bay Dist (ft)	575	575			925	925				325		
Storage Blk Time (%)				1						0	25	28
Queuing Penalty (veh)				2						0	52	111

Intersection: 19: MD 24 & US 1 Bus.

Movement	NB	B17	B17	SB	SB	SB	SB	SB
Directions Served	R	T	T	L	L	T	T	R
Maximum Queue (ft)	350	676	640	280	313	441	441	323
Average Queue (ft)	70	166	180	169	185	249	260	20
95th Queue (ft)	301	548	565	243	273	373	381	143
Link Distance (ft)		640	640		441	441	441	441
Upstream Blk Time (%)		0	0			0	0	
Queuing Penalty (veh)		3	1			0	0	
Storage Bay Dist (ft)	325			325				
Storage Blk Time (%)	0					0		
Queuing Penalty (veh)	0					0		

Intersection: 20: Belair & US 1 Bus.

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	T	TR	L	T	T	TR
Maximum Queue (ft)	68	95	205	158	89	557	53	74	32	91
Average Queue (ft)	15	41	125	46	14	71	21	18	9	35
95th Queue (ft)	44	85	184	104	53	294	56	52	31	78
Link Distance (ft)		278		306	441	441		302	302	302
Upstream Blk Time (%)						0				
Queuing Penalty (veh)						0				
Storage Bay Dist (ft)	200		200				100			
Storage Blk Time (%)				1						
Queuing Penalty (veh)				1						

Intersection: 21: Kelley & US 1 Bus.

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	68	72	118	94	141	209	312	117	97	115
Average Queue (ft)	28	27	53	37	79	51	77	55	22	36
95th Queue (ft)	63	56	103	72	139	150	216	96	69	93
Link Distance (ft)		301		307		302	302		565	565
Upstream Blk Time (%)							0			
Queuing Penalty (veh)							3			
Storage Bay Dist (ft)	200		200		200			200		
Storage Blk Time (%)							0			
Queuing Penalty (veh)							0			

Intersection: 22: Atwood & US 1 Bus.

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	124	270	333	125	224	579	583	225	580	580
Average Queue (ft)	27	126	308	113	45	431	449	202	366	363
95th Queue (ft)	72	234	393	154	131	613	632	259	626	599
Link Distance (ft)		314	318			565	565		565	565
Upstream Blk Time (%)			21			5	8		1	1
Queuing Penalty (veh)			0			37	58		0	0
Storage Bay Dist (ft)	100			100	200			200		
Storage Blk Time (%)		27	29	35		42		18	9	
Queuing Penalty (veh)		7	133	42		19		127	26	

PM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 35: MD 24 & MD 924

Movement	EB	EB	EB	EB	EB	B214	B214	B214	WB	WB	WB	WB
Directions Served	L	T	T	T	R	T	T	T	L	L	T	T
Maximum Queue (ft)	324	417	436	454	175	201	223	200	537	550	674	661
Average Queue (ft)	107	368	373	388	42	48	60	68	422	470	596	589
95th Queue (ft)	264	473	471	468	161	147	173	181	560	624	719	714
Link Distance (ft)		346	346	346		194	194	194			579	579
Upstream Blk Time (%)		21	22	23		1	1	0			8	9
Queuing Penalty (veh)		97	102	110		3	3	2			0	0
Storage Bay Dist (ft)	300				150				525	525		
Storage Blk Time (%)		25		40	0				2	4	9	
Queuing Penalty (veh)		19		69	0				12	29	79	

Intersection: 35: MD 24 & MD 924

Movement	WB	B28	B28	B28	B28	NB	NB	NB	NB	SB	SB	SB
Directions Served	T	T	T	T	T	L	L	T	R	L	L	T
Maximum Queue (ft)	614	487	487	319	64	244	349	480	350	442	439	375
Average Queue (ft)	414	127	89	15	5	103	149	279	70	274	298	226
95th Queue (ft)	591	360	321	116	28	179	294	428	300	383	414	347
Link Distance (ft)	579	472	472	472	472			465			1305	1305
Upstream Blk Time (%)	0	1	0					1				
Queuing Penalty (veh)	0	0	0					0				
Storage Bay Dist (ft)						325	325		325	525		
Storage Blk Time (%)								6	0			40
Queuing Penalty (veh)								33	0			27

Intersection: 35: MD 24 & MD 924

Movement	SB
Directions Served	R
Maximum Queue (ft)	125
Average Queue (ft)	45
95th Queue (ft)	142
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	100
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Network Summary

Network wide Queuing Penalty: 3987

PM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 4: MD 24 & Singer Rd

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	EBL	WBT	NBL	SBTL	WBL	EBT	SBL	NBTL
Maximum Green (s)	22.0	95.0	16.0	24.0	22.0	95.0	16.0	24.0
Minimum Green (s)	5.0	20.0	5.0	8.0	5.0	20.0	5.0	8.0
Recall	None	C-Max	None	None	None	C-Max	None	None
Avg. Green (s)	20.8	98.9	15.2	23.3	14.3	104.1	8.1	32.3
g/C Ratio	0.11	0.55	0.08	0.13	0.08	0.58	0.04	0.18
Cycles Skipped (%)	5	0	0	0	0	0	15	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	75	100	75	68	5	100	0	68
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 180.0
 Number of Complete Cycles : 19

Intersection: 5: MD 24 & Wheel Rd.

Phase	1	2	4	5	6	8
Movement(s) Served	EBTL	WBT	SBTL	WBL	EBT	NBTL
Maximum Green (s)	20.0	101.0	39.0	22.0	74.0	39.0
Minimum Green (s)	5.0	20.0	8.0	5.0	20.0	8.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	19.6	105.4	36.5	16.0	84.6	36.5
g/C Ratio	0.10	0.59	0.20	0.08	0.47	0.20
Cycles Skipped (%)	5	0	0	9	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	75	100	65	5	100	65
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 180.0
 Number of Complete Cycles : 19

PM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 6: MD 24 & Belair South Pkwy

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	NBTL	SBTL	WBL	EBT
Maximum Green (s)	44.0	77.0	17.0	18.0	20.0	101.0
Minimum Green (s)	5.0	20.0	5.0	5.0	5.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	42.2	78.9	16.6	18.4	10.3	112.3
g/C Ratio	0.23	0.44	0.09	0.10	0.05	0.62
Cycles Skipped (%)	0	0	0	0	5	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	75	100	80	100	0	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 180.0
 Number of Complete Cycles : 19

Intersection: 7: MD 24 & Plumtree

Phase	1	2	4	5	6	8
Movement(s) Served	WBTL	EBT	SBTL	EBL	WBT	NBTL
Maximum Green (s)	29.0	92.0	39.0	22.0	65.0	39.0
Minimum Green (s)	5.0	25.0	8.0	5.0	25.0	8.0
Recall	Max	C-Max	None	None	C-Max	None
Avg. Green (s)	29.0	97.2	34.0	15.1	77.2	34.0
g/C Ratio	0.16	0.54	0.19	0.08	0.43	0.19
Cycles Skipped (%)	0	0	0	9	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	100	100	45	5	100	45
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 180.0
 Number of Complete Cycles : 19

Intersection: 13: MD 24 & Ring Factory

Phase	1	2	4	5	6	8
Movement(s) Served	EBL	WBT	SBTL	WBL	EBT	NBTL
Maximum Green (s)	22.0	68.0	42.0	22.0	68.0	42.0
Minimum Green (s)	8.0	20.0	8.0	8.0	20.0	8.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	14.7	81.9	35.8	10.8	87.6	35.8
g/C Ratio	0.10	0.55	0.24	0.06	0.58	0.24
Cycles Skipped (%)	0	0	0	13	0	0
Cycles @ Minimum (%)	8	0	0	33	0	0
Cycles Maxed Out (%)	8	100	54	0	100	54
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

Intersection: 14: MD 24 & MacPhail

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	EBL	WBT	NBL	SBTL	WBL	EBT	SBL	NBTL
Maximum Green (s)	25.0	62.5	20.0	21.0	25.0	63.0	20.0	21.0
Minimum Green (s)	5.0	20.0	5.0	8.0	5.0	20.0	5.0	8.0
Recall	None	C-Max	None	None	None	C-Max	None	None
Avg. Green (s)	19.9	72.2	19.0	18.3	18.6	74.6	18.2	18.1
g/C Ratio	0.13	0.48	0.13	0.12	0.12	0.50	0.12	0.12
Cycles Skipped (%)	0	0	0	4	0	0	0	0
Cycles @ Minimum (%)	0	0	0	4	0	0	0	0
Cycles Maxed Out (%)	26	100	63	38	13	100	58	38
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

PM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 15: MD 24 & Marketplace

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	NBTL	SBTL	WBL	EBT
Maximum Green (s)	25.0	54.0	27.0	21.0	25.0	54.0
Minimum Green (s)	5.0	20.0	5.0	5.0	5.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	15.4	66.1	26.1	21.3	24.0	55.5
g/C Ratio	0.09	0.44	0.17	0.14	0.16	0.37
Cycles Skipped (%)	9	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	9	100	88	83	70	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

Intersection: 16: MD 24 & Boulton

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	NBTL	SBTL	WBL	EBTL
Maximum Green (s)	46.0	31.0	25.0	28.0	46.0	31.0
Minimum Green (s)	3.0	20.0	5.0	5.0	3.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	7.7	79.7	23.7	24.1	26.3	55.8
g/C Ratio	0.03	0.53	0.16	0.16	0.18	0.37
Cycles Skipped (%)	39	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	71	30	0	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

PM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 18: Tollgate Rd. & US 1 Bus.

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBTL	WBTL	EBTL	SBL	NBTL
Maximum Green (s)	32.0	45.0	28.0	25.0	32.0	45.0
Minimum Green (s)	3.0	20.0	8.0	5.0	3.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	26.3	50.9	28.0	25.0	10.5	68.1
g/C Ratio	0.18	0.34	0.19	0.17	0.06	0.45
Cycles Skipped (%)	0	0	0	0	8	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	29	100	100	100	0	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 19: MD 24 & US 1 Bus.

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	WBL	EBT	NBL	SBT	EBL	WBT	SBL	NBTL
Maximum Green (s)	25.0	36.0	22.0	45.0	20.0	41.0	22.0	45.0
Minimum Green (s)	3.0	20.0	3.0	20.0	3.0	20.0	3.0	20.0
Recall	None	Min	None	C-Max	None	Min	None	C-Max
Avg. Green (s)	22.8	35.0	15.2	55.8	19.4	38.4	20.8	49.4
g/C Ratio	0.15	0.23	0.10	0.37	0.13	0.26	0.14	0.33
Cycles Skipped (%)	0	0	0	0	0	0	0	0
Cycles @ Minimum (%)	0	4	0	0	0	0	0	0
Cycles Maxed Out (%)	58	63	0	100	83	63	38	100
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

PM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 20: Belair & US 1 Bus.

Phase	2	4	6	8
Movement(s) Served	NBT	EBTL	SBTL	WBTL
Maximum Green (s)	100.0	40.0	100.0	40.0
Minimum Green (s)	15.0	8.0	15.0	8.0
Recall	C-Max	None	C-Max	None
Avg. Green (s)	120.8	19.3	120.8	19.3
g/C Ratio	0.81	0.13	0.81	0.13
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	100	0	100	0
Cycles with Peds (%)	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 21: Kelley & US 1 Bus.

Phase	1	2	4	5	6	8
Movement(s) Served	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Maximum Green (s)	26.0	70.0	40.0	26.0	70.0	40.0
Minimum Green (s)	3.0	20.0	5.0	3.0	20.0	5.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	6.4	130.5	11.7	5.4	131.8	11.7
g/C Ratio	0.02	0.83	0.07	0.01	0.84	0.07
Cycles Skipped (%)	57	4	4	61	4	4
Cycles @ Minimum (%)	0	0	4	0	0	4
Cycles Maxed Out (%)	0	96	0	0	96	0
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

PM EXISTING CONDITIONS

Baseline

11/24/2008

Intersection: 22: Atwood & US 1 Bus.

Phase	1	2	4	5	6	8
Movement(s) Served	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Maximum Green (s)	32.0	58.0	19.0	32.0	58.0	22.0
Minimum Green (s)	5.0	20.0	5.0	5.0	20.0	5.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	6.7	97.1	15.4	34.8	66.5	15.5
g/C Ratio	0.03	0.65	0.10	0.23	0.44	0.10
Cycles Skipped (%)	38	0	0	0	0	4
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	33	33	100	4
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

Intersection: 35: MD 24 & MD 924

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	SBTL	NBTL	WBL	EBT
Maximum Green (s)	20.0	76.0	39.0	21.0	58.0	38.0
Minimum Green (s)	5.0	25.0	5.0	8.0	5.0	25.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	12.1	84.5	36.8	22.4	54.2	42.4
g/C Ratio	0.07	0.47	0.20	0.12	0.30	0.24
Cycles Skipped (%)	0	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	5	100	70	85	42	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 180.0
 Number of Complete Cycles : 19

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Summary of All Intervals

Start Time	6:57
End Time	8:07
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intvl	1
Vehs Entered	14942
Vehs Exited	14801
Starting Vehs	850
Ending Vehs	991
Denied Entry Before	32
Denied Entry After	89
Travel Distance (mi)	20132
Travel Time (hr)	1041.5
Total Delay (hr)	614.2
Total Stops	25032
Fuel Used (gal)	8465.0

Interval #0 Information Seeding

Start Time	6:57
End Time	7:07
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:07
End Time	8:07
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	14942
Vehs Exited	14801
Starting Vehs	850
Ending Vehs	991
Denied Entry Before	32
Denied Entry After	89
Travel Distance (mi)	20132
Travel Time (hr)	1041.5
Total Delay (hr)	614.2
Total Stops	25032
Fuel Used (gal)	8465.0

4: MD 24 & Singer Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	1.9	14.3	0.1	0.6	9.1	0.2	3.2	2.5	1.1	1.8	2.6	0.5
Delay / Veh (s)	90.3	30.0	11.5	81.6	35.0	18.1	65.4	67.9	31.2	55.2	63.6	16.1
Stop Delay (hr)	1.6	5.4	0.0	0.5	4.5	0.1	2.9	2.3	1.1	1.6	2.3	0.5
St Del/Veh (s)	78.6	11.4	0.5	70.5	17.2	5.2	59.4	61.3	29.7	48.7	57.3	14.8
Total Stops	70	644	6	29	448	18	166	127	113	117	125	100
Travel Dist (mi)	74.5	1738.6	28.8	18.5	632.7	26.1	23.6	17.9	17.6	15.6	19.6	16.0
Travel Time (hr)	3.2	44.1	0.6	1.0	19.8	0.7	4.0	3.1	1.8	2.3	3.2	1.1
Avg Speed (mph)	23	39	47	19	32	37	6	6	10	7	6	15
Fuel Used (gal)	27.8	529.3	9.2	6.5	202.0	8.6	15.8	11.6	8.4	10.2	12.4	5.9
HC Emissions (g)	2	71	3	1	27	4	1	1	1	1	1	0
CO Emissions (g)	1364	30570	984	360	11533	1075	600	433	430	419	359	234
NOx Emissions (g)	11	292	8	4	108	11	4	4	3	3	2	1
Vehicles Entered	72	1709	29	27	935	38	179	136	132	118	148	120
Vehicles Exited	77	1714	28	28	946	39	177	134	132	117	147	121
Hourly Exit Rate	77	1714	28	28	946	39	177	134	132	117	147	121
Input Volume	87	1666	26	36	950	50	183	139	133	115	165	129
% of Volume	89	103	108	78	100	78	97	96	99	102	89	94
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: MD 24 & Singer Rd Performance by movement

Movement	All
Total Delay (hr)	38.1
Delay / Veh (s)	37.5
Stop Delay (hr)	22.9
St Del/Veh (s)	22.6
Total Stops	1963
Travel Dist (mi)	2629.4
Travel Time (hr)	84.8
Avg Speed (mph)	31
Fuel Used (gal)	847.7
HC Emissions (g)	114
CO Emissions (g)	48360
NOx Emissions (g)	452
Vehicles Entered	3643
Vehicles Exited	3660
Hourly Exit Rate	3660
Input Volume	3679
% of Volume	99
Denied Entry Before	0
Denied Entry After	0

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5: MD 24 & Wheel Rd. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.4	3.0	0.0	0.4	10.5	0.2	0.1	0.5	1.5	2.0	0.2	0.3
Delay / Veh (s)	44.9	6.9	5.0	115.3	31.2	13.6	75.2	65.9	37.9	73.3	43.8	27.8
Stop Delay (hr)	0.4	0.4	0.0	0.3	3.7	0.0	0.1	0.5	1.4	1.9	0.2	0.3
St Del/Veh (s)	40.3	1.0	0.0	96.4	11.0	1.0	70.6	60.7	34.7	68.4	40.3	26.7
Total Stops	26	112	0	11	355	15	5	28	126	94	14	32
Travel Dist (mi)	11.0	538.3	2.7	10.8	1224.4	47.9	0.8	3.8	18.3	13.1	2.4	5.3
Travel Time (hr)	0.7	13.5	0.1	0.6	31.6	1.1	0.1	0.6	2.1	2.4	0.3	0.5
Avg Speed (mph)	16	40	38	19	39	45	6	6	9	6	8	11
Fuel Used (gal)	4.7	213.9	1.0	3.7	417.8	16.1	0.5	2.4	10.0	8.9	1.3	2.2
HC Emissions (g)	1	28	0	0	61	1	0	0	1	1	0	0
CO Emissions (g)	345	14549	52	165	27259	982	17	121	393	270	32	72
NOx Emissions (g)	3	115	0	1	239	7	0	1	3	2	0	1
Vehicles Entered	33	1583	8	10	1196	48	6	29	137	100	18	39
Vehicles Exited	34	1583	8	12	1224	50	5	27	143	99	19	40
Hourly Exit Rate	34	1583	8	12	1224	50	5	27	143	99	19	40
Input Volume	26	1570	6	13	1201	56	7	33	133	96	21	38
% of Volume	131	101	133	92	102	89	71	82	108	103	90	105
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

5: MD 24 & Wheel Rd. Performance by movement

Movement	All
Total Delay (hr)	19.1
Delay / Veh (s)	21.4
Stop Delay (hr)	9.1
St Del/Veh (s)	10.2
Total Stops	818
Travel Dist (mi)	1879.0
Travel Time (hr)	53.6
Avg Speed (mph)	35
Fuel Used (gal)	682.3
HC Emissions (g)	94
CO Emissions (g)	44257
NOx Emissions (g)	371
Vehicles Entered	3207
Vehicles Exited	3244
Hourly Exit Rate	3244
Input Volume	3200
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

6: MD 24 & Belair South Pkwy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	2.4	6.4	0.2	1.4	7.5	0.4	1.9	1.4	0.3	5.4	1.0	0.8
Delay / Veh (s)	84.3	18.7	6.4	78.7	24.7	9.9	66.0	64.4	22.7	58.0	51.4	17.9
Stop Delay (hr)	2.2	3.5	0.0	1.2	4.3	0.1	1.8	1.2	0.3	4.9	0.9	0.7
St Del/Veh (s)	76.7	10.0	0.6	71.6	14.3	1.8	60.7	58.9	21.5	52.8	44.2	16.4
Total Stops	101	316	26	62	312	50	88	69	46	286	55	118
Travel Dist (mi)	31.9	391.9	32.9	20.7	365.7	43.8	13.9	10.2	7.1	44.8	9.3	20.0
Travel Time (hr)	3.1	13.9	0.9	1.8	14.2	1.3	2.4	1.7	0.6	6.9	1.3	1.5
Avg Speed (mph)	10	28	36	11	26	33	6	6	12	7	7	14
Fuel Used (gal)	16.7	164.1	13.4	9.9	148.1	16.4	9.7	6.5	2.7	27.0	5.6	8.1
HC Emissions (g)	1	21	2	1	18	3	0	0	0	2	0	1
CO Emissions (g)	870	11072	1085	601	9087	1345	318	205	118	855	157	371
NOx Emissions (g)	5	80	6	4	71	10	2	1	1	6	1	2
Vehicles Entered	100	1240	104	60	1079	129	105	77	53	336	70	150
Vehicles Exited	103	1237	104	63	1089	130	105	76	53	334	71	151
Hourly Exit Rate	103	1237	104	63	1089	130	105	76	53	334	71	151
Input Volume	111	1200	116	59	1056	130	125	71	55	347	64	167
% of Volume	93	103	90	107	103	100	84	107	96	96	111	90
Denied Entry Before	0	0	0	0	0	0	0	0	0	1	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: MD 24 & Belair South Pkwy Performance by movement

Movement	All
Total Delay (hr)	28.9
Delay / Veh (s)	29.7
Stop Delay (hr)	21.0
St Del/Veh (s)	21.6
Total Stops	1529
Travel Dist (mi)	992.0
Travel Time (hr)	49.5
Avg Speed (mph)	20
Fuel Used (gal)	428.2
HC Emissions (g)	51
CO Emissions (g)	26086
NOx Emissions (g)	191
Vehicles Entered	3503
Vehicles Exited	3516
Hourly Exit Rate	3516
Input Volume	3501
% of Volume	100
Denied Entry Before	1
Denied Entry After	0

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7: MD 24 & Plumtree Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	1.3	7.8	0.0	0.9	4.2	0.2	0.3	0.5	1.1	1.7	1.1	1.8
Delay / Veh (s)	92.2	21.8	9.4	41.2	13.0	5.8	65.1	39.7	33.3	83.2	72.4	54.1
Stop Delay (hr)	1.2	3.2	0.0	0.8	2.0	0.0	0.2	0.4	1.0	1.5	1.0	1.6
St Del/Veh (s)	83.8	9.0	1.0	35.3	6.3	0.8	61.1	35.0	30.3	77.4	65.0	48.7
Total Stops	46	364	2	55	245	30	12	31	104	77	54	119
Travel Dist (mi)	44.8	1144.5	3.6	25.0	374.2	34.4	1.7	5.5	15.8	9.4	7.2	15.6
Travel Time (hr)	2.1	27.7	0.1	1.4	11.4	1.0	0.3	0.7	1.7	2.0	1.3	2.3
Avg Speed (mph)	21	41	46	17	33	35	6	9	9	5	6	7
Fuel Used (gal)	17.6	389.3	1.0	9.6	156.9	13.4	1.1	3.1	7.9	7.2	5.0	9.9
HC Emissions (g)	3	56	0	2	19	2	0	0	1	0	0	1
CO Emissions (g)	1158	25783	66	613	10595	924	20	106	365	183	172	368
NOx Emissions (g)	10	221	1	5	78	6	0	1	2	1	1	2
Vehicles Entered	50	1290	4	77	1165	108	13	41	119	70	54	118
Vehicles Exited	51	1281	4	77	1167	106	14	44	120	74	53	118
Hourly Exit Rate	51	1281	4	77	1167	106	14	44	120	74	53	118
Input Volume	52	1274	4	82	1175	98	16	36	114	62	51	112
% of Volume	98	101	100	94	99	108	88	122	105	119	104	105
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	1	0	0	0	0	0	0	0

7: MD 24 & Plumtree Performance by movement

Movement	All
Total Delay (hr)	20.7
Delay / Veh (s)	23.9
Stop Delay (hr)	13.0
St Del/Veh (s)	15.0
Total Stops	1139
Travel Dist (mi)	1681.8
Travel Time (hr)	52.0
Avg Speed (mph)	32
Fuel Used (gal)	622.0
HC Emissions (g)	83
CO Emissions (g)	40354
NOx Emissions (g)	328
Vehicles Entered	3109
Vehicles Exited	3109
Hourly Exit Rate	3109
Input Volume	3076
% of Volume	101
Denied Entry Before	0
Denied Entry After	1

13: MD 24 & Ring Factory Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.8	4.4	0.0	0.7	8.4	0.3	0.1	0.9	1.2	3.2	2.0	1.9
Delay / Veh (s)	87.2	12.1	5.0	84.3	23.3	11.7	60.0	36.9	32.3	65.0	52.2	47.3
Stop Delay (hr)	0.8	2.3	0.0	0.7	3.0	0.0	0.1	0.8	1.1	2.8	1.7	1.6
St Del/Veh (s)	82.6	6.4	0.6	75.6	8.4	1.3	52.5	31.7	28.6	56.5	43.9	41.0
Total Stops	35	216	2	32	373	31	6	64	105	205	107	120
Travel Dist (mi)	20.5	684.3	6.5	28.0	1106.8	89.0	0.6	12.5	19.1	25.4	19.4	20.4
Travel Time (hr)	1.3	17.0	0.1	1.3	27.2	2.0	0.1	1.3	1.9	4.0	2.6	2.6
Avg Speed (mph)	16	40	44	22	41	45	7	10	10	7	8	8
Fuel Used (gal)	7.5	208.3	1.9	10.6	360.4	27.8	0.4	6.2	9.4	15.7	10.8	10.6
HC Emissions (g)	1	28	0	1	49	4	0	1	1	1	0	1
CO Emissions (g)	352	10475	83	555	23716	1798	11	280	390	430	271	386
NOx Emissions (g)	4	125	1	4	192	15	0	2	3	3	2	4
Vehicles Entered	35	1299	11	33	1293	103	4	88	134	177	137	144
Vehicles Exited	35	1301	11	31	1295	101	4	88	136	180	138	145
Hourly Exit Rate	35	1301	11	31	1295	101	4	88	136	180	138	145
Input Volume	43	1298	11	34	1300	104	8	91	122	183	131	116
% of Volume	81	100	100	91	100	97	50	97	111	98	105	125
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

13: MD 24 & Ring Factory Performance by movement

Movement	All
Total Delay (hr)	24.0
Delay / Veh (s)	25.0
Stop Delay (hr)	14.9
St Del/Veh (s)	15.5
Total Stops	1296
Travel Dist (mi)	2032.5
Travel Time (hr)	61.4
Avg Speed (mph)	33
Fuel Used (gal)	669.6
HC Emissions (g)	87
CO Emissions (g)	38747
NOx Emissions (g)	354
Vehicles Entered	3458
Vehicles Exited	3465
Hourly Exit Rate	3465
Input Volume	3441
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

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14: MD 24 & MacPhail Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	2.5	3.6	0.2	5.3	7.9	0.3	1.2	1.6	0.2	1.7	1.4	0.1
Delay / Veh (s)	77.4	11.3	3.8	70.3	22.4	4.9	58.3	63.9	7.3	64.8	65.3	31.5
Stop Delay (hr)	2.3	2.2	0.2	4.7	4.3	0.1	1.1	1.5	0.2	1.6	1.3	0.1
St Del/Veh (s)	72.3	6.8	2.6	61.7	12.1	2.0	52.8	58.8	5.0	58.7	60.7	28.8
Total Stops	111	237	48	229	511	0	64	83	0	90	69	9
Travel Dist (mi)	17.9	177.5	33.1	39.2	184.2	28.0	7.1	8.8	10.5	8.3	6.6	0.9
Travel Time (hr)	3.0	7.6	1.2	6.4	11.3	1.0	1.4	1.9	0.6	2.0	1.6	0.1
Avg Speed (mph)	6	23	28	6	18	30	5	5	24	4	4	7
Fuel Used (gal)	9.5	51.4	6.3	21.5	54.2	6.4	5.6	6.4	5.0	7.5	5.7	0.4
HC Emissions (g)	0	6	1	1	5	1	0	0	1	0	1	0
CO Emissions (g)	176	1749	224	374	1757	469	175	175	351	242	192	9
NOx Emissions (g)	1	22	2	3	17	2	1	1	2	2	2	0
Vehicles Entered	115	1165	214	270	1270	206	75	94	121	95	77	10
Vehicles Exited	117	1159	214	274	1265	206	74	87	121	97	78	10
Hourly Exit Rate	117	1159	214	274	1265	206	74	87	121	97	78	10
Input Volume	108	1159	216	272	1228	215	76	87	121	106	65	18
% of Volume	108	100	99	101	103	96	97	100	100	92	120	56
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

14: MD 24 & MacPhail Performance by movement

Movement	All
Total Delay (hr)	26.1
Delay / Veh (s)	25.3
Stop Delay (hr)	19.4
St Del/Veh (s)	18.8
Total Stops	1451
Travel Dist (mi)	522.0
Travel Time (hr)	38.1
Avg Speed (mph)	14
Fuel Used (gal)	180.0
HC Emissions (g)	16
CO Emissions (g)	5892
NOx Emissions (g)	56
Vehicles Entered	3712
Vehicles Exited	3702
Hourly Exit Rate	3702
Input Volume	3671
% of Volume	101
Denied Entry Before	0
Denied Entry After	0

15: MD 24 & Marketplace Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	2.1	5.5	0.3	2.1	4.6	0.2	1.2	1.6	0.1	3.4	1.3	0.2
Delay / Veh (s)	87.2	16.0	7.8	74.7	16.6	3.0	61.1	72.8	6.5	72.2	65.8	12.9
Stop Delay (hr)	1.9	2.8	0.0	2.0	3.6	0.0	1.1	1.5	0.1	3.1	1.2	0.1
St Del/Veh (s)	78.6	8.2	0.5	69.7	13.0	0.0	57.0	67.9	4.4	66.8	62.0	10.0
Total Stops	77	265	3	101	285	3	61	77	0	148	60	18
Travel Dist (mi)	22.7	336.2	35.2	11.3	110.9	28.3	6.2	7.5	6.7	14.1	6.0	3.4
Travel Time (hr)	2.7	13.6	1.2	2.5	7.1	1.1	1.4	1.9	0.4	3.9	1.5	0.3
Avg Speed (mph)	9	25	29	5	16	27	4	4	23	4	4	15
Fuel Used (gal)	14.1	159.6	14.5	7.0	39.9	5.2	5.2	6.6	3.2	13.7	5.0	1.6
HC Emissions (g)	1	22	1	0	3	1	0	0	0	1	0	0
CO Emissions (g)	586	10534	980	93	1381	236	152	159	163	326	94	73
NOx Emissions (g)	3	79	5	1	13	2	1	1	1	2	1	1
Vehicles Entered	85	1249	133	101	996	268	67	81	80	166	69	43
Vehicles Exited	86	1245	134	105	996	268	68	78	80	168	71	43
Hourly Exit Rate	86	1245	134	105	996	268	68	78	80	168	71	43
Input Volume	74	1241	130	97	999	250	61	91	83	159	76	44
% of Volume	116	100	103	108	100	107	111	86	96	106	93	98
Denied Entry Before	1	2	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

15: MD 24 & Marketplace Performance by movement

Movement	All
Total Delay (hr)	22.5
Delay / Veh (s)	24.3
Stop Delay (hr)	17.4
St Del/Veh (s)	18.8
Total Stops	1098
Travel Dist (mi)	588.4
Travel Time (hr)	37.4
Avg Speed (mph)	16
Fuel Used (gal)	275.6
HC Emissions (g)	30
CO Emissions (g)	14778
NOx Emissions (g)	111
Vehicles Entered	3338
Vehicles Exited	3342
Hourly Exit Rate	3342
Input Volume	3305
% of Volume	101
Denied Entry Before	3
Denied Entry After	0

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16: MD 24 & Boulton Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.3	3.6	0.6	0.5	0.8	0.4	1.4	1.8	0.5	0.5	2.2	0.7
Delay / Veh (s)	18.0	16.0	9.6	73.8	6.9	6.2	66.6	71.0	7.5	66.8	67.3	47.3
Stop Delay (hr)	0.3	2.2	0.3	0.4	0.3	0.0	1.4	1.7	0.4	0.4	2.0	0.7
St Del/Veh (s)	15.1	9.8	5.6	67.0	2.2	0.6	62.4	66.3	5.5	62.1	62.5	44.3
Total Stops	40	282	0	22	34	36	69	84	2	24	110	49
Travel Dist (mi)	19.7	229.0	58.4	4.4	82.2	43.0	6.7	7.9	18.6	2.3	10.1	4.6
Travel Time (hr)	0.8	8.1	1.9	0.6	2.8	1.6	1.7	2.1	1.2	0.6	2.6	0.9
Avg Speed (mph)	30	30	37	8	30	27	4	4	23	4	4	5
Fuel Used (gal)	6.3	69.7	17.7	3.1	45.7	18.8	5.7	6.4	7.4	2.0	8.8	3.4
HC Emissions (g)	1	8	3	0	5	2	0	1	1	0	0	0
CO Emissions (g)	445	4351	1542	151	3432	1350	156	172	303	54	185	93
NOx Emissions (g)	3	30	9	1	21	8	1	2	2	0	1	1
Vehicles Entered	70	810	213	22	443	214	76	90	233	27	118	53
Vehicles Exited	69	811	212	22	443	212	79	92	233	26	117	54
Hourly Exit Rate	69	811	212	22	443	212	79	92	233	26	117	54
Input Volume	66	808	203	20	442	234	77	90	217	22	128	40
% of Volume	105	100	104	110	100	91	103	102	107	118	91	135
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	2	0	0	0

16: MD 24 & Boulton Performance by movement

Movement	All
Total Delay (hr)	13.3
Delay / Veh (s)	20.2
Stop Delay (hr)	10.1
St Del/Veh (s)	15.3
Total Stops	752
Travel Dist (mi)	486.9
Travel Time (hr)	24.6
Avg Speed (mph)	21
Fuel Used (gal)	194.9
HC Emissions (g)	23
CO Emissions (g)	12234
NOx Emissions (g)	79
Vehicles Entered	2369
Vehicles Exited	2370
Hourly Exit Rate	2370
Input Volume	2347
% of Volume	101
Denied Entry Before	0
Denied Entry After	2

18: Tollgate Rd. & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	2.1	3.0	0.6	17.8	7.1	1.6	4.2	6.0	1.6	0.7	11.7	1.0
Delay / Veh (s)	66.9	67.8	9.3	190.7	175.5	99.2	62.1	28.3	28.0	38.4	34.9	29.5
Stop Delay (hr)	1.9	2.8	0.4	17.1	6.8	1.5	3.7	4.4	1.2	0.5	8.3	0.6
St Del/Veh (s)	62.3	62.8	6.6	182.2	167.7	94.5	55.2	20.5	20.5	30.9	24.7	19.4
Total Stops	97	142	24	435	175	68	230	427	125	65	647	77
Travel Dist (mi)	9.6	13.5	17.9	29.1	12.4	4.9	66.7	214.8	59.3	8.6	158.0	15.6
Travel Time (hr)	2.4	3.5	1.2	18.9	7.5	1.8	6.0	11.5	3.3	0.9	15.7	1.4
Avg Speed (mph)	4	4	20	2	3	7	12	19	18	9	10	11
Fuel Used (gal)	8.5	11.2	8.1	52.0	21.1	5.5	26.4	70.6	17.6	3.3	64.2	5.8
HC Emissions (g)	1	1	1	3	1	1	2	9	2	0	6	0
CO Emissions (g)	305	223	408	727	281	144	680	2875	509	69	1482	57
NOx Emissions (g)	3	2	4	7	2	1	7	30	6	1	19	1
Vehicles Entered	113	157	225	338	144	58	238	769	211	67	1225	117
Vehicles Exited	112	158	226	336	146	57	244	768	211	60	1200	116
Hourly Exit Rate	112	158	226	336	146	57	244	768	211	60	1200	116
Input Volume	117	155	223	338	133	66	253	810	228	78	1248	115
% of Volume	96	102	101	99	110	86	96	95	93	77	96	101
Denied Entry Before	0	0	0	11	4	2	1	0	0	0	0	0
Denied Entry After	0	0	2	14	4	2	1	0	0	0	0	0

18: Tollgate Rd. & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	57.3
Delay / Veh (s)	56.6
Stop Delay (hr)	49.2
St Del/Veh (s)	48.5
Total Stops	2512
Travel Dist (mi)	610.5
Travel Time (hr)	74.2
Avg Speed (mph)	10
Fuel Used (gal)	294.5
HC Emissions (g)	26
CO Emissions (g)	7760
NOx Emissions (g)	83
Vehicles Entered	3662
Vehicles Exited	3634
Hourly Exit Rate	3634
Input Volume	3764
% of Volume	97
Denied Entry Before	18
Denied Entry After	23

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19: MD 24 & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	3.2	14.8	0.2	4.1	9.7	0.5	0.6	3.9	0.1	7.1	5.2	0.1
Delay / Veh (s)	76.0	64.8	5.0	55.8	59.4	7.4	40.8	21.1	2.3	79.6	18.4	1.7
Stop Delay (hr)	2.9	11.1	0.0	3.6	7.9	0.1	0.5	3.3	0.0	6.5	3.6	0.0
St Del/Veh (s)	68.7	48.5	0.1	48.5	48.6	1.4	37.1	17.9	0.0	73.6	12.9	0.1
Total Stops	134	754	3	267	468	49	49	208	0	273	362	0
Travel Dist (mi)	29.2	158.3	24.8	73.2	153.4	69.2	4.5	54.7	17.6	30.9	97.1	9.6
Travel Time (hr)	4.0	18.6	0.9	6.0	13.2	2.3	0.7	5.3	0.7	8.0	7.7	0.4
Avg Speed (mph)	7	9	28	12	12	30	6	10	25	4	13	27
Fuel Used (gal)	17.4	85.4	9.9	31.2	72.5	21.7	2.0	23.7	3.3	23.9	39.9	2.4
HC Emissions (g)	1	6	2	4	5	3	0	3	0	1	4	0
CO Emissions (g)	707	2691	971	1473	3061	1454	32	920	108	428	1316	170
NOx Emissions (g)	4	21	7	13	21	11	0	8	1	4	13	1
Vehicles Entered	152	830	135	265	586	256	50	669	217	322	1015	110
Vehicles Exited	150	820	135	264	590	256	48	663	217	318	1009	109
Hourly Exit Rate	150	820	135	264	590	256	48	663	217	318	1009	109
Input Volume	163	808	122	280	582	242	70	708	215	310	1039	114
% of Volume	92	101	111	94	101	106	69	94	101	103	97	96
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

19: MD 24 & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	49.4
Delay / Veh (s)	38.7
Stop Delay (hr)	39.6
St Del/Veh (s)	31.0
Total Stops	2567
Travel Dist (mi)	722.4
Travel Time (hr)	67.6
Avg Speed (mph)	11
Fuel Used (gal)	333.1
HC Emissions (g)	30
CO Emissions (g)	13330
NOx Emissions (g)	104
Vehicles Entered	4607
Vehicles Exited	4579
Hourly Exit Rate	4579
Input Volume	4653
% of Volume	98
Denied Entry Before	0
Denied Entry After	0

20: Belair & US 1 Bus. Performance by movement

Movement	EBL	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.1	0.1	1.2	0.1	0.2	1.0	0.0	0.0	1.1	0.0	3.7
Delay / Veh (s)	60.1	11.2	77.1	71.9	12.7	3.9	3.2	7.4	2.9	0.7	5.5
Stop Delay (hr)	0.0	0.1	1.2	0.1	0.2	0.3	0.0	0.0	0.2	0.0	2.1
St Del/Veh (s)	57.9	10.2	73.2	68.7	11.3	1.4	0.6	4.1	0.6	0.0	3.1
Total Stops	2	18	59	4	42	87	4	9	110	0	335
Travel Dist (mi)	0.2	1.0	3.4	0.2	2.9	84.9	4.1	1.3	95.2	0.4	193.7
Travel Time (hr)	0.1	0.1	1.4	0.1	0.3	3.4	0.2	0.1	3.5	0.0	9.1
Avg Speed (mph)	3	10	3	3	10	25	22	16	27	26	22
Fuel Used (gal)	0.2	0.3	4.2	0.2	1.1	52.4	1.8	0.4	36.2	0.1	97.0
HC Emissions (g)	0	0	0	0	0	7	0	0	6	0	14
CO Emissions (g)	4	5	101	2	40	3643	87	14	2215	5	6116
NOx Emissions (g)	0	0	1	0	0	27	1	0	20	0	49
Vehicles Entered	3	19	59	4	50	892	41	18	1363	5	2454
Vehicles Exited	3	19	58	4	50	894	41	19	1365	5	2458
Hourly Exit Rate	3	19	58	4	50	894	41	19	1365	5	2458
Input Volume	2	22	65	5	50	928	46	16	1367	6	2507
% of Volume	150	86	89	80	100	96	89	119	100	83	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

21: Kelley & US 1 Bus. Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	1.8	0.0	2.3
Delay / Veh (s)	52.8	8.3	81.8	7.4	9.7	0.6	0.1	9.4	4.6	5.8	3.5
Stop Delay (hr)	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.4
St Del/Veh (s)	50.2	7.2	79.2	6.2	6.8	0.1	0.0	3.7	0.3	0.2	0.5
Total Stops	2	2	4	15	19	0	0	17	63	2	124
Travel Dist (mi)	0.1	0.1	0.2	0.9	1.9	56.6	0.5	4.8	165.3	2.4	232.9
Travel Time (hr)	0.0	0.0	0.1	0.1	0.1	1.6	0.0	0.3	6.0	0.1	8.4
Avg Speed (mph)	4	12	2	13	14	35	27	19	28	22	28
Fuel Used (gal)	0.1	0.0	0.3	0.2	0.5	18.8	0.1	1.9	73.5	0.8	96.3
HC Emissions (g)	0	0	0	0	0	3	0	0	12	0	15
CO Emissions (g)	2	0	6	1	12	1039	1	86	4407	19	5574
NOx Emissions (g)	0	0	0	0	0	10	0	1	42	0	53
Vehicles Entered	2	2	4	15	27	821	7	41	1378	20	2317
Vehicles Exited	2	2	4	15	27	821	7	40	1380	20	2318
Hourly Exit Rate	2	2	4	15	27	821	7	40	1380	20	2318
Input Volume	2	2	2	20	25	866	6	37	1385	18	2363
% of Volume	100	100	200	75	108	95	117	108	100	111	98
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0

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22: Atwood & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.4	0.6	0.5	0.8	1.3	2.0	0.3	6.4	0.1	2.9	6.9	0.1
Delay / Veh (s)	90.6	75.3	37.6	92.6	86.1	23.8	22.9	29.2	24.9	27.9	18.4	14.3
Stop Delay (hr)	0.4	0.6	0.5	0.8	1.2	1.7	0.2	5.0	0.1	2.2	4.7	0.1
St Del/Veh (s)	87.4	72.0	35.8	88.0	81.2	20.2	18.1	22.7	19.4	21.3	12.5	11.3
Total Stops	16	30	44	35	54	247	41	491	9	280	476	5
Travel Dist (mi)	1.0	1.8	2.9	2.1	3.2	18.0	5.4	94.1	1.2	40.5	147.9	1.7
Travel Time (hr)	0.5	0.7	0.6	0.9	1.4	2.7	0.4	8.8	0.1	4.1	11.0	0.1
Avg Speed (mph)	2	3	5	2	2	8	12	11	11	13	17	18
Fuel Used (gal)	1.2	1.9	2.1	2.6	4.0	11.3	1.6	38.1	0.4	19.0	63.8	0.6
HC Emissions (g)	0	0	0	0	0	1	0	4	0	2	7	0
CO Emissions (g)	16	25	76	58	40	287	41	1116	6	758	2733	20
NOx Emissions (g)	0	0	1	1	0	3	0	12	0	6	24	0
Vehicles Entered	16	31	48	33	53	297	45	798	10	373	1356	16
Vehicles Exited	17	30	47	33	53	298	45	784	10	375	1355	16
Hourly Exit Rate	17	30	47	33	53	298	45	784	10	375	1355	16
Input Volume	16	36	37	38	52	320	53	837	14	397	1356	21
% of Volume	106	83	127	87	102	93	85	94	71	94	100	76
Denied Entry Before	0	0	0	0	0	0	0	0	0	1	4	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

22: Atwood & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	22.3
Delay / Veh (s)	26.2
Stop Delay (hr)	17.4
St Del/Veh (s)	20.4
Total Stops	1728
Travel Dist (mi)	319.7
Travel Time (hr)	31.5
Avg Speed (mph)	12
Fuel Used (gal)	146.6
HC Emissions (g)	14
CO Emissions (g)	5173
NOx Emissions (g)	47
Vehicles Entered	3076
Vehicles Exited	3063
Hourly Exit Rate	3063
Input Volume	3177
% of Volume	96
Denied Entry Before	5
Denied Entry After	0

35: MD 24 & MD 924 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.7	37.1	0.4	6.4	30.0	0.5	1.2	1.8	3.2	81.7	4.4	1.8
Delay / Veh (s)	94.5	74.3	36.3	83.7	119.6	2.9	92.1	83.0	16.8	255.0	159.5	129.4
Stop Delay (hr)	0.6	31.3	0.3	5.7	26.6	0.0	1.2	1.7	2.7	72.1	4.2	1.7
St Del/Veh (s)	88.2	62.7	27.3	75.5	106.2	0.0	88.2	77.6	14.4	225.0	153.6	125.6
Total Stops	29	1109	13	283	764	2	46	70	0	1774	78	6
Travel Dist (mi)	2.0	137.6	2.9	33.2	108.9	61.8	4.4	7.1	54.0	283.5	24.2	12.0
Travel Time (hr)	0.7	39.9	0.5	7.3	32.3	2.3	1.4	2.0	5.0	89.5	5.0	2.1
Avg Speed (mph)	3	3	6	5	3	27	4	4	24	6	15	30
Fuel Used (gal)	2.3	129.2	1.9	24.9	94.2	7.6	4.5	6.0	24.8	275.2	16.9	7.8
HC Emissions (g)	0	6	0	1	5	1	0	1	2	17	1	1
CO Emissions (g)	42	1596	75	591	1505	265	133	165	1181	4203	501	311
NOx Emissions (g)	0	21	1	4	13	2	1	1	7	45	4	2
Vehicles Entered	26	1811	42	275	936	562	49	81	679	1151	97	50
Vehicles Exited	26	1786	41	273	868	557	48	78	678	1155	101	50
Hourly Exit Rate	26	1786	41	273	868	557	48	78	678	1155	101	50
Input Volume	36	1807	55	276	950	536	42	94	687	1221	105	38
% of Volume	72	99	75	99	91	104	114	83	99	95	96	132
Denied Entry Before	0	0	0	0	0	0	0	2	0	3	0	0
Denied Entry After	0	0	0	0	0	0	0	1	2	55	5	0

35: MD 24 & MD 924 Performance by movement

Movement	All
Total Delay (hr)	169.1
Delay / Veh (s)	106.6
Stop Delay (hr)	148.2
St Del/Veh (s)	93.4
Total Stops	4174
Travel Dist (mi)	731.6
Travel Time (hr)	188.0
Avg Speed (mph)	5
Fuel Used (gal)	595.4
HC Emissions (g)	37
CO Emissions (g)	10567
NOx Emissions (g)	102
Vehicles Entered	5759
Vehicles Exited	5661
Hourly Exit Rate	5661
Input Volume	5847
% of Volume	97
Denied Entry Before	5
Denied Entry After	63

Total Network Performance

Total Delay (hr)	614.2
Delay / Veh (s)	148.7
Stop Delay (hr)	436.6
St Del/Veh (s)	105.7
Total Stops	25032
Travel Dist (mi)	20132.2
Travel Time (hr)	1041.5
Avg Speed (mph)	21
Fuel Used (gal)	8465.0
HC Emissions (g)	1048
CO Emissions (g)	476427
NOx Emissions (g)	3858
Vehicles Entered	14942
Vehicles Exited	14801
Hourly Exit Rate	14801
Input Volume	85081
% of Volume	17
Denied Entry Before	32
Denied Entry After	89

Intersection: 4: MD 24 & Singer Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	157	482	518	16	90	738	816	61	246	401	169	154
Average Queue (ft)	71	260	308	3	27	218	233	7	147	126	76	90
95th Queue (ft)	126	425	478	13	73	579	605	28	238	250	143	166
Link Distance (ft)		5305	5305			3512	3512			692	692	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	325			800	300			675	270			130
Storage Blk Time (%)		2				7	1			1		5
Queuing Penalty (veh)		2				2	0			1		9

Intersection: 4: MD 24 & Singer Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	239	126
Average Queue (ft)	120	43
95th Queue (ft)	216	93
Link Distance (ft)	692	692
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	10	
Queuing Penalty (veh)	11	

Intersection: 5: MD 24 & Wheel Rd.

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	LTR	L	TR
Maximum Queue (ft)	72	195	206	75	375	419	53	264	155	86
Average Queue (ft)	26	43	56	15	177	200	9	110	84	30
95th Queue (ft)	56	133	149	57	335	387	32	213	150	70
Link Distance (ft)		1715	1715		5305	5305		691		691
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	375			300			725		380	
Storage Blk Time (%)						3				
Queuing Penalty (veh)						0				

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Intersection: 6: MD 24 & Belair South Pkwy

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	222	240	264	31	118	290	336	79	154	236	42	262
Average Queue (ft)	98	144	164	15	65	149	166	26	83	67	22	141
95th Queue (ft)	174	221	238	37	119	292	314	55	143	146	44	243
Link Distance (ft)		1616	1616			1715	1715			692	692	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	900			900	800			800	160			380
Storage Blk Time (%)									1	2		
Queuing Penalty (veh)									1	2		

Intersection: 6: MD 24 & Belair South Pkwy

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	302	147
Average Queue (ft)	166	53
95th Queue (ft)	263	102
Link Distance (ft)	692	692
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: MD 24 & Plumtree

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LTR
Maximum Queue (ft)	111	354	433	27	186	262	284	53	214	348
Average Queue (ft)	53	157	171	2	55	104	121	19	95	201
95th Queue (ft)	92	287	306	12	120	205	227	44	184	336
Link Distance (ft)		4668	4668			1616	1616		690	690
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	575			575	600			600		
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 13: MD 24 & Ring Factory

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	122	208	176	60	331	330	21	74	313	75	571
Average Queue (ft)	32	79	80	21	143	148	1	5	119	68	296
95th Queue (ft)	92	169	155	53	279	273	9	30	217	83	439
Link Distance (ft)		3026	3026		4668	4668			746		746
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	625			525			525	50		50	
Storage Blk Time (%)									41	54	46
Queuing Penalty (veh)									3	133	83

Intersection: 14: MD 24 & MacPhail

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	T	L	TR
Maximum Queue (ft)	203	272	347	81	374	436	389	110	174	181	159
Average Queue (ft)	110	103	126	33	230	234	243	54	68	91	77
95th Queue (ft)	178	188	225	70	354	388	395	101	141	156	142
Link Distance (ft)		763	763	763		788	788		491		454
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	700				575			250		325	
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 15: MD 24 & Marketplace

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB	SB
Directions Served	L	T	T	T	L	T	T	R	LT	L	T	R
Maximum Queue (ft)	140	247	261	140	200	294	290	56	292	292	182	66
Average Queue (ft)	82	89	111	59	105	134	145	6	129	142	76	2
95th Queue (ft)	133	172	203	118	183	244	258	33	209	229	156	22
Link Distance (ft)		1392	1392	1392		539	539		486		448	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	525				500			500		350		50
Storage Blk Time (%)											32	0
Queuing Penalty (veh)											66	0

2015 AM CONDITIONS

Baseline

11/24/2008

Intersection: 16: MD 24 & Boulton

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	T	R	L	TR
Maximum Queue (ft)	96	233	270	96	76	75	52	136	227	225	224	279
Average Queue (ft)	28	123	137	26	14	25	18	69	82	7	25	136
95th Queue (ft)	62	224	236	69	45	65	43	128	166	74	92	223
Link Distance (ft)		1489	1489		970	970	970		465			441
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	500			625				200		200	200	
Storage Blk Time (%)									1	0		2
Queuing Penalty (veh)									2	0		1

Intersection: 18: Tollgate Rd. & US 1 Bus.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	T
Maximum Queue (ft)	239	213	143	275	488	72	292	360	414	274	711	711
Average Queue (ft)	96	131	25	272	452	33	173	226	283	49	298	340
95th Queue (ft)	180	203	82	280	569	60	263	360	393	128	549	618
Link Distance (ft)		441			454			1470	1470		640	640
Upstream Blk Time (%)					34						1	1
Queuing Penalty (veh)					0						6	10
Storage Bay Dist (ft)	250		250	250		250	325			250		
Storage Blk Time (%)	0			61				0			10	50
Queuing Penalty (veh)	0			121				1			8	57

Intersection: 18: Tollgate Rd. & US 1 Bus.

Movement	SB	B17	B17
Directions Served	R	T	T
Maximum Queue (ft)	75	158	259
Average Queue (ft)	17	11	19
95th Queue (ft)	62	69	117
Link Distance (ft)		420	420
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	50		
Storage Blk Time (%)	0		
Queuing Penalty (veh)	1		

2015 AM CONDITIONS

Baseline

11/24/2008

Intersection: 19: MD 24 & US 1 Bus.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	L	L	T	T	R	L	T	T
Maximum Queue (ft)	112	118	613	614	193	204	390	413	146	98	179	182
Average Queue (ft)	63	71	310	353	121	134	207	250	45	39	93	105
95th Queue (ft)	108	109	487	542	177	184	325	371	126	83	157	162
Link Distance (ft)			970	970			1392	1392	1392		420	420
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	575	575			925	925				325		
Storage Blk Time (%)			0									
Queuing Penalty (veh)			1									

Intersection: 19: MD 24 & US 1 Bus.

Movement	SB	SB	SB	SB
Directions Served	L	L	T	T
Maximum Queue (ft)	228	228	330	354
Average Queue (ft)	141	151	151	166
95th Queue (ft)	222	233	271	282
Link Distance (ft)		441	441	441
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	325			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Belair & US 1 Bus.

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	T	TR	L	T	T	TR
Maximum Queue (ft)	26	51	118	94	31	31	31	133	114	104
Average Queue (ft)	2	13	59	30	2	2	8	27	32	35
95th Queue (ft)	12	38	108	67	15	15	30	78	89	94
Link Distance (ft)		278		306	441	441		302	302	302
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200		200				100			
Storage Blk Time (%)								0		
Queuing Penalty (veh)								0		

2015 AM CONDITIONS

Baseline

11/24/2008

Intersection: 21: Kelley & US 1 Bus.

Movement	EB	EB	WB	WB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	L	T	TR
Maximum Queue (ft)	25	29	31	31	53	53	53	129
Average Queue (ft)	2	2	5	14	13	11	7	17
95th Queue (ft)	12	14	23	39	41	36	35	80
Link Distance (ft)		301		307			565	565
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	200		200		200	200		
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 22: Atwood & US 1 Bus.

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	75	153	352	125	224	379	392	225	510	493
Average Queue (ft)	22	64	135	96	37	228	247	119	189	218
95th Queue (ft)	57	123	289	149	104	352	379	199	390	390
Link Distance (ft)		314	318			565	565		565	565
Upstream Blk Time (%)			2							
Queuing Penalty (veh)			0							
Storage Bay Dist (ft)	100			100	200			200		
Storage Blk Time (%)		6	18	8		12		1	4	
Queuing Penalty (veh)		1	56	7		6		6	15	

2015 AM CONDITIONS

Baseline

11/24/2008

Intersection: 35: MD 24 & MD 924

Movement	EB	EB	EB	EB	B214	B214	B214	B11	B11	B12	B12	WB
Directions Served	L	T	T	T	T	T	T	T	T	T	T	L
Maximum Queue (ft)	88	436	436	417	265	265	266	1141	1141	828	863	198
Average Queue (ft)	25	418	416	406	263	232	226	966	983	262	297	136
95th Queue (ft)	66	428	424	488	268	279	276	1423	1426	725	805	212
Link Distance (ft)		346	346	346	194	194	194	1069	1069	3512	3512	
Upstream Blk Time (%)		52	52	51	44	32	31	21	24			
Queuing Penalty (veh)		332	331	320	281	203	198	198	224			
Storage Bay Dist (ft)	300											525
Storage Blk Time (%)		54		58								
Queuing Penalty (veh)		20		32								

Intersection: 35: MD 24 & MD 924

Movement	WB	WB	WB	WB	B28	B28	B28	NB	NB	NB	SB	SB
Directions Served	L	T	T	T	T	T	T	L	L	T	L	L
Maximum Queue (ft)	549	650	651	634	240	239	212	74	75	139	549	1339
Average Queue (ft)	180	440	460	330	34	33	7	18	35	80	543	1275
95th Queue (ft)	357	739	751	625	141	136	70	52	67	134	560	1545
Link Distance (ft)		579	579	579	472	472	472			465		1305
Upstream Blk Time (%)		9	11	0								31
Queuing Penalty (veh)		0	0	0								0
Storage Bay Dist (ft)	525							325	325		525	
Storage Blk Time (%)		14									17	33
Queuing Penalty (veh)		38									102	202

Intersection: 35: MD 24 & MD 924

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	1339	125
Average Queue (ft)	567	8
95th Queue (ft)	1556	60
Link Distance (ft)	1305	
Upstream Blk Time (%)	6	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		100
Storage Blk Time (%)	6	
Queuing Penalty (veh)	2	

Network Summary

Network wide Queuing Penalty: 3098

2015 AM CONDITIONS

Baseline

11/24/2008

Intersection: 4: MD 24 & Singer Rd

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	EBL	WBT	NBL	SBTL	WBL	EBT	SBL	NBTL
Maximum Green (s)	19.0	68.0	19.0	21.0	19.0	68.0	19.0	21.0
Minimum Green (s)	5.0	20.0	5.0	8.0	5.0	20.0	5.0	8.0
Recall	None	C-Max	None	None	None	C-Max	None	None
Avg. Green (s)	11.0	82.4	16.5	18.0	8.5	89.8	13.0	23.0
g/C Ratio	0.07	0.55	0.11	0.12	0.03	0.60	0.08	0.15
Cycles Skipped (%)	4	0	0	0	39	0	8	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	54	29	0	100	17	29
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 5: MD 24 & Wheel Rd.

Phase	1	2	4	5	6	8
Movement(s) Served	EBTL	WBT	SBTL	WBL	EBT	NBTL
Maximum Green (s)	23.0	71.0	36.0	16.0	50.0	36.0
Minimum Green (s)	5.0	20.0	8.0	5.0	20.0	8.0
Recall	Max	C-Max	None	None	C-Max	None
Avg. Green (s)	23.0	87.4	19.1	8.8	84.4	19.1
g/C Ratio	0.15	0.58	0.13	0.01	0.56	0.13
Cycles Skipped (%)	0	0	0	79	0	0
Cycles @ Minimum (%)	0	0	13	0	0	13
Cycles Maxed Out (%)	100	100	0	0	100	0
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 6: MD 24 & Belair South Pkwy

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	NBTL	SBTL	WBL	EBT
Maximum Green (s)	19.0	59.0	18.0	30.0	19.0	59.0
Minimum Green (s)	5.0	20.0	5.0	5.0	5.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	12.7	75.9	13.0	23.6	9.6	79.6
g/C Ratio	0.08	0.51	0.09	0.16	0.06	0.53
Cycles Skipped (%)	0	0	0	0	4	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	25	8	0	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

Intersection: 7: MD 24 & Plumtree

Phase	1	2	4	5	6	8
Movement(s) Served	WBTL	EBT	SBTL	EBL	WBT	NBTL
Maximum Green (s)	23.0	71.0	36.0	16.0	50.0	36.0
Minimum Green (s)	5.0	25.0	8.0	5.0	25.0	8.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	19.2	84.9	29.7	8.6	71.9	29.7
g/C Ratio	0.11	0.57	0.20	0.04	0.48	0.20
Cycles Skipped (%)	17	0	0	24	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	46	100	21	0	100	21
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

2015 AM CONDITIONS

Baseline

11/24/2008

Intersection: 13: MD 24 & Ring Factory

Phase	1	2	4	5	6	8
Movement(s) Served	EBL	WBT	SBTL	WBL	EBT	NBTL
Maximum Green (s)	16.0	62.0	54.0	16.0	62.0	54.0
Minimum Green (s)	8.0	20.0	8.0	8.0	20.0	8.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	9.6	83.9	43.5	8.5	82.9	43.5
g/C Ratio	0.04	0.56	0.29	0.04	0.55	0.29
Cycles Skipped (%)	35	0	0	22	0	0
Cycles @ Minimum (%)	39	0	0	57	0	0
Cycles Maxed Out (%)	0	100	30	0	100	30
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

Intersection: 14: MD 24 & MacPhail

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	EBL	WBT	NBL	SBTL	WBL	EBT	SBL	NBTL
Maximum Green (s)	25.0	74.5	11.5	18.0	40.0	60.0	11.0	18.0
Minimum Green (s)	5.0	20.0	5.0	8.0	5.0	20.0	5.0	8.0
Recall	None	C-Max	None	None	None	C-Max	None	None
Avg. Green (s)	14.2	91.9	9.1	15.0	28.6	77.9	10.7	14.1
g/C Ratio	0.09	0.61	0.06	0.10	0.16	0.52	0.07	0.09
Cycles Skipped (%)	0	0	0	4	17	0	8	4
Cycles @ Minimum (%)	0	0	0	8	0	0	0	8
Cycles Maxed Out (%)	0	100	25	8	3	100	58	8
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

Intersection: 15: MD 24 & Marketplace

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	NBTL	SBTL	WBL	EBT
Maximum Green (s)	25.0	54.0	24.0	24.0	25.0	54.0
Minimum Green (s)	5.0	20.0	5.0	5.0	5.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	11.2	79.9	16.5	18.9	13.4	77.7
g/C Ratio	0.07	0.53	0.11	0.13	0.09	0.52
Cycles Skipped (%)	0	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	8	8	0	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

Intersection: 16: MD 24 & Boulton

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	NBTL	SBTL	WBL	EBTL
Maximum Green (s)	25.0	52.0	25.0	28.0	25.0	52.0
Minimum Green (s)	3.0	20.0	5.0	5.0	3.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	6.7	98.0	13.7	17.6	7.2	98.3
g/C Ratio	0.03	0.65	0.09	0.12	0.03	0.66
Cycles Skipped (%)	39	0	4	0	43	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	4	0	0	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

2015 AM CONDITIONS

Baseline

11/24/2008

Intersection: 18: Tollgate Rd. & US 1 Bus.

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBTL	WBTL	EBTL	SBL	NBTL
Maximum Green (s)	25.0	52.0	31.0	22.0	25.0	52.0
Minimum Green (s)	3.0	20.0	8.0	5.0	3.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	18.2	62.1	31.0	18.5	7.0	76.7
g/C Ratio	0.12	0.41	0.21	0.12	0.03	0.51
Cycles Skipped (%)	0	0	0	0	26	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	9	100	100	26	0	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 19: MD 24 & US 1 Bus.

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	WBL	EBT	NBL	SBT	EBL	WBT	SBL	NBTL
Maximum Green (s)	25.0	39.0	25.0	39.0	25.0	39.0	25.0	39.0
Minimum Green (s)	3.0	20.0	3.0	20.0	3.0	20.0	3.0	20.0
Recall	None	Min	None	C-Max	None	Min	None	C-Max
Avg. Green (s)	17.1	37.2	5.5	73.2	11.6	42.7	19.2	54.7
g/C Ratio	0.11	0.25	0.02	0.49	0.08	0.28	0.13	0.36
Cycles Skipped (%)	0	0	43	0	0	0	0	0
Cycles @ Minimum (%)	0	13	0	0	0	0	0	0
Cycles Maxed Out (%)	0	38	0	100	0	38	13	100
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 20: Belair & US 1 Bus.

Phase	2	4	6	8
Movement(s) Served	NBT	EBTL	SBTL	WBTL
Maximum Green (s)	100.0	40.0	100.0	40.0
Minimum Green (s)	15.0	8.0	15.0	8.0
Recall	C-Max	None	C-Max	None
Avg. Green (s)	129.7	10.2	129.7	10.2
g/C Ratio	0.86	0.07	0.86	0.07
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	42	0	42
Cycles Maxed Out (%)	100	0	100	0
Cycles with Peds (%)	0	0	0	0

Controller Summary
 Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

Intersection: 21: Kelley & US 1 Bus.

Phase	1	2	4	5	6	8
Movement(s) Served	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Maximum Green (s)	26.0	70.0	40.0	26.0	70.0	40.0
Minimum Green (s)	3.0	20.0	5.0	3.0	20.0	5.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	0.0	484.8	5.2	4.8	411.1	5.2
g/C Ratio	0.00	0.84	0.01	0.00	0.83	0.01
Cycles Skipped (%)	100	74	71	87	70	71
Cycles @ Minimum (%)	0	0	4	4	0	4
Cycles Maxed Out (%)	0	26	0	0	30	0
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary
 Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

2015 AM CONDITIONS

Baseline

11/24/2008

Intersection: 22: Atwood & US 1 Bus.

Phase	1	2	4	5	6	8
Movement(s) Served	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Maximum Green (s)	32.0	55.0	25.0	32.0	55.0	19.0
Minimum Green (s)	5.0	20.0	5.0	5.0	20.0	5.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	6.9	108.1	11.0	20.3	90.0	11.4
g/C Ratio	0.03	0.72	0.07	0.14	0.60	0.08
Cycles Skipped (%)	42	0	8	0	0	0
Cycles @ Minimum (%)	0	0	4	0	0	0
Cycles Maxed Out (%)	0	100	0	4	100	4
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 35: MD 24 & MD 924

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	SBTL	NBTL	WBL	EBT
Maximum Green (s)	20.0	60.0	60.0	20.0	20.0	60.0
Minimum Green (s)	5.0	25.0	5.0	8.0	5.0	25.0
Recall	None	None	None	None	None	None
Avg. Green (s)	56.1	77.4	60.0	11.8	18.4	60.0
g/C Ratio	0.21	0.28	0.34	0.07	0.11	0.34
Cycles Skipped (%)	35	37	0	0	0	0
Cycles @ Minimum (%)	5	0	0	10	0	0
Cycles Maxed Out (%)	40	63	100	5	60	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 173.9

Number of Complete Cycles : 19

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy auditing of the accounts.

In the second section, the author details the various methods used to collect and analyze data. This includes both primary and secondary research techniques. The primary research involved direct observation and interviews with key stakeholders, while secondary research focused on reviewing existing literature and industry reports.

The third section presents the findings of the study. It highlights several key trends and patterns that emerged from the data. These findings are then compared against the initial hypotheses to determine their validity. The results indicate that there are significant differences between the expected and actual outcomes in certain areas.

Finally, the document concludes with a series of recommendations based on the research findings. These suggestions are aimed at improving the efficiency and effectiveness of the processes being studied. The author also notes the limitations of the study and suggests areas for future research to further explore these topics.



Summary of All Intervals

Start Time	8:57
End Time	8:07
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intvls	1
Vehs Entered	18710
Vehs Exited	18332
Starting Vehs	1096
Ending Vehs	1474
Denied Entry Before	116
Denied Entry After	1320
Travel Distance (mi)	21173
Travel Time (hr)	2108.5
Total Delay (hr)	1645.9
Total Stops	41226
Fuel Used (gal)	11413.7

Interval #0 Information Seeding

Start Time	6:57
End Time	7:07
Total Time (min)	10

Volumes adjusted by Growth Factors.
No data recorded this interval.

Interval #1 Information Recording

Start Time	7:07
End Time	8:07
Total Time (min)	60

Volumes adjusted by Growth Factors.

Vehs Entered	18710
Vehs Exited	18332
Starting Vehs	1096
Ending Vehs	1474
Denied Entry Before	116
Denied Entry After	1320
Travel Distance (mi)	21173
Travel Time (hr)	2108.5
Total Delay (hr)	1645.9
Total Stops	41226
Fuel Used (gal)	11413.7

4: MD 24 & Singer Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	2.0	11.5	0.1	0.9	9.4	0.2	2.9	2.6	0.9	2.2	3.0	0.7
Delay / Veh (s)	83.5	26.8	13.3	85.2	38.2	15.3	60.9	62.2	27.8	67.3	65.8	16.7
Stop Delay (hr)	1.7	4.4	0.0	0.8	4.7	0.1	2.6	2.3	0.8	2.0	2.7	0.6
St Del/Veh (s)	72.2	10.2	0.3	74.8	19.3	5.3	54.9	56.0	26.4	60.4	59.0	14.9
Total Stops	82	510	3	39	460	24	158	132	89	129	152	132
Travel Dist (mi)	84.2	1567.4	29.6	25.0	588.3	28.8	22.4	19.6	15.3	15.3	21.5	20.8
Travel Time (hr)	3.5	38.3	0.6	1.4	19.3	0.7	3.6	3.2	1.4	2.7	3.6	1.5
Avg Speed (mph)	24	41	46	18	30	39	7	6	11	6	6	15
Fuel Used (gal)	29.2	491.7	8.8	9.4	183.4	8.8	14.6	12.3	6.9	10.5	14.4	7.7
HC Emissions (g)	4	75	3	1	26	1	1	1	1	1	1	1
CO Emissions (g)	1640	31117	851	404	10726	612	494	334	357	411	453	429
NOx Emissions (g)	15	295	8	3	98	5	3	2	3	3	3	4
Vehicles Entered	83	1550	29	37	886	43	170	149	115	116	162	156
Vehicles Exited	87	1537	29	39	886	44	171	147	115	117	163	157
Hourly Exit Rate	87	1540	29	39	888	44	171	147	115	117	163	157
Input Volume	87	1666	26	36	950	50	183	139	133	115	165	129
% of Volume	100	92	112	109	93	88	94	106	87	102	99	122
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

4: MD 24 & Singer Rd Performance by movement

Movement	All
Total Delay (hr)	36.3
Delay / Veh (s)	37.4
Stop Delay (hr)	22.7
St Del/Veh (s)	23.4
Total Stops	1910
Travel Dist (mi)	2438.2
Travel Time (hr)	79.8
Avg Speed (mph)	31
Fuel Used (gal)	797.7
HC Emissions (g)	115
CO Emissions (g)	47830
NOx Emissions (g)	442
Vehicles Entered	3496
Vehicles Exited	3492
Hourly Exit Rate	3499
Input Volume	3679
% of Volume	95
Denied Entry Before	0
Denied Entry After	0

5: MD 24 & Wheel Rd. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.2	2.7	0.0	0.4	9.1	0.2	0.0	0.5	1.0	1.7	0.5	0.3
Delay / Veh (s)	42.2	6.7	5.6	95.8	28.3	16.4	37.6	68.7	29.4	68.6	68.0	28.0
Stop Delay (hr)	0.1	0.4	0.0	0.4	3.2	0.0	0.0	0.4	0.9	1.6	0.4	0.3
St Del/Veh (s)	38.2	0.9	0.0	85.5	10.0	0.6	32.3	63.6	27.0	63.4	64.2	26.4
Total Stops	11	118	0	16	320	12	4	26	106	85	22	26
Travel Dist (mi)	4.8	497.4	0.8	16.3	1177.6	50.1	0.5	3.1	16.6	11.9	3.3	4.5
Travel Time (hr)	0.3	12.4	0.0	0.7	29.4	1.1	0.1	0.6	1.6	2.1	0.6	0.4
Avg Speed (mph)	17	40	36	23	40	44	9	6	10	6	6	11
Fuel Used (gal)	1.9	194.4	0.4	6.3	413.8	17.5	0.3	2.1	8.2	7.7	2.0	2.1
HC Emissions (g)	0	28	0	1	65	1	0	1	1	1	0	0
CO Emissions (g)	111	13501	24	409	29238	1049	5	122	417	313	46	73
NOx Emissions (g)	1	110	0	3	247	7	0	1	3	2	0	0
Vehicles Entered	14	1460	3	16	1155	49	4	23	125	90	23	34
Vehicles Exited	14	1465	2	16	1166	50	4	25	125	89	25	35
Hourly Exit Rate	14	1468	2	16	1168	50	4	25	125	89	25	35
Input Volume	26	1570	6	13	1201	56	7	33	133	96	21	38
% of Volume	54	93	33	123	97	89	57	76	94	93	119	92
Denied Entry Before	0	0	0	0	0	0	0	0	0	1	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

5: MD 24 & Wheel Rd. Performance by movement

Movement	All
Total Delay (hr)	16.6
Delay / Veh (s)	19.9
Stop Delay (hr)	7.8
St Del/Veh (s)	9.3
Total Stops	746
Travel Dist (mi)	1786.9
Travel Time (hr)	49.3
Avg Speed (mph)	36
Fuel Used (gal)	656.6
HC Emissions (g)	98
CO Emissions (g)	45308
NOx Emissions (g)	376
Vehicles Entered	2996
Vehicles Exited	3016
Hourly Exit Rate	3022
Input Volume	3200
% of Volume	94
Denied Entry Before	1
Denied Entry After	0

6: MD 24 & Belair South Pkwy Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	2.1	4.7	0.2	1.3	6.3	0.3	2.4	1.1	0.2	5.7	0.9	0.7
Delay / Veh (s)	80.2	15.6	5.7	82.6	22.3	8.7	80.3	60.8	16.8	60.4	61.9	15.9
Stop Delay (hr)	2.0	2.3	0.0	1.2	3.7	0.1	2.2	1.0	0.2	5.2	0.8	0.6
St Del/Veh (s)	74.3	7.4	0.5	75.3	12.9	1.9	75.4	55.3	15.6	55.1	54.9	14.4
Total Stops	91	208	23	59	257	39	99	66	44	300	46	120
Travel Dist (mi)	30.5	346.0	36.8	19.2	343.7	41.4	13.8	9.2	6.3	44.4	7.1	20.2
Travel Time (hr)	2.8	11.2	1.0	1.7	12.7	1.2	2.8	1.4	0.4	7.2	1.1	1.4
Avg Speed (mph)	11	31	37	11	27	34	5	6	14	6	6	15
Fuel Used (gal)	15.7	146.8	15.0	9.1	135.2	14.9	10.0	5.9	2.2	28.6	4.6	7.7
HC Emissions (g)	2	20	1	1	18	4	1	1	0	3	1	1
CO Emissions (g)	957	10617	1094	417	8659	1321	294	248	79	1000	196	368
NOx Emissions (g)	6	76	6	3	70	11	2	2	1	8	1	3
Vehicles Entered	98	1095	116	56	1026	123	104	70	47	335	54	151
Vehicles Exited	95	1091	117	59	1015	124	107	66	48	338	51	156
Hourly Exit Rate	95	1093	117	59	1017	124	107	66	48	339	51	156
Input Volume	111	1200	116	59	1056	130	125	71	55	347	64	167
% of Volume	86	91	101	100	96	96	86	93	87	98	80	94
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

6: MD 24 & Belair South Pkwy Performance by movement

Movement	All
Total Delay (hr)	26.0
Delay / Veh (s)	28.6
Stop Delay (hr)	19.2
St Del/Veh (s)	21.2
Total Stops	1352
Travel Dist (mi)	918.6
Travel Time (hr)	45.0
Avg Speed (mph)	20
Fuel Used (gal)	395.8
HC Emissions (g)	52
CO Emissions (g)	25252
NOx Emissions (g)	189
Vehicles Entered	3275
Vehicles Exited	3267
Hourly Exit Rate	3273
Input Volume	3501
% of Volume	93
Denied Entry Before	0
Denied Entry After	0

7: MD 24 & Plumtree Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	1.2	6.7	0.0	1.2	3.3	0.1	0.3	0.6	1.2	1.3	1.5	1.9
Delay / Veh (s)	84.7	20.9	12.7	48.6	10.9	5.2	58.7	63.8	35.6	86.0	82.9	53.8
Stop Delay (hr)	1.1	2.6	0.0	1.0	1.5	0.0	0.2	0.6	1.1	1.2	1.3	1.7
St Del/Veh (s)	76.5	8.1	2.4	43.0	5.0	0.7	53.5	59.5	32.5	78.9	75.0	48.6
Total Stops	47	305	4	71	181	25	15	31	102	61	65	116
Travel Dist (mi)	45.1	1036.7	5.4	28.2	350.9	30.7	2.1	4.5	15.9	7.2	8.4	16.3
Travel Time (hr)	2.0	24.6	0.1	1.8	10.1	0.8	0.3	0.7	1.8	1.5	1.7	2.4
Avg Speed (mph)	22	42	43	16	35	37	6	6	9	5	5	7
Fuel Used (gal)	16.8	355.6	2.1	12.4	146.5	12.0	1.4	2.9	8.5	5.5	6.3	10.4
HC Emissions (g)	1	53	0	3	20	2	0	0	1	0	1	1
CO Emissions (g)	914	25021	158	971	10698	989	46	76	430	131	319	441
NOx Emissions (g)	7	203	1	8	78	7	0	0	3	1	3	4
Vehicles Entered	51	1165	6	88	1100	96	16	34	120	54	63	123
Vehicles Exited	50	1157	6	87	1094	95	16	34	119	54	63	124
Hourly Exit Rate	50	1159	6	87	1096	95	16	34	119	54	63	124
Input Volume	52	1274	4	82	1175	98	16	36	114	62	51	112
% of Volume	96	91	150	106	93	97	100	95	105	87	124	111
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

7: MD 24 & Plumtree Performance by movement

Movement	All
Total Delay (hr)	19.2
Delay / Veh (s)	23.8
Stop Delay (hr)	12.3
St Del/Veh (s)	15.2
Total Stops	1023
Travel Dist (mi)	1551.5
Travel Time (hr)	48.0
Avg Speed (mph)	32
Fuel Used (gal)	580.4
HC Emissions (g)	83
CO Emissions (g)	40193
NOx Emissions (g)	314
Vehicles Entered	2916
Vehicles Exited	2899
Hourly Exit Rate	2905
Input Volume	3076
% of Volume	94
Denied Entry Before	0
Denied Entry After	0

13: MD 24 & Ring Factory Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.8	5.5	0.0	0.8	6.8	0.3	0.1	1.0	0.9	3.3	1.9	1.5
Delay / Veh (s)	79.8	10.9	5.2	87.8	20.3	10.7	65.5	38.6	24.3	72.6	58.8	49.2
Stop Delay (hr)	0.8	2.8	0.0	0.7	2.6	0.0	0.1	0.9	0.8	2.9	1.6	1.3
St Del/Veh (s)	74.6	5.6	0.7	80.9	7.7	1.0	61.1	33.2	21.1	64.0	50.0	41.7
Total Stops	36	272	4	32	313	22	7	75	98	182	99	104
Travel Dist (mi)	21.1	809.0	9.4	27.7	1037.4	90.8	1.0	13.5	18.6	23.7	16.7	15.6
Travel Time (hr)	1.2	20.3	0.2	1.3	24.6	2.0	0.2	1.4	1.5	4.1	2.4	2.0
Avg Speed (mph)	17	40	44	21	42	45	7	9	12	6	7	8
Fuel Used (gal)	8.1	266.6	2.5	10.5	332.8	28.9	0.6	7.1	8.5	15.5	10.0	8.2
HC Emissions (g)	0	36	0	1	55	4	0	1	1	2	1	0
CO Emissions (g)	336	15635	140	527	23379	1829	15	306	442	595	362	217
NOx Emissions (g)	3	152	1	4	205	15	0	2	3	5	3	2
Vehicles Entered	36	1815	16	32	1217	105	7	95	132	168	119	111
Vehicles Exited	37	1813	16	34	1216	103	7	95	130	163	117	108
Hourly Exit Rate	37	1816	16	34	1218	103	7	95	130	163	117	108
Input Volume	43	1957	11	34	1300	104	8	91	122	183	131	116
% of Volume	86	93	146	100	94	99	88	105	107	89	89	93
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	1	0	0

13: MD 24 & Ring Factory Performance by movement

Movement	All
Total Delay (hr)	23.0
Delay / Veh (s)	21.6
Stop Delay (hr)	14.6
St Del/Veh (s)	13.6
Total Stops	1244
Travel Dist (mi)	2084.5
Travel Time (hr)	61.3
Avg Speed (mph)	34
Fuel Used (gal)	699.2
HC Emissions (g)	101
CO Emissions (g)	43783
NOx Emissions (g)	395
Vehicles Entered	3853
Vehicles Exited	3839
Hourly Exit Rate	3846
Input Volume	4100
% of Volume	94
Denied Entry Before	0
Denied Entry After	1

14: MD 24 & MacPhail Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	5.4	8.6	0.1	9.4	73.9	9.7	14.5	14.1	14.1	7.8	1.7	3.3
Delay / Veh (s)	89.6	22.2	3.0	187.3	172.7	130.4	237.7	270.4	153.7	135.7	98.2	83.0
Stop Delay (hr)	4.9	5.7	0.1	8.9	66.1	9.4	13.9	13.6	13.6	7.2	1.6	3.1
St Del/Veh (s)	81.1	14.8	2.0	177.9	154.3	126.2	227.6	259.6	148.0	126.2	91.3	77.8
Total Stops	224	548	44	176	1530	25	375	263	106	335	74	173
Travel Dist (mi)	33.3	211.8	23.1	23.3	203.1	33.3	20.8	18.0	28.8	17.7	5.5	12.3
Travel Time (hr)	6.3	13.3	0.8	10.0	77.8	10.6	15.2	14.6	15.1	8.3	1.9	3.8
Avg Speed (mph)	5	16	29	6	7	25	3	2	12	2	3	3
Fuel Used (gal)	19.9	76.4	4.5	28.9	212.2	31.3	40.6	37.8	43.3	24.9	6.0	12.1
HC Emissions (g)	2	8	1	1	9	2	2	2	1	2	0	1
CO Emissions (g)	471	3010	206	560	2433	990	574	492	609	497	88	266
NOx Emissions (g)	4	29	2	3	21	4	5	4	4	5	1	2
Vehicles Entered	215	1387	149	181	1542	269	221	189	331	209	63	144
Vehicles Exited	218	1386	150	180	1541	268	219	188	331	203	65	143
Hourly Exit Rate	218	1389	150	180	1544	269	219	188	332	203	65	143
Input Volume	230	1486	175	202	1743	287	231	189	346	222	67	144
% of Volume	95	93	86	89	89	94	95	100	96	92	97	99
Denied Entry Before	0	0	0	1	18	1	1	1	3	0	0	0
Denied Entry After	0	0	0	17	124	23	5	4	7	0	0	0

14: MD 24 & MacPhail Performance by movement

Movement	All
Total Delay (hr)	162.6
Delay / Veh (s)	119.6
Stop Delay (hr)	148.0
St Del/Veh (s)	108.8
Total Stops	3873
Travel Dist (mi)	630.9
Travel Time (hr)	177.7
Avg Speed (mph)	7
Fuel Used (gal)	537.9
HC Emissions (g)	30
CO Emissions (g)	10198
NOx Emissions (g)	84
Vehicles Entered	4900
Vehicles Exited	4892
Hourly Exit Rate	4901
Input Volume	5322
% of Volume	92
Denied Entry Before	25
Denied Entry After	180

15: MD 24 & Marketplace Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	3.0	11.4	0.5	17.8	19.2	0.5	29.8	27.2	33.6	6.5	4.1	1.7
Delay / Veh (s)	89.9	31.7	10.1	209.8	53.0	7.1	719.4	670.9	584.8	91.8	86.1	42.6
Stop Delay (hr)	2.6	6.4	0.0	16.5	14.8	0.1	29.3	26.7	33.3	6.0	3.8	1.4
St Del/Veh (s)	78.1	17.7	0.5	193.7	40.8	1.7	708.4	659.5	579.9	84.9	79.6	37.0
Total Stops	121	516	14	601	916	19	251	250	79	286	182	137
Travel Dist (mi)	34.4	360.9	48.5	34.7	144.1	28.9	13.8	13.5	17.4	21.8	14.6	11.0
Travel Time (hr)	3.9	20.1	1.8	18.8	22.4	1.4	30.3	27.7	34.2	7.3	4.6	2.1
Avg Speed (mph)	9	18	27	2	6	21	2	2	8	3	3	6
Fuel Used (gal)	21.2	163.7	20.2	53.0	94.5	10.9	73.6	66.9	83.9	24.3	14.8	7.9
HC Emissions (g)	2	22	2	1	8	2	0	3	1	1	1	0
CO Emissions (g)	1134	10032	1337	402	2832	686	387	688	774	471	276	202
NOx Emissions (g)	8	73	8	4	27	5	1	4	3	4	3	2
Vehicles Entered	123	1300	179	311	1312	274	151	145	206	256	173	140
Vehicles Exited	120	1297	181	302	1294	271	148	147	207	254	167	140
Hourly Exit Rate	120	1299	181	303	1296	272	148	147	207	254	167	140
Input Volume	138	1356	175	320	1494	304	159	183	275	260	197	150
% of Volume	87	96	104	95	87	89	93	80	75	98	85	94
Denied Entry Before	0	0	0	0	0	0	6	2	3	1	1	0
Denied Entry After	0	0	0	0	0	0	30	25	52	0	0	1

15: MD 24 & Marketplace Performance by movement

Movement	All
Total Delay (hr)	155.3
Delay / Veh (s)	122.9
Stop Delay (hr)	141.0
St Del/Veh (s)	111.6
Total Stops	3372
Travel Dist (mi)	743.4
Travel Time (hr)	174.6
Avg Speed (mph)	7
Fuel Used (gal)	634.9
HC Emissions (g)	44
CO Emissions (g)	19220
NOx Emissions (g)	142
Vehicles Entered	4570
Vehicles Exited	4528
Hourly Exit Rate	4537
Input Volume	5011
% of Volume	91
Denied Entry Before	13
Denied Entry After	108

Baseline

16: MD 24 & Boulton Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.6	9.6	1.1	8.9	5.8	0.1	24.8	15.3	34.1	0.9	4.6	0.8
Delay / Veh (s)	34.5	44.4	13.2	111.7	21.7	9.3	358.2	365.4	289.2	55.7	73.4	63.7
Stop Delay (hr)	0.5	7.2	0.6	7.6	3.5	0.1	24.3	15.0	33.6	0.8	4.2	0.8
St Del/Veh (s)	29.2	33.5	7.7	96.3	13.1	3.3	351.3	358.2	285.0	50.3	66.8	59.0
Total Stops	57	545	37	344	282	20	278	164	108	53	227	45
Travel Dist (mi)	17.6	218.1	81.0	57.7	185.3	11.0	22.0	13.4	33.7	4.7	19.4	4.0
Travel Time (hr)	1.0	13.9	2.9	10.5	10.2	0.5	25.6	15.8	35.3	1.0	5.4	1.0
Avg Speed (mph)	21	17	34	6	18	24	3	3	12	5	4	4
Fuel Used (gal)	6.1	76.1	25.5	43.3	108.2	5.7	64.7	39.1	89.7	3.8	18.3	3.4
HC Emissions (g)	1	7	3	4	14	1	3	1	3	0	1	0
CO Emissions (g)	501	4005	2055	1441	7144	440	828	379	1004	123	395	88
NOx Emissions (g)	2	24	10	12	49	2	6	2	6	1	4	1
Vehicles Entered	63	773	294	293	961	56	248	152	424	55	226	46
Vehicles Exited	61	777	292	280	958	54	250	150	424	55	228	46
Hourly Exit Rate	61	778	293	281	960	54	250	150	425	55	228	46
Input Volume	67	750	299	330	1149	73	286	162	472	43	239	45
% of Volume	91	104	98	85	84	74	88	93	90	128	96	102
Denied Entry Before	0	0	0	0	0	0	3	1	6	0	0	0
Denied Entry After	0	0	0	0	0	0	30	19	32	0	0	0

16: MD 24 & Boulton Performance by movement

Movement	All
Total Delay (hr)	106.5
Delay / Veh (s)	107.0
Stop Delay (hr)	98.1
St Del/Veh (s)	98.6
Total Stops	2160
Travel Dist (mi)	667.9
Travel Time (hr)	122.8
Avg Speed (mph)	11
Fuel Used (gal)	483.9
HC Emissions (g)	38
CO Emissions (g)	18404
NOx Emissions (g)	121
Vehicles Entered	3591
Vehicles Exited	3575
Hourly Exit Rate	3582
Input Volume	3915
% of Volume	91
Denied Entry Before	10
Denied Entry After	81

18: Tollgate Rd. & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	33.4	45.6	26.0	29.6	40.5	11.0	36.1	93.6	16.7	2.8	17.7	4.7
Delay / Veh (s)	620.1	624.0	482.1	477.9	489.4	387.2	381.0	295.5	278.1	64.8	63.9	63.5
Stop Delay (hr)	33.0	44.9	25.7	29.1	39.7	10.8	32.2	80.5	14.3	2.2	13.7	3.5
St Del/Veh (s)	611.8	614.1	476.3	470.0	480.1	381.6	340.3	254.3	238.6	51.9	49.5	48.2
Total Stops	272	382	106	281	378	134	994	2461	454	217	845	264
Travel Dist (mi)	16.4	22.5	15.4	19.1	25.8	8.7	94.9	318.2	59.7	20.7	132.5	35.2
Travel Time (hr)	34.0	46.3	26.5	30.3	41.4	11.3	38.7	102.0	18.4	3.4	21.0	5.8
Avg Speed (mph)	2	2	8	3	2	6	4	6	6	6	6	6
Fuel Used (gal)	83.5	112.5	64.8	75.3	101.2	28.2	111.3	306.8	55.1	11.7	76.8	20.4
HC Emissions (g)	1	3	4	3	4	1	7	20	1	1	4	1
CO Emissions (g)	624	892	955	786	1066	367	1681	4900	502	236	1148	263
NOx Emissions (g)	3	5	6	5	7	2	17	50	4	3	15	3
Vehicles Entered	193	263	193	222	300	101	346	1152	215	159	1007	268
Vehicles Exited	195	263	194	224	297	102	336	1129	216	153	987	261
Hourly Exit Rate	195	264	194	224	298	102	337	1131	216	153	989	262
Input Volume	235	321	213	278	349	122	392	1269	269	147	1100	299
% of Volume	83	82	91	81	85	84	86	89	80	104	90	87
Denied Entry Before	3	3	4	0	0	0	0	0	0	0	0	0
Denied Entry After	51	60	43	52	62	18	41	129	27	0	0	0

18: Tollgate Rd. & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	357.6
Delay / Veh (s)	293.4
Stop Delay (hr)	329.7
St Del/Veh (s)	270.5
Total Stops	6788
Travel Dist (mi)	769.3
Travel Time (hr)	379.1
Avg Speed (mph)	5
Fuel Used (gal)	1047.8
HC Emissions (g)	50
CO Emissions (g)	13420
NOx Emissions (g)	120
Vehicles Entered	4419
Vehicles Exited	4357
Hourly Exit Rate	4365
Input Volume	4994
% of Volume	87
Denied Entry Before	10
Denied Entry After	483

19: MD 24 & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	9.8	18.6	0.3	8.1	37.9	1.6	9.9	70.5	20.1	6.6	12.8	0.2
Delay / Veh (s)	84.9	81.6	7.0	71.2	156.5	20.0	200.2	255.5	183.2	67.7	45.0	2.3
Stop Delay (hr)	8.3	14.8	0.0	6.6	31.6	0.9	9.5	67.3	19.3	6.0	10.8	0.0
St Del/Veh (s)	72.4	64.8	0.6	57.7	130.8	10.8	191.5	244.2	176.2	61.8	37.9	0.0
Total Stops	449	789	21	442	1370	147	212	881	93	319	633	0
Travel Dist (mi)	77.4	151.8	28.0	111.9	239.0	76.0	15.2	84.6	30.6	33.2	92.2	23.6
Travel Time (hr)	12.0	22.3	1.1	11.0	43.4	3.6	10.4	72.6	21.1	7.6	15.2	0.9
Avg Speed (mph)	6	7	26	10	6	21	4	3	12	4	6	25
Fuel Used (gal)	52.8	98.8	12.4	62.3	171.7	32.0	27.9	188.2	56.4	23.4	53.9	5.8
HC Emissions (g)	3	9	3	6	13	4	1	7	3	1	3	1
CO Emissions (g)	1761	3489	1144	3057	5536	2194	314	1951	782	364	1112	333
NOx Emissions (g)	13	30	7	21	42	14	2	17	6	3	10	2
Vehicles Entered	414	816	158	410	877	285	179	997	395	338	1034	267
Vehicles Exited	416	822	162	413	865	285	177	990	395	359	1023	268
Hourly Exit Rate	417	824	162	414	867	286	177	992	396	360	1025	269
Input Volume	409	793	177	445	995	360	241	1185	459	395	1100	316
% of Volume	102	104	92	93	87	79	74	84	86	91	93	85
Denied Entry Before	0	0	0	0	0	0	0	2	3	0	0	0
Denied Entry After	0	0	0	0	0	0	9	77	40	0	0	0

19: MD 24 & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	196.3
Delay / Veh (s)	114.5
Stop Delay (hr)	175.2
St Del/Veh (s)	102.2
Total Stops	5356
Travel Dist (mi)	963.6
Travel Time (hr)	221.2
Avg Speed (mph)	6
Fuel Used (gal)	785.7
HC Emissions (g)	53
CO Emissions (g)	22037
NOx Emissions (g)	167
Vehicles Entered	6170
Vehicles Exited	6175
Hourly Exit Rate	6187
Input Volume	6875
% of Volume	90
Denied Entry Before	5
Denied Entry After	126

20: Belair & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBL	SBT	SBR	All
Total Delay (hr)	0.3	0.2	0.4	2.7	0.1	0.6	3.5	0.1	0.2	1.6	0.0	9.9
Delay / Veh (s)	54.4	71.2	25.5	73.9	61.6	26.7	7.6	5.2	35.4	4.0	2.6	10.1
Stop Delay (hr)	0.3	0.2	0.4	2.5	0.1	0.6	1.2	0.0	0.2	0.2	0.0	5.7
St Del/Veh (s)	51.1	68.5	24.4	69.1	58.9	25.1	2.5	0.3	31.0	0.5	0.2	5.9
Total Stops	19	11	55	121	6	73	122	5	20	69	1	502
Travel Dist (mi)	1.2	0.6	3.1	7.7	0.5	4.9	157.2	4.0	1.7	101.9	1.8	284.7
Travel Time (hr)	0.4	0.3	0.6	3.0	0.2	0.9	7.9	0.2	0.3	4.2	0.1	18.0
Avg Speed (mph)	3	2	6	3	3	6	20	20	6	24	21	16
Fuel Used (gal)	1.3	0.8	2.0	9.6	0.5	3.0	88.9	1.8	1.1	67.6	0.8	177.3
HC Emissions (g)	0	0	0	0	0	0	12	0	0	9	0	22
CO Emissions (g)	28	10	51	172	6	104	4355	51	19	4730	38	9564
NOx Emissions (g)	0	0	1	1	0	1	46	1	0	34	0	84
Vehicles Entered	22	12	59	133	8	86	1652	39	24	1460	26	3521
Vehicles Exited	22	12	59	132	8	84	1651	39	24	1455	26	3512
Hourly Exit Rate	22	12	59	132	8	84	1654	39	24	1458	26	3519
Input Volume	25	12	58	137	8	75	1893	61	31	1617	23	3940
% of Volume	88	100	102	97	100	112	87	64	78	90	113	89
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	0	0	0	0	0	0	0	0	0

21: Kelley & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	2.3	0.1	0.1	3.6	1.1	15.9	1.2	5.3	0.0	1.3	12.1	0.4
Delay / Veh (s)	213.3	53.2	10.4	376.4	661.1	590.8	32.7	13.8	4.2	50.2	30.4	30.6
Stop Delay (hr)	2.3	0.1	0.1	3.5	1.1	15.9	1.0	3.7	0.0	1.0	6.3	0.2
St Del/Veh (s)	209.7	50.4	9.3	369.6	658.6	588.8	28.0	9.6	1.4	39.2	15.9	15.8
Total Stops	40	4	33	48	7	134	122	296	2	106	982	39
Travel Dist (mi)	2.3	0.2	2.6	2.0	0.3	5.7	9.1	95.6	0.7	11.5	171.2	6.3
Travel Time (hr)	2.4	0.1	0.2	3.6	1.1	16.2	1.5	7.8	0.0	1.7	16.5	0.6
Avg Speed (mph)	1	3	11	1	1	1	6	12	19	7	10	10
Fuel Used (gal)	6.2	0.2	0.9	9.1	2.7	38.0	4.8	36.9	0.2	7.3	92.7	3.3
HC Emissions (g)	0	0	0	0	0	1	0	3	0	0	7	1
CO Emissions (g)	63	3	41	66	15	374	111	1114	7	158	2701	186
NOx Emissions (g)	0	0	0	0	0	2	1	12	0	1	29	2
Vehicles Entered	39	4	45	35	6	103	131	1384	10	95	1429	53
Vehicles Exited	39	4	45	34	6	91	127	1378	10	95	1426	52
Hourly Exit Rate	39	4	45	34	6	91	127	1381	10	95	1429	52
Input Volume	48	5	35	47	3	100	149	1553	14	118	1587	63
% of Volume	81	80	129	72	200	91	85	89	72	81	90	83
Denied Entry Before	0	0	0	0	0	0	0	0	0	0	0	0
Denied Entry After	0	0	0	2	1	11	0	0	0	0	0	0

21: Kelley & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	43.4
Delay / Veh (s)	47.1
Stop Delay (hr)	35.2
St Del/Veh (s)	38.1
Total Stops	1813
Travel Dist (mi)	307.5
Travel Time (hr)	51.7
Avg Speed (mph)	7
Fuel Used (gal)	202.2
HC Emissions (g)	14
CO Emissions (g)	4840
NOx Emissions (g)	48
Vehicles Entered	3334
Vehicles Exited	3307
Hourly Exit Rate	3313
Input Volume	3722
% of Volume	89
Denied Entry Before	0
Denied Entry After	14

22: Atwood & US 1 Bus. Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.5	1.7	1.2	4.6	7.2	36.3	0.9	27.7	0.7	28.1	134.8	4.1
Delay / Veh (s)	65.5	74.6	58.0	353.6	297.0	275.3	68.0	70.0	73.2	374.6	333.9	377.0
Stop Delay (hr)	0.4	1.6	1.2	4.5	7.0	35.6	0.8	22.5	0.6	27.2	128.7	3.9
St Del/Veh (s)	59.7	70.4	54.8	345.6	289.4	269.9	58.3	56.9	60.7	362.3	318.9	362.7
Total Stops	26	76	74	61	108	387	68	1161	30	365	1362	34
Travel Dist (mi)	1.5	4.7	4.6	2.9	5.2	28.7	5.6	168.1	3.9	29.3	158.0	4.3
Travel Time (hr)	0.5	1.9	1.5	4.7	7.4	37.5	1.1	32.0	0.8	29.0	139.2	4.2
Avg Speed (mph)	3	3	3	2	2	4	6	5	5	4	6	6
Fuel Used (gal)	1.8	5.8	5.0	11.6	18.2	93.5	3.6	113.7	2.7	74.2	354.6	10.2
HC Emissions (g)	0	1	0	1	0	4	0	6	1	3	11	1
CO Emissions (g)	30	143	73	149	158	973	44	1630	122	868	3410	116
NOx Emissions (g)	0	2	1	1	1	6	0	21	2	7	23	1
Vehicles Entered	26	79	78	48	85	475	49	1426	33	267	1455	40
Vehicles Exited	25	81	77	46	88	475	47	1418	33	272	1451	39
Hourly Exit Rate	25	81	77	46	88	476	47	1421	33	273	1454	39
Input Volume	31	87	65	54	87	524	53	1616	36	338	1644	48
% of Volume	81	93	119	85	101	91	89	88	92	81	88	81
Denied Entry Before	0	0	0	2	6	16	0	0	0	6	21	0
Denied Entry After	0	0	0	8	2	36	0	0	0	48	213	10

22: Atwood & US 1 Bus. Performance by movement

Movement	All
Total Delay (hr)	247.7
Delay / Veh (s)	219.8
Stop Delay (hr)	233.9
St Del/Veh (s)	207.6
Total Stops	3752
Travel Dist (mi)	416.9
Travel Time (hr)	259.6
Avg Speed (mph)	5
Fuel Used (gal)	694.8
HC Emissions (g)	26
CO Emissions (g)	7716
NOx Emissions (g)	64
Vehicles Entered	4061
Vehicles Exited	4052
Hourly Exit Rate	4060
Input Volume	4583
% of Volume	89
Denied Entry Before	51
Denied Entry After	317

35: MD 24 & MD 924 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay (hr)	0.4	36.9	0.7	7.2	28.1	0.4	1.3	3.1	6.1	52.9	2.7	0.5
Delay / Veh (s)	64.3	82.7	45.7	87.2	109.4	2.5	106.9	98.5	30.2	165.5	88.0	55.2
Stop Delay (hr)	0.4	32.0	0.6	6.5	24.6	0.0	1.3	2.9	5.6	43.9	2.5	0.5
St Del/Veh (s)	59.3	71.8	37.5	78.9	95.6	0.0	103.4	92.6	27.7	137.4	81.8	52.0
Total Stops	18	966	30	294	769	0	41	104	0	1630	89	2
Travel Dist (mi)	1.8	122.2	4.0	35.5	111.1	57.3	3.8	10.1	58.1	286.7	28.4	8.2
Travel Time (hr)	0.5	39.4	0.9	8.2	30.5	2.0	1.5	3.4	8.1	60.7	3.5	0.7
Avg Speed (mph)	4	3	5	4	4	28	3	4	24	6	14	31
Fuel Used (gal)	1.7	125.8	3.0	27.3	90.7	6.6	4.5	9.7	32.5	207.1	15.3	3.7
HC Emissions (g)	0	7	0	2	4	1	0	0	3	11	2	0
CO Emissions (g)	43	1681	63	798	1336	200	113	133	1376	3212	601	162
NOx Emissions (g)	0	21	1	6	12	1	0	1	9	36	4	1
Vehicles Entered	23	1595	58	295	927	520	43	115	731	1173	115	34
Vehicles Exited	24	1618	58	297	925	520	46	113	730	1128	110	33
Hourly Exit Rate	24	1621	58	298	927	521	46	113	731	1130	110	33
Input Volume	36	1807	55	276	950	536	42	94	687	1221	105	38
% of Volume	67	90	106	108	98	97	110	120	106	93	105	87
Denied Entry Before	0	0	0	0	0	0	0	0	1	0	0	0
Denied Entry After	0	0	0	0	0	0	0	2	2	6	0	0

35: MD 24 & MD 924 Performance by movement

Movement	All
Total Delay (hr)	140.4
Delay / Veh (s)	90.0
Stop Delay (hr)	120.9
St Del/Veh (s)	77.5
Total Stops	3943
Travel Dist (mi)	727.3
Travel Time (hr)	159.3
Avg Speed (mph)	5
Fuel Used (gal)	527.9
HC Emissions (g)	31
CO Emissions (g)	9719
NOx Emissions (g)	94
Vehicles Entered	5629
Vehicles Exited	5602
Hourly Exit Rate	5613
Input Volume	5847
% of Volume	96
Denied Entry Before	1
Denied Entry After	10

Total Network Performance

Total Delay (hr)	1645.9
Delay / Veh (s)	319.9
Stop Delay (hr)	1404.2
St Del/Veh (s)	272.9
Total Stops	41226
Travel Dist (mi)	21173.4
Travel Time (hr)	2108.5
Avg Speed (mph)	15
Fuel Used (gal)	11413.7
HC Emissions (g)	1207
CO Emissions (g)	531283
NOx Emissions (g)	4240
Vehicles Entered	18710
Vehicles Exited	18332
Hourly Exit Rate	18367
Input Volume	105097
% of Volume	17
Denied Entry Before	116
Denied Entry After	1320

Intersection: 4: MD 24 & Singer Rd

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	173	478	567	32	195	971	946	66	261	287	146	154
Average Queue (ft)	82	194	229	2	45	213	226	12	120	124	53	95
95th Queue (ft)	150	362	420	13	130	696	713	39	221	218	114	154
Link Distance (ft)		5305	5305			3512	3512			692	692	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	325			800	300			675	270			130
Storage Blk Time (%)		1				6	2		0	0		6
Queuing Penalty (veh)		1				2	1		0	1		10

Intersection: 4: MD 24 & Singer Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	328	130
Average Queue (ft)	154	60
95th Queue (ft)	281	120
Link Distance (ft)	692	692
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	19	
Queuing Penalty (veh)	22	

Intersection: 5: MD 24 & Wheel Rd.

Movement	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	LTR	L	TR
Maximum Queue (ft)	52	136	222	71	438	516	27	169	192	86
Average Queue (ft)	10	50	65	18	137	152	9	86	71	32
95th Queue (ft)	36	119	158	49	242	257	29	164	137	63
Link Distance (ft)		1715	1715		5305	5305		691		691
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	375			300			725		380	
Storage Blk Time (%)						1				
Queuing Penalty (veh)						0				

Intersection: 6: MD 24 & Belair South Pkwy

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	171	353	375	54	178	235	266	75	172	154	42	220
Average Queue (ft)	92	89	108	14	57	123	132	27	92	56	20	148
95th Queue (ft)	157	188	207	39	122	235	263	60	145	117	42	203
Link Distance (ft)		1616	1616			1715	1715			692	692	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	900			900	800			800	160			380
Storage Blk Time (%)									0	1		
Queuing Penalty (veh)									0	1		

Intersection: 6: MD 24 & Belair South Pkwy

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	242	108
Average Queue (ft)	168	51
95th Queue (ft)	224	100
Link Distance (ft)	692	692
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: MD 24 & Plumtree

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	LTR	LTR
Maximum Queue (ft)	136	231	286	27	117	216	182	31	297	453
Average Queue (ft)	48	142	155	4	68	86	92	17	100	213
95th Queue (ft)	109	233	266	18	118	171	169	37	217	399
Link Distance (ft)		4668	4668			1616	1616		690	690
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	575			575	600			600		
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 13: MD 24 & Ring Factory

Movement	EB	EB	EB	B2	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	T	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	80	184	198	856	60	244	240	20	74	295	75	524
Average Queue (ft)	30	103	111	59	22	126	121	1	7	122	66	276
95th Queue (ft)	73	190	198	417	52	233	235	7	33	241	89	454
Link Distance (ft)		3026	3026	788		4668	4668			746		746
Upstream Blk Time (%)				0								
Queuing Penalty (veh)				2								
Storage Bay Dist (ft)	625				525			525	50		50	
Storage Blk Time (%)										36	51	38
Queuing Penalty (veh)										3	126	70

Intersection: 14: MD 24 & MacPhail

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B2	B2	NB	NB
Directions Served	L	T	T	R	L	T	T	R	T	T	L	T
Maximum Queue (ft)	348	326	336	75	600	857	860	775	68	99	274	533
Average Queue (ft)	222	229	249	32	255	594	603	48	2	7	229	375
95th Queue (ft)	339	323	320	68	558	794	816	282	23	46	319	625
Link Distance (ft)		763	763	763		788	788		3026	3026		491
Upstream Blk Time (%)						1	2	0				20
Queuing Penalty (veh)							10	11	0			0
Storage Bay Dist (ft)	700				575			750			250	
Storage Blk Time (%)						9	2	0			17	25
Queuing Penalty (veh)						18	5	0			91	142

Intersection: 14: MD 24 & MacPhail

Movement	NB	SB	SB
Directions Served	R	L	TR
Maximum Queue (ft)	275	350	493
Average Queue (ft)	104	254	248
95th Queue (ft)	322	385	464
Link Distance (ft)			454
Upstream Blk Time (%)			2
Queuing Penalty (veh)			0
Storage Bay Dist (ft)	250	325	
Storage Blk Time (%)	0	10	5
Queuing Penalty (veh)	0	22	11

Intersection: 15: MD 24 & Marketplace

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	B1	B1	NB
Directions Served	L	T	T	T	R	L	T	T	R	T	T	LT
Maximum Queue (ft)	226	306	1470	206	55	525	629	610	525	780	802	520
Average Queue (ft)	116	167	232	106	2	509	581	420	74	418	382	499
95th Queue (ft)	191	265	630	191	18	554	686	631	344	899	887	510
Link Distance (ft)		1392	1392	1392			539	539		763	763	486
Upstream Blk Time (%)			0			7	27	8	0	2	2	63
Queuing Penalty (veh)			2			0	282	83	0	23	16	0
Storage Bay Dist (ft)	525				200	500			500			
Storage Blk Time (%)				0		41	8	9	0			67
Queuing Penalty (veh)				0		298	26	27	0			183

Intersection: 15: MD 24 & Marketplace

Movement	NB	SB	SB	SB
Directions Served	R	L	T	R
Maximum Queue (ft)	375	374	463	66
Average Queue (ft)	129	257	247	23
95th Queue (ft)	421	359	460	70
Link Distance (ft)			448	
Upstream Blk Time (%)			3	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)	350	350		50
Storage Blk Time (%)	0	2	65	0
Queuing Penalty (veh)	0	7	268	0

Intersection: 16: MD 24 & Boulton

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	117	376	374	230	649	240	1033	886	225	480	225	224
Average Queue (ft)	42	234	231	39	318	104	158	45	210	357	39	46
95th Queue (ft)	82	351	358	118	518	166	439	308	238	605	179	123
Link Distance (ft)		1489	1489			970	970	970		465		
Upstream Blk Time (%)							0			9		
Queuing Penalty (veh)							1			0		
Storage Bay Dist (ft)	500			500	625				200		200	200
Storage Blk Time (%)					1				29	6	0	
Queuing Penalty (veh)					3				184	43	0	

Intersection: 16: MD 24 & Boulton

Movement	SB
Directions Served	TR
Maximum Queue (ft)	456
Average Queue (ft)	238
95th Queue (ft)	392
Link Distance (ft)	441
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	21
Queuing Penalty (veh)	9

Intersection: 18: Tollgate Rd. & US 1 Bus.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	TR	L	T	T
Maximum Queue (ft)	274	456	305	275	506	275	349	1495	1504	274	711	711
Average Queue (ft)	203	447	131	199	463	98	342	1412	1391	154	438	480
95th Queue (ft)	305	498	351	313	500	263	385	1671	1642	298	702	741
Link Distance (ft)		441			454			1470	1470		640	640
Upstream Blk Time (%)		43			44			19	12		1	2
Queuing Penalty (veh)		0			0			0	0		11	16
Storage Bay Dist (ft)	250		250	250		250	325			250		
Storage Blk Time (%)	4	50	0	10	51	0	51	18		0	39	53
Queuing Penalty (veh)	21	223	1	47	202	1	321	71		0	58	160

Intersection: 18: Tollgate Rd. & US 1 Bus.

Movement	SB	B17	B17
Directions Served	R	T	T
Maximum Queue (ft)	75	168	210
Average Queue (ft)	56	7	21
95th Queue (ft)	98	59	105
Link Distance (ft)		420	420
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	50		
Storage Blk Time (%)	13		
Queuing Penalty (veh)	72		

Intersection: 19: MD 24 & US 1 Bus.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	L	L	T	T	R	L	T	T
Maximum Queue (ft)	336	308	522	414	730	806	829	835	742	350	492	492
Average Queue (ft)	197	194	322	330	214	271	589	605	185	212	451	461
95th Queue (ft)	279	281	422	413	405	563	813	842	494	400	536	537
Link Distance (ft)			970	970			1392	1392	1392		420	420
Upstream Blk Time (%)											31	28
Queuing Penalty (veh)											255	229
Storage Bay Dist (ft)	575	575			925	925				325		
Storage Blk Time (%)										0	46	47
Queuing Penalty (veh)										0	111	215

Intersection: 19: MD 24 & US 1 Bus.

Movement	NB	B17	B17	SB	SB	SB	SB	SB
Directions Served	R	T	T	L	L	T	T	R
Maximum Queue (ft)	350	601	614	292	328	433	445	262
Average Queue (ft)	156	107	137	157	174	266	279	9
95th Queue (ft)	443	358	405	225	247	357	366	83
Link Distance (ft)		640	640	441	441	441	441	
Upstream Blk Time (%)						0	0	
Queuing Penalty (veh)						0	0	
Storage Bay Dist (ft)	325			325				
Storage Blk Time (%)	0				0			
Queuing Penalty (veh)	0				0			

Intersection: 20: Belair & US 1 Bus.

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	L	TR	T	TR	L	T	T	TR
Maximum Queue (ft)	47	116	224	275	525	116	53	52	53	76
Average Queue (ft)	18	51	115	66	51	23	21	9	10	21
95th Queue (ft)	46	91	188	160	266	69	51	37	37	54
Link Distance (ft)		278		306	441	441		302	302	302
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200		200				100			
Storage Blk Time (%)			1							
Queuing Penalty (veh)			1							

Intersection: 21: Kelley & US 1 Bus.

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	198	93	224	337	224	310	332	224	643	598
Average Queue (ft)	70	26	84	282	84	125	144	66	431	486
95th Queue (ft)	180	65	247	390	162	246	274	137	763	739
Link Distance (ft)		301		307		302	302		565	565
Upstream Blk Time (%)				60		0	1		5	9
Queuing Penalty (veh)				0		3	13		45	76
Storage Bay Dist (ft)	200		200		200			200		
Storage Blk Time (%)	5		0	76	0	5			13	
Queuing Penalty (veh)	2		0	36	2	8			15	

Intersection: 22: Atwood & US 1 Bus.

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	125	329	333	125	224	593	580	225	580	604
Average Queue (ft)	21	149	328	115	46	563	566	201	573	569
95th Queue (ft)	65	245	341	158	136	600	601	242	615	613
Link Distance (ft)		314	318			565	565		565	565
Upstream Blk Time (%)		0	35			22	33		23	21
Queuing Penalty (veh)		0	0			182	277		0	0
Storage Bay Dist (ft)	100			100	200			200		
Storage Blk Time (%)		32	43	38		45		24	31	
Queuing Penalty (veh)		10	223	53		24		201	106	

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Baseline

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Intersection: 35: MD 24 & MD 924

Movement	EB	EB	EB	EB	EB	B214	B214	B214	B11	B11	B12	B12
Directions Served	L	T	T	T	R	T	T	T	T	T	T	T
Maximum Queue (ft)	311	417	417	454	175	284	265	264	1159	1141	39	68
Average Queue (ft)	25	413	413	417	42	242	220	192	507	524	1	3
95th Queue (ft)	118	432	434	432	163	347	328	279	1089	1111	13	25
Link Distance (ft)		346	346	346		194	194	194	1069	1069	3512	3512
Upstream Blk Time (%)		54	53	52		40	28	22	1	1		
Queuing Penalty (veh)		341	337	327		253	174	141	6	8		
Storage Bay Dist (ft)	300				150							
Storage Blk Time (%)	0	55		64	0							
Queuing Penalty (veh)	0	20		35	0							

Intersection: 35: MD 24 & MD 924

Movement	WB	WB	WB	WB	WB	B28	B28	NB	NB	NB	SB	SB
Directions Served	L	L	T	T	T	T	T	L	L	T	L	L
Maximum Queue (ft)	265	549	670	699	548	229	271	53	72	182	549	1320
Average Queue (ft)	146	234	429	431	297	22	24	19	29	106	515	1141
95th Queue (ft)	240	471	699	706	539	118	127	45	59	172	587	1699
Link Distance (ft)			579	579	579	472	472			465		1305
Upstream Blk Time (%)			9	8								28
Queuing Penalty (veh)			0	0								0
Storage Bay Dist (ft)	525	525						325	325		525	
Storage Blk Time (%)		0	11								13	27
Queuing Penalty (veh)		0	30								79	165

Intersection: 35: MD 24 & MD 924

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	1320	113
Average Queue (ft)	538	0
95th Queue (ft)	1435	0
Link Distance (ft)	1305	
Upstream Blk Time (%)	4	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		100
Storage Blk Time (%)	6	0
Queuing Penalty (veh)	2	0

Network Summary

Network wide Queuing Penalty: 7217

Intersection: 4: MD 24 & Singer Rd

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	EBL	WBT	NBL	SBTL	WBL	EBT	SBL	NBTL
Maximum Green (s)	19.0	68.0	19.0	21.0	19.0	68.0	19.0	21.0
Minimum Green (s)	5.0	20.0	5.0	8.0	5.0	20.0	5.0	8.0
Recall	None	C-Max	None	None	None	C-Max	None	None
Avg. Green (s)	12.1	80.6	15.2	19.9	10.0	88.8	11.8	23.3
g/C Ratio	0.08	0.54	0.10	0.13	0.04	0.59	0.08	0.16
Cycles Skipped (%)	4	0	0	0	46	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	4
Cycles Maxed Out (%)	0	100	38	29	4	100	0	29
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 5: MD 24 & Wheel Rd.

Phase	1	2	4	5	6	8
Movement(s) Served	EBTL	WBT	SBTL	WBL	EBT	NBTL
Maximum Green (s)	23.0	71.0	36.0	16.0	50.0	36.0
Minimum Green (s)	5.0	20.0	8.0	5.0	20.0	8.0
Recall	Max	C-Max	None	None	C-Max	None
Avg. Green (s)	23.0	88.3	18.7	6.5	82.8	18.7
g/C Ratio	0.15	0.59	0.12	0.02	0.55	0.12
Cycles Skipped (%)	0	0	0	48	0	0
Cycles @ Minimum (%)	0	0	8	0	0	8
Cycles Maxed Out (%)	100	100	0	0	100	0
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 6: MD 24 & Belair South Pkwy

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	NBTL	SBTL	WBL	EBT
Maximum Green (s)	19.0	59.0	18.0	30.0	19.0	59.0
Minimum Green (s)	5.0	20.0	5.0	5.0	5.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	12.3	77.5	13.3	23.4	9.3	81.1
g/C Ratio	0.08	0.52	0.09	0.16	0.06	0.54
Cycles Skipped (%)	0	0	0	0	4	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	4	100	8	8	0	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 7: MD 24 & Plumtree

Phase	1	2	4	5	6	8
Movement(s) Served	WBTL	EBT	SBTL	EBL	WBT	NBTL
Maximum Green (s)	23.0	71.0	36.0	16.0	50.0	36.0
Minimum Green (s)	5.0	25.0	8.0	5.0	25.0	8.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	17.0	84.7	29.6	9.3	73.6	29.6
g/C Ratio	0.11	0.56	0.19	0.04	0.49	0.19
Cycles Skipped (%)	0	0	4	30	0	4
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	33	100	38	0	100	38
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 13: MD 24 & Ring Factory

Phase	1	2	4	5	6	8
Movement(s) Served	EBL	WBT	SBTL	WBL	EBT	NBTL
Maximum Green (s)	16.0	62.0	54.0	16.0	62.0	54.0
Minimum Green (s)	8.0	20.0	8.0	8.0	20.0	8.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	9.0	85.6	41.1	8.8	85.8	41.1
g/C Ratio	0.05	0.57	0.27	0.04	0.57	0.27
Cycles Skipped (%)	25	0	0	25	0	0
Cycles @ Minimum (%)	46	0	0	58	0	0
Cycles Maxed Out (%)	0	100	22	0	100	22
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
Number of Complete Cycles : 23

Intersection: 14: MD 24 & MacPhail

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	EBL	WBT	NBL	SBTL	WBL	EBT	SBL	NBTL
Maximum Green (s)	25.0	74.5	11.5	18.0	40.0	60.0	11.0	18.0
Minimum Green (s)	5.0	20.0	5.0	8.0	5.0	20.0	5.0	8.0
Recall	None	C-Max	None	None	None	C-Max	None	None
Avg. Green (s)	22.7	77.0	11.4	18.0	21.5	78.2	12.0	17.9
g/C Ratio	0.15	0.51	0.08	0.12	0.13	0.52	0.08	0.11
Cycles Skipped (%)	0	0	0	0	8	0	0	4
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	67	100	96	96	0	100	100	92
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
Number of Complete Cycles : 23

Intersection: 15: MD 24 & Marketplace

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	NBTL	SBTL	WBL	EBT
Maximum Green (s)	25.0	54.0	24.0	24.0	25.0	54.0
Minimum Green (s)	5.0	20.0	5.0	5.0	5.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	14.5	64.4	24.0	23.7	25.3	54.0
g/C Ratio	0.10	0.43	0.16	0.16	0.17	0.36
Cycles Skipped (%)	0	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	8	100	100	83	100	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 16: MD 24 & Boulton

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	NBTL	SBTL	WBL	EBTL
Maximum Green (s)	25.0	52.0	25.0	28.0	25.0	52.0
Minimum Green (s)	3.0	20.0	5.0	5.0	3.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	7.9	77.1	24.0	25.7	26.3	54.0
g/C Ratio	0.04	0.51	0.16	0.17	0.18	0.36
Cycles Skipped (%)	30	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	79	50	71	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 18: Tollgate Rd. & US 1 Bus.

Phase	1	2	3	4	5	6
Movement(s) Served	NBL	SBTL	WBTL	EBTL	SBL	NBTL
Maximum Green (s)	25.0	52.0	31.0	22.0	25.0	52.0
Minimum Green (s)	3.0	20.0	8.0	5.0	3.0	20.0
Recall	None	C-Max	None	None	None	C-Max
Avg. Green (s)	24.0	53.0	31.0	22.0	13.2	63.8
g/C Ratio	0.16	0.35	0.21	0.15	0.09	0.43
Cycles Skipped (%)	0	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	88	100	100	100	0	100
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
Number of Complete Cycles : 23

Intersection: 19: MD 24 & US 1 Bus.

Phase	1	2	3	4	5	6	7	8
Movement(s) Served	WBL	EBT	NBL	SBT	EBL	WBT	SBL	NBTL
Maximum Green (s)	25.0	39.0	25.0	39.0	25.0	39.0	25.0	39.0
Minimum Green (s)	3.0	20.0	3.0	20.0	3.0	20.0	3.0	20.0
Recall	None	Min	None	C-Max	None	Min	None	C-Max
Avg. Green (s)	23.3	40.0	14.8	50.0	23.6	39.7	19.8	44.7
g/C Ratio	0.16	0.27	0.10	0.33	0.16	0.26	0.13	0.30
Cycles Skipped (%)	0	0	0	0	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0	0	0
Cycles Maxed Out (%)	58	88	4	100	67	88	9	100
Cycles with Peds (%)	0	0	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
Number of Complete Cycles : 23

Intersection: 20: Belair & US 1 Bus.

Phase	2	4	6	8
Movement(s) Served	NBT	EBTL	SBTL	WBTL
Maximum Green (s)	100.0	40.0	100.0	40.0
Minimum Green (s)	15.0	8.0	15.0	8.0
Recall	C-Max	None	C-Max	None
Avg. Green (s)	120.6	19.3	120.6	19.3
g/C Ratio	0.80	0.13	0.80	0.13
Cycles Skipped (%)	0	0	0	0
Cycles @ Minimum (%)	0	0	0	0
Cycles Maxed Out (%)	100	0	100	0
Cycles with Peds (%)	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 21: Kelley & US 1 Bus.

Phase	1	2	4	5	6	8
Movement(s) Served	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Maximum Green (s)	26.0	70.0	40.0	26.0	70.0	40.0
Minimum Green (s)	3.0	20.0	5.0	3.0	20.0	5.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	7.4	97.5	38.6	7.8	92.7	38.6
g/C Ratio	0.02	0.65	0.26	0.04	0.62	0.26
Cycles Skipped (%)	57	0	0	26	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	96	0	100	96
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0

Number of Complete Cycles : 23

Intersection: 22: Atwood & US 1 Bus.

Phase	1	2	4	5	6	8
Movement(s) Served	NBL	SBTL	EBTL	SBL	NBTL	WBTL
Maximum Green (s)	32.0	55.0	25.0	32.0	55.0	19.0
Minimum Green (s)	5.0	20.0	5.0	5.0	20.0	5.0
Recall	None	C-Max	None	None	C-Max	None
Avg. Green (s)	6.7	93.0	21.1	30.6	64.5	15.7
g/C Ratio	0.03	0.62	0.13	0.20	0.43	0.10
Cycles Skipped (%)	38	0	4	0	0	0
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	0	100	46	39	100	8
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 150.0
 Number of Complete Cycles : 23

Intersection: 35: MD 24 & MD 924

Phase	1	2	3	4	5	6
Movement(s) Served	EBL	WBT	SBTL	NBTL	WBL	EBT
Maximum Green (s)	20.0	60.0	60.0	20.0	20.0	60.0
Minimum Green (s)	5.0	25.0	5.0	8.0	5.0	25.0
Recall	None	None	None	None	None	None
Avg. Green (s)	56.5	75.8	60.0	14.2	22.0	60.0
g/C Ratio	0.18	0.28	0.34	0.08	0.13	0.31
Cycles Skipped (%)	45	35	0	0	0	10
Cycles @ Minimum (%)	0	0	0	0	0	0
Cycles Maxed Out (%)	35	60	100	5	48	90
Cycles with Peds (%)	0	0	0	0	0	0

Controller Summary

Average Cycle Length (s): 174.1
 Number of Complete Cycles : 20